ASOCIAŢIA ROMÂNĂ DE ARHEOLOGIE

S T U D I I D E P R E I S T O R I E

11/2014

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Editura Cetatea de Scaun
Bucureşti
2014

A S O C I A Ţ I A R O M Â N Ă D E A R H E O L O G I E

STUDII DE PREISTORIE 11

Coperta: Vas ceramic de la sfârşitul mileniului IV BC, descoperit în tumulul de la Ariceştii Rahtivani (jud. Prahova).

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Volum sponsorizat de S.C. FARMEXPERT D.C.I. S.R.L http://www.farmexpert.ro

ISSN 2065 – 2526

Asociația Română de Arheologie http://www.arheologie.ro

SUMAR

Interview with Douglass W. Bailey

Radu-Alexandru DRAGOMAN*

Douglass W. Bailey is Professor of Archaeology and Visual Anthropology in the Department of Anthropology at San Francisco State University, United States of America. He took his MPhil (1986) and PhD (1991) in archaeology from Cambridge University, United Kingdom. Between 2006 and 2008 he was the Head of Archaeology at Cardiff University, United Kingdom, and from 2008-2011, Chair of the Anthropology Department at San Francisco State University. His many research interests include prehistoric and ancient art, visual and material culture, the archaeology of prehistoric Europe, and the archaeology of the contemporary past. He has directed research projects in Bulgaria, Romania and the United States of America.

Radu-Alexandru Dragoman (R.-Al.D.): You are well known for the new approaches to the study of Neolithic figurines from the Balkans not only in what concerns their interpretation but also the manner in which they are exposed and published. Which are your recent and future projects on the topic of prehistoric art?

Douglass Bailey (DWB): In addition to *Prehistoric Figurines* (Bailey 2005) I am most pleased with the *Unearthed* project that produced a major exhibition at the Sainsbury Centre for the Visual Arts at the University of Norwich in the UK and a book (Bailey et al. 2010). It is not often that one has the freedom to follow new strands of thinking and writing without the normal restraint imposed by journal editors or publishing houses. The *Unearthed* project allowed me to do that with superb support from the Arts and Humanities Research Council in the UK and Dr Simon Kaner at the University of East Anglia in Norwich. The book turned out even better that I had expected and it remains my favourite piece of work; I think that it is still available on-line at Alibris.com. The exhibition was another matter; the museum curators had trouble allowing me to explore the full dimensions of juxtapostioning the images and objects that I had in mind; they refused to permit me to exhibit modern material culture (such as Barbie Dolls) alongside the Neolithic figurines and Jōmon dogū. They had very clear ideas about what was appropriate for a modern museum and some of what I wanted to do did not fit into their plans. I learned that sometimes it is impossible to convince the people in power of an idea that you know deep inside you is groundbreaking and revolutionary.

In the end, I was able to mix together everything that I wanted in the book, though even here I had to fight to get the unusual imagery into print – they refused to let me use an image of Barbie on the cover because of the potential litigation from the Mattel Company. I hope that once the book appeared that the most intense worriers realized that they had been mistaken to limit the power of the exhibition. Maybe not. For what is it worth (and to reveal the issues at play in the creation of the exhibition and the book), I included in the book reconstructions of their letters of protest and condemnation. They did not like that either. If you read the back cover of the book, you will see what I intended: to place before the reader/viewer a series of relatively disorganized objects and to force the reader/viewer to come up with their own understanding of the material. The book is like an excavation; the reader/viewer has to process the images and text as if they were artefacts.

Most of my more recent published work has explored wide dimensions of representation, not only with figurines but also with other elements of the material past. As I write this, I am preparing a small installation of my photographs of figurines for the Badè Museum in Berkeley, California. I am mounting six images, each of a Neolithic figurine held in an unusual and highly unscientific way; I have published similar images in other places (e.g., Bailey 2008). Like most of the work that I do now, I started taking those photographs with nothing more than a hunch that the process of making the

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images would produce a result that was stimulating, though I really was not sure what the result would be. Even when I saw the original prints some time ago, soon after I took them, I couldn't see everything that was in them or what I might possibly do with them. In the Badè show I am working with the idea that I have published elsewhere (most clearly in Bailey 2012), that Neolithic figurines played a role (probably subconscious) in the ways that historic and modern Europe understands the human body, particularly the female form; for me the exciting challenge is to make this point with images and not with text or obvious narrative. The images that I have selected for the show all present a clearly female figurine in the grasp of a modern human hand, specifically as if the hand is muting or covering the mouth or the head or the body of the figurine. The idea emerged after the museum asked me to do the show. I went through the 60 or 70 images that I had of these objects and picked out what I thought were the most interesting images: the ones that made me stop and think when I looked at them. Unexpectedly, all of the ones were of figurines tightly held (almost restrained) in the modern hand. An idea of controlling female body worked its way into my mind. That will be the message of the installation, though I am not sure how explicit I will be about telling the spectators that this is what they should see; I prefer that they find their own patterns and meanings.

The Badè show is flattering; I was surprised to be asked to mount the exhibition, but gratified that someone found my alternative take on the material to be worth showing to a wider audience. I first wrestled with non-standard representations of Neolithic figurines in *Prehistoric Figurines* (Bailey 2005) when I included four images at the very start of the book, before any title pages or table of contents. I presented them without captions or explanations. I wanted the reader/viewer to engage the images and let their reactions run in whatever direction they did, before I tainted their mind with my own ideas. When I was working on that book (on sabbatical at Stanford University's Archaeology Center), I read James Agee and Walker Evans' 1941 work *Let Us Now Praise Famous Men*. That book famously starts with a series of Evans' images unhindered by captions or explanations. The images make the reader of *Famous Men* plunge into the material without any preliminary context or statement of the writer's and photographer's intention. I wanted to do the same thing, though as you will know, my images manipulated the figurines in unusual ways and made connections to contemporary art.

When *Prehistoric Figurines* appeared I was still at a relatively insecure point in my career, and I was concerned about what other respected specialists thought about my work. I remember hearing that one of the main European experts (one whose opinion I valued) had found the book to be "clever" but nothing more significant. Soon after that I realized that it was a sure way to insanity (and intellectual limitation) to get hung up on what other specialists thought about one's work. Since then, I have taken what some may see as a more selfish line by making work (articles, books, book chapters, conference presentations) for my own reasons and intentions (thus satisfying my own desires) and not according to other's perceptions or restrictions. I am happy doing that, though it has meant that many people either don't like what I make or sometimes feel threatened by it. That's fine with me. I understand that I may now be in a privileged position as a Full Professor with Tenure and that perhaps this allows me to do unusual things. On the other hand, innovative and original work should always be given space and encouragement. Sometimes we fail when we try to push originality too far; this sort of failure is something to be praised. We do not make significant progress unless we have failed again and again. Of course this is a paradox, but it is the secret to original thinking and work. If we do not try to make provocative work, then we are wasting our time. Who wants just another rendition of the standard argument: in my case, I am not interested in another typology of Hamangia figurines or another debate about whether or not Marija Gimbutas' Mother Goddess interpretation is correct or not.

R.-Al.D.: Between 1998 and 2005, together with Dr. Radian-Remus Andreescu from the National Museum of Romania History in Bucharest, you led the *Southern Romania Archaeological Project*; also, you had numerous contacts with the Romanian archaeologists and gave a series of lectures at the University of Bucharest, at the "Vasile Pârvan" Archaeology Seminar at the Faculty of History. Retrospectively, how do you evaluate the results and eventually the consequences of this project? What can you tell us from your personal experience about the socio-political aspects of these researches and meetings: e.g., the philosophy and research agendas pursued by the Romanian and

British partners, the different academic and financing systems, the power structures and relations within the project but also the Romanian academic milieu, etc.?

DWB: A full answer to your questions would require a book on its own! About SRAP, we are still working to finish analyses and to write a final report. Luckily, individual specialists have published their work as it has become ready for dissemination, and we are hoping to get a final publication completed by the end of 2015. International collaborations are strange creatures, though maybe this is not the right metaphor. I love collaborating with other people, learning other ways of thinking, of working, and of addressing a common topic (e.g., the Neolithic of southeastern Europe). One of the good things about large, international collaborations is that very different perspectives are brought together in a high pressure and intensive process of working and living together. Whether we admit it or not, we all have our own agendas about what we want to accomplish in our work. These agendas can have many parts: personal, career-advancement, ego, financial, intellectual, and on and on. At times, these goals are left unspoken: such and such a collaboration will help me get a promotion at work, or will give status to me and to my professor or to my institute or museum or university, or will provide me relief from being at home arguing with a spouse or taking care of the kids.

Different regional or national schools of archaeology (or of any other academic or intellectual activity) have their own standards, intentions, rules, personalities, codes of conduct, and expectations. Earlier in my career I could recognise these pretty well, but I was very ambitious and arrogant and didn't always say the right things to the right people. Looking back on it, I think that I even enjoyed aggravating people, of putting difficult conversations in play. I think that time has made me a little more diplomatic, though that is not for me to judge. Having said that, I have never liked systems of power (on excavations or in institutes or universities) in which some people are given authority and high position because of their academic lineage, the colour of their skin, their gender, or their age (and not because of their abilities or experiences).

On top of that, I remain convinced that students and younger colleagues should throw all of their energies into attacking the theories, conclusions, and methods of their senior professors and advisors. Find the weaknesses in your professor's interpretation and then write something better in its place. For me this is the healthiest and most robust way to do science (and social science and humanities research); the great discoveries come from this process. It is not for the faint of heart, however. The alternative way to do science is for each professor's students to spend all of their energies repeating the words of the professor and defending him (or her) against all attacks. The result is the hagiography of the senior figures in a field of study. Their failings and weaknesses are excused, and the overall result is both a poor mechanism for advancing thought and a system that rewards the obsequious and weak. I believe that this system is indefensible and nothing more than intellectual nepotism and scientific immorality.

You asked about working as a foreign archaeologist. We descend on sites as if aliens from another planet. This is true both of foreign teams, such as the British one that I lead at SRAP, but also of local Romanian teams from Bucureşti or from Alexandria. We have to find a way to connect to the past that we are examining. One of the great tragedies of the formal cultural and scientific systems that give out permits and funding in many countries is that permits and funding are usually limited to only a short period (often three years). It is impossible for anyone to know a site, a landscape, or a body of material satisfactorily in three years. For me, it was only after visiting the Teleorman Valley for six or seven years that I slowly started to know what was happening there. By that time, it was almost impossible to raise more money to work.

I look at my work in Alexandria and my earlier work in Bulgaria both as archaeological projects and as social, political and personal engagements. Part of the necessary result of digging a site is to process the material, to analyse the data, and to present the results to the public with as much honesty and efficiency as possible. Having said that, there is a huge "other" space of these projects that exist outside of the physical processes of digging, recording, drawing, mapping, photographing, measuring, investigating the site and its material and natural contents. In this other space we will find a richer set of relationships and daily acts and negotiations. In many ways, I find the latter to be as exciting if not more exciting then the acts of excavation and analysis. For example,

running a field project means that you will spend most of your time and energy in the mayor's office or in discussion with the owner of a restaurant or with the local labourers. I love being in the field as much for these communications and connections as or any "higher" scientific exercise. Soon after starting to work on SRAP, I realized the personal and cultural value of connecting with the people of the local village and town. Some of that became the series of photographs that I took in the afternoons once we had finished work for the day at the site or in the museum. The *Muzeul Județean Teleorman* (MJT) has a set of these images and I am as proud of them as I am of the excavation or publication or conference sessions. You can see the images online at http://dougbaileyphotography.yolasite.com/.

R.-Al.D.: Are you taking into consideration new fieldwork research in the near future?

DWB: The answer depends what you mean by "fieldwork research". I am less enthusiastic about starting new excavations than I was earlier in my career. I understand that it is an essential part of what we do as archaeologists. However, maybe we need to re-position the practice of archaeology within the broader study of humankind. The big topics that we study (time, cause and effect, change, social structure, technology, human and group identity) are the same topics that many other disciplines and specialists study. I do not see why we separate the archaeologist from the poet from the graphic artist from the musician from the sculptor. We can only gain by working in other areas of method, approach and thought. A lot of my most recent work explores these connections and tries to push beyond the standard boundaries of archaeology and of art. Three recent publications are montage-chapters (Bailey 2103, 2014a, 2015) that disrupt otherwise standard books of traditional, textual, academic writing. I plan to continue that type of work, which I see as a way of "going beyond" the limits of the standard disciplines of archaeology but also of art (for more details, see Bailey 2014c).

A current and strong desire I have is to work with the concept of the archive. Part of this comes from the discipline of visual anthropology and the way that the museum collections of the world contain objects and images and recordings that were accumulated over a long period of time in grand projects of recording and classification. Usually building an archive was the work of European countries as they took control of what some would call the third world. In other places the recording and collecting was carried out by the people who controlled the ways that knowledge was created, and thus who controlled much of how history and nationalism developed in hegemonic fashions. I am thinking here of nationalist political arbiters of culture and heritage (and this applies both to western and non-western countries). The fascinating part of the archive is that even though many people see archives as passive and inert collections of long dead cultures or communities, in reality archives are active and vocal. Recent work in ethnography and visual anthropology has shown how these active archives are alive and can fight back against long histories of abuse and colonization. If I were to start a new project now, it might focus on archaeological, ethnographic, and photographic archives. If it were to be in Romania, then I would want to look at the last 100 years and the way that photography and the mass-media constructed a series of politically motivated and, at times, highly abusive, versions of realities (though I would include equal treatment to periods and regimes before and after December 1989).

At a more general level, the goal of anything in which I want to invest my efforts and time is to use parts of the past (artefacts, sites, interpretations, *inter alia*.) to create new work and new meanings which have the power to stand apart, disarticulated from the past. This means letting go of the past and defamiliarizing ourselves from the objects we study that we usually connect to the past. I have written about this in my article "Art // archaeology // art: letting-go beyond" (2014c). I understand that to many people what I am arguing for appears to be very non-archaeological. From my perspective (and in light of what I have said in answer to your earlier questions) all of this work (on archives and on disarticulated the past) is archaeological, particularly as it is a different way to understand what we are supposed to do with this stuff that we call "the past".

Much of my thinking on this comes from the realization that archaeologists suffer badly from the disease of excavation-mania. While some projects are specific and valuable and follow clear research goals and questions, many do not. In too many places, I have been appalled that some

archaeologists spend their careers in an overly competitive frenzy to see who can excavate the most sites. To dig like this is a cultural crime. Perhaps, the people who are doing this (the archaeological maniacs) are insecure about their own professional and personal abilities and about their positions within their institutions and professional societies. They dig and dig and dig as if to fill in the holes in their self-esteem. So many of these excavations are unpublished; most have lacked modern analytic examination of the material. Look in almost any storage room in a museum and you will see the results of this mania for digging: 1000s of bag of unanalysed material.

Until I finish doing that I can do to bring our work SRAP to publication, I will not excavate again. It would be immoral. Having said that, it has been difficult to get the funding that we need to finish the analysis; this is despite the extraordinary support of the local museum (MJT) and its current director, Pavel Mirea, a man who has done more than anyone in the project to produce what results we have disseminated so far, and who really is the main machine within the project. His work humbles me. Not unexpectedly, not all of the senior members of the project have followed his lead. One expert held his analysis hostage from us until we agreed to pay him for his work, when our project we did not have the money to pay any of the specialists for their efforts; another colleague liked to sit on the side of the trench and make inane and unhelpful comments while the rest of the team toiled in the heat and the dust.

R.-Al.D.: One more question about politics. The project *Măgura Past and Present*, co-directed with Dr. Steve Mills from Cardiff University in the United Kingdom, was part of the pan-European project *Art-Landscape Transformations* (2008-2011), financed by the European Union. The project was based on the modern village of Măgura, in the Teleorman County, and involved archaeologists, historians, ethnographers, artists, photographers, and film-makers from various corners of the world, on the one part, and, on the other part, people from the village, from school children to politicians. However, from all these "interventions", as you coined them, it seems that the consideration of the political contexts and dominant ideologies from the recent and contemporary past of the Măgura village is missing: in this regard I would remind the fact that the lives of the people from the rural communities from Teleorman were affected by de modernist politics of the Communist regime, and later, both before and after Romania's accession to the European Union in 2007, they were profoundly affected by neoliberal politics. Why this absence of the political? I would add one more question: what change/changes brought the project to the lives of the people from Măgura village or at least for the local participants?

DWB: These are strong and welcome questions. You assume that the "political contexts and dominant ideologies" of Măgura were missing from the daily practice of the work and from the output. How do you know, Alecu? Let me try answer in a more polite way, while still acknowledging and appreciating the seriousness of your question (which I fully respect). There are at least two senses of the political: one is the Big Politics of which you speak – Ceauseşcu, totalitarian socialism, the Warsaw Pact, the United States, neoliberalism, the European Union, and the recent and current national, regional and village-level political actors and acts, laws and statues, arrests and hegemonic acts bullying some and privileging others. Another sense of the political is with a lower case letter "p" in political; it is about the regular, almost unnoticed, human interactions, collaborations and obstructions that come with each day that we live, with each morning that we wake to, with each bowel movement we make, each hello to a friend, and each middle finger we raise to an enemy. This is the level of actual life; the Big P politics is something else. To answer your question, therefore, I would reply that the political was always present in the work that we did, though it was the lower case "p" version of political.

To your second question, let me ask you this: why do you assume that we (or I) had any intention to change the lives of the inhabitants of Măgura? I hope that I am not that arrogant. All that any of us can do in our lives and our works is to live and work as we feel is appropriate for ourselves in each of the endless contexts in which we negotiate and contest the world that we live in. Again, academics, archaeologists, scientists (not unlike Big P politicians) often fool themselves to think that they are going to change the world, or in your question, to "change the lives" of the people of Măgura. To think that a project can affect change in this way and at this level is naïve, and I cannot imagine that you, Alecu, as the politically and theoretically informed person you are, would think that

this could be the case. Having said all of that, I do believe strongly that our lives are constantly being changed by the situations that we place ourselves in. The more dynamic and unexpected is the situation, the greater the potential for change. So, I am in debt to the inhabitants of Măgura and to the many people who I have worked with (both in agreement and in opposition) while in Romania. Bulgaria is another question, though even there, their treatment of me and of our project there in the 1990s formed an important part of my own personal and professional growth. I continue to thank them for that.

The more informative question is not how I have changed them, but how they have changed me. The answer is unreachable, as one can never know with any certainty how any one event or contact or communication actually affects us, shapes who we are, or conditions what we do. We fool ourselves when we see cause and effect is such simplistic ways; this is true both in terms of our own positions in life and science, and it is one of the reasons that I do not think that it is possible for us to ever determine with and objective security why events or developments in the past happened as they did. Thus, questions about the origins of the Neolithic (itself a term of gross over-generalization) are not interesting to me. Don't take this the wrong way. I love to read what people are thinking about this question (and I am in their debt for their work on it), but it, like most other research questions in traditional archaeology, is not tied to the day-to-day reality of life. I understand that you want to ask me about the films that we made in Măgura, and those films relate closely to this discussion. Is that your next question?

R.-Al.D.: Yes indeed, but first I would shortly like to clarify part of my previous question because, apparently, I was misunderstood: there has never been in my mind the idea that the project should have changed the lives of the people in the village of Măgura, but on the contrary, to bring into discussion, as a subject for reflection, the consequences, intended or not, that researchers' presence and actions might have had for the participants and villagers; in other words, to reflect on the ways we approach our Neighbor and the responsibility we have for our "interventions". But you have already addressed this, so I turn to another question. Apparently unusual for an archaeologist, you participated in the elaboration of a few films – *Eternity was Born in the Village* and *Eleven Minutes and Forty Seconds in the Neolithic?* I saw the first one, produced in the framework of the *Măgura Past and Present* project, at the very moment of its release and I was impressed by the sensibility with which the two directors, Peter Biella and Iván Drufovka, approached the people from the village of Măgura; I didn't see the second film (but I hope to see it). Which is the story behind the making of these two films?

DWB: Again I am fascinated by the complex mystery and challenges inherent in the acts of representation, particularly visual representation. The film *Eternity was Born in the Village* was part of our response to the requirements that I was given by the organizers of the larger EU project, *Art-Landscape Transformations*. Archaeologists, like most academics and intellectuals, are immensely egotistical, and our systems of funding, as well as the grant- and permit-giving institutions, control work and thought often in dangerous ways. We have developed a discipline in which we play god with time, its measurements, and the connection of human action through time. As prehistorians, we think nothing of talking about cause and effect over centuries or millennia. Many of my colleagues have the capability and confidence to do this with ease and without second thought; more power to them, and I enjoy learning of their successes. For me, I feel that there are other ways to think and to work.

At the time that I received the EU grant, I had just started my job at San Francisco State and Peter Biella, one of my new colleagues, was (and still is) a world-renowned ethnographic filmmaker. As you have mentioned, I used the funds for the *Măgura Past and Present* project to take as many non-archaeological creative "makers" to Măgura as I could afford to take within the limits of the grant that we were given. Peter was one of the makers and he brought his colleague Iván Drufovka. My instructions to Peter and Iván were the same ones that I gave to each of the project participants: use your specific set of skills and knowledges to evoke the place and people of Măgura. If you think about it, this is really the same thing that any leader of an excavation team asks of his or her team members: use your scientific skills to represent a past place in the present, whether that representation is with animal bones, pollen, ceramics, lithics, or other materials.

Peter and Iván started filming a week before I arrived, and the day that I pulled into the village from Otopeni, they showed me what that had shot up to that point. It was stunning! My only further instruction to them was that they must not introduce any sense of a narrative story-line or plot into the film. In the early edits of *Eternity*, they stuck to this, but in the later versions, a story-line emerged. But that was their decision; they were the filmmakers. I had to let it rest.

As they were working on their film, I asked Peter if he would help me to make another (unplanned) film and this is what became the second film that you mentioned: *Eleven Minutes and Forty Seconds in the Neolithic*. The larger EU project had what I thought was a rather grandiose title, *Art Landscape Transformation*, and the goal of that larger project was to integrate art practice within the study of the transformations of the landscape over long periods of time. In talking about the project and what we might do in Romania, I repeatedly bumped against the European scientific idea that landscape is transformed over long periods of time (1000s or 10,000s of years) and that one of the things that archaeologists do is to record and reconstruct changes in environment and landscape over these inhuman spans of time. The more I thought about it, the more uncomfortable I felt. Increasingly, I came to the opinion that our long time-span versions of human history are not human at all. So, I asked Peter to help me shoot and edit a film that would suggest to the viewer a better scale of time passage: a timescale that matters to people in real-time. I wanted the result to show that what matters in life (i.e., the scale of transformation for humans) happens in the real-time of everyday, minute-by-minute time, and that our scientific, archaeological chronologies and cultural phasings of sites are something else altogether (though they have huge value in archaeological research).

To attempt to make this point with a film, we set up a video camera on the corner of one of the back alleys in Măgura and then for 20-minutes we let the camera run on its own without any change of perspective or focus. We did this at four different times over one 24-hour period. Once we had the four films, we stuck them together so that when the film is shown (as it was at the 2011 meetings of the Society of American Archaeologies in Sacramento, California), the viewers see all four films in real time arranged in four quadrants on a screen. When you watch the screen, you see the same place (the alley) but in four different times, but all at the same time. Some parts of the place stay the same, others change. The result is unusual (to say the least), but it is exactly what I think we all should be doing: trying new and otherwise unacceptable processes to open up the way that we think about the past and the present, and particularly the way that we represent place through time (for me this last process is one of the things that archaeologies spend a lot of time doing). At a conference in Chicago a couple of years later, I gave a lecture about this larger goal: "Going beyond and letting go: non-archaeological art and non-artistic archaeology" and the direct link is as follows: https://www.academia.edu/4218265/Video_lecture_Going_beyond_and_letting_go_non-archaeological_art_and_non-artistic_archaeology_2013_NB_click_more_to_get_link.

A final spin-off from that *Eleven Minutes* video is an article (to be published this year) in which I have taken the whole idea farther via two-dimensions (Bailey 2015). The article is another montage-chapter from an otherwise standard academic book, and the goal, as with my other recent work, has been to use images and their juxtapositioning to force the reader/viewer to come up with they own thoughts about the material (and not to be told by me what to think).

R.-Al.D.: Recently, *Ruin Memories*, a project in which you took part and I constantly followed with great interest, came to an end. Tell as more about this project in general and especially about your topics of interest within it.

DWB: *Ruin Memories* is an extraordinary project run by a small group of innovative archaeologists and thinkers, and led by Bjornar Olsen from the University of Tromsø in Norway. It is not for me to say what that team has been trying to do, though I agree with you that the project is superb and worth following (go to http://ruinmemories.org for a full view). I find exciting the way that *Ruin Memories* works with those parts of modernity that have been abandoned, discarded, victimized, made redundant, left to decay, and neglected. The connection to archaeology is very strong, though the link is through that process I mentioned above of stepping outside of our standard way of thinking about the past and about human action. Though there are many points of fascination with the *Ruin*

Memories work, I have been most drawn to the way that they (re)present their subject of study. Their use of photography and text is careful and powerful. I envy them and what they are doing; it is some of the best work in play at the moment.

R.-Al.D.: *Apropos* of the archaeology of the recent past, in 2009, in the first issue of the *Buletinul Muzeului Judeţean Teleorman. Seria arheologie*, you published a very welcome and interesting plea for an archaeology of the material traces of the recent and contemporary past of the Teleorman region. Do you have any novelties to tell us?

DWB: Thank you for asking about that article (Bailey 2009); you prompted me to go back and reread it. While I do not want to take up the space here to repeat what I wrote there, I am just as adamant in defence of the comments that I made at the time. At the top of these is an understanding that archaeology only exists in the present, and that the material and the landscape that we study only exist in the present. The consequence of this is that archaeology is a methodology that can be applied to any situation in any period. As a method of analysis, archaeology is particularly valuable in the study of the modern world and the very recent past; as you know, this is more commonly called the archaeology of the contemporary past as developed most clearly by Victor Buchli and Gavin Lucas in their important 2001 book *The Archaeology of the Contemporary Past* (Routledge) and which is also in play in the *Ruin Memories* project that you just asked me about. One of the most valuable consequences of this approach is that the application of archaeological methods to contemporary places, sites, events, people and encounters causes us to become unfamiliar with a place, site, event, person or encounters which we otherwise would normally know and understand almost without thinking.

As an example, I remember that during one of the excavation seasons at SRAP, we were digging the Criş-Dudeşti-Vădasta site at Măgura. The excavation was near a fresh water spring that was next to the road to the site, and so we drove past the spring each day. The spring was a busy place and many people would stop and fill up bottles and large plastic containers. One morning when we drove past, we saw that three gypsy wagons were pulled up and a group of half a dozen gypsies were camped out there. After a couple of days, the gypsies moved on. Though they were gone, they had left behind a lot of garbage. One of graduate students on our project (Chris Witmore, now a professor at Texas Tech University) suggested that we apply the archaeological technique of a field survey to the gypsy garbage. Chris led a group of students in mapping the "site" and in collecting, bagging and tagging the "artefacts". What we did not expect was that when the work day was over and Chris and his group were ready to load their "finds" into the cars to drive back to the museum in Alexandria, a heated debate (an argument, even) would storm up about whether or not the drivers should be allowed to take the finds (deemed by some to be trash left by an unwelcome element of society) in their cars. From what was a simple, small project in the archaeology of the contemporary past (or even a straightforward ethnoarchaeological experiment about mobile groups and patterns of material culture discard), there emerged a very sharp discussion heavily soiled with racist attitudes to gypsy populations in this region and in Romania in general.

R.-Al.D.: Imitating the theme of the section "A life in books" from the *Journal of the Royal Anthropological Institute*, I would ask you: if you were to choose five books which strongly impacted the way you understand and practice archaeology, which would they be and why?

DWB: By this time in the interview, I doubt that it will be a surprise that my choices will not be all archaeological works. However, I would start with two books that changed the way I (and many others) thought about what archaeology is and how it should be practiced. The first is Ian Hodder's 1981 *Symbols in Action* (Cambridge). At a very personal level, the book was one of five or so on the list of required summer reading sent to me as a student about to enrol in the Masters in Archaeology degree at Cambridge in the summer of 1985. I struggled to see how much of Hodder's book was archaeological (my BA had been in Classics, and my grounding in archaeological theory, if it existed at all, was very much of the Lewis Binford, New Archaeology tradition). As I read *Symbols in Action*, but more so, as I worked through the intense yearlong MPhil program, I realized that archaeology was a powerful social and political discipline that had a vital role to play in life beyond any simple method to reconstruct a past. Hodder's focus on symbols and their meanings in their shifting contexts was

foundational for much of how the best current archaeological interpretation is now practised and the book's arguments and examples had a profound effect on me. The fact that Hodder was at Cambridge and that as MPhil students we had lectures and supervisions with him compounded the impact. There were other important things happening at Cambridge at the time, and together it was a sensational time to be a young student of archaeology.

The second book I didn't read until sometime later, maybe in 2001: Michael Shank's 1992, *Experiencing the Past* (Cambridge). Unlike my position of theoretical naivety when I had read *Symbols*, I picked up *Experiencing the Past* with a pretty good idea what I was looking for and what might be in the book. By 2001, I was good friends with Michael, and we had talked about a lot of common interests. If fact we had crossed over at Cambridge; he was doing his PhD and I was doing mine, though he was miles ahead of me (really on a different plateau). Regardless, in 2001, I had not read his 1992 book, but I was increasingly unhappy with the versions of complete and unfragmented pasts that continued to be produced and praised in the archaeological publishing and teaching worlds. By the late 1990s Michael had established himself as a leader in archaeological theory and interpretation. While the breadth of his impact often is traced to the two books that he wrote with Chris Tilley in 1987 (*Reconstructing Archaeology* and *Social Theory and Archaeology*), there is more value in his other work, particularly on representation, and *Experiencing the Past* is central to that contribution. I was doing the major part of my research for *Prehistoric Figurines* in 2001 and 2002, and thus, I was spending a lot of time thinking about visual representation and the archaeology of art. I came upon Michael's 1992 book just when my appetite for radically different approaches to material culture and to the past was at its hungriest. There is another book which could be slotted in here as an alternate for *Experiencing the Past*; that is the book that Michael wrote with the performance researcher Mike Pearson: *Theatre/Archaeology* (2001; Routledge). Both books are required reading for all of my graduate students, and I turn to each volume from time to time for reminders and for inspiration.

The third and fourth books, neither archaeological works, have had a lasting impact on me, particularly in my current work in visual archaeology and visual anthropology. The first of these is James Agee and Walker Evan's 1941 landmark volume *Let Us Now Praise Famous Men* (Houghton Mifflin). As you will know, *Famous Men* was the final outcome from an assignment that *Fortune Magazine* gave to Agee and Evans in 1936 to examine tenant famers in the American south during the dust bowl and the American Depression. Agee was an author and Evans a photographer, and the book that they eventually produced is a sensational and revolutionary work of documentation and agit-prop declaration. The book has so much that still appeals to me at very deep levels: the juxtapositioning of image and text (and of text-with-text); the exquisite photographs; the intimate connection (invasion almost) by Agee and Evans into the lives of three tenant families; and the strong, yet unspoken, political statement about the state of the people in this part of the country. It is as close to a perfect book as I know, and only slightly more powerful than Robert Frank's 1955 *The Americans*, which I would add to my list if I had a slot for a sixth volume.

My choice for a fourth book is more academic and straightforward in its message: John Tagg's 1988 collection *The Burden of Representation: Essays on Photographies and Histories* (Palgrave Macmillan). Here the message is strong and sophisticated, examining the ways that photographic representation creates truths and fact. For me, I could swap the word archaeology or artefact for photography and print anywhere in Tagg's book and the message would be the same. There are other books in the social and political sciences that I could include here in a general set of late 20th century arguments about the construction of truth and the exploitation of the past in the present. I included *Burden* because it focused on photography and visual culture (main interests of mine), and because I read it at a critical time in my own intellectual education when my mind was eager for fertilization.

A fifth book? Either one of Emile Zola's novels from his twenty-volume Rougon-Macquart cycle: probably *Nana* (1880) or *L'Assommoir* (1877) or something from the Beat authors, maybe William Burroughs' *Naked Lunch* (1959) or Jack Kerouac's *On the Road* (1957). There is so much of rich nutritional value in any of these last four titles, that it is hard to do each of them justice here, let alone choose one over the others. In any event, I will not try to flavour your impression of them – go out and read them yourself if you have not already. They are all experiments in documentary

representation (in fact I have included a lengthy quote from one of Zola's novels as an "artefact" in a piece of archaeological disruption that will be published later this year; Bailey 2015). From Zola's naturalistic description of French life in the late 19th century to the legend (and thus, of course, of fact) that Kerouac typed out his book on one continuous reel of paper, all of it is luscious and food for our intellectual and creative digestive tracts. Part of the attraction is that these authors and the rest of these movements were kicking some serious ass in a particular and wondrous way, a way that much of society (particularly) high society and the intellectual gatekeepers of literature looked down upon with tremendous distain. The message I take from these sorts of situations (and the same would apply to Shanks' or Hodder's works) is that if the people in power hate what you are doing and try to undermine you and prevent you from doing your work in the alternative way that you are doing it, then you are on the right track and you should push on with all energy and confidence. The obverse holds as well: if your work does not disturb anyone, then you need to reassess what it is that you are doing and how you are going about your life.

R.-Al.D.: Finally, in my turn, I put the same question you asked from other archaeologists you interviewed: if you were to live forever on a desert island, what book or books and what luxury items would you like to take with you?

DWB: Excellent! Considering that I will have food and drink (including endless palinka from my friends in Măgura), then I can concentrate on other matters (though I would ask for a fully equipped kitchen – good knives, an excellent gas cooker, an ice-machine, and a blender to make frozen daiquiris). I would want to use my time on the island to explore some other medium of creative work. I know nothing about music. I do not play any instrument. I can't even read music. I have always found that cello music affects me in powerful sensory ways, especially its acoustics and physical vibrations. So, I would ask for a cello, cello music, and a sympathetic cello teacher (probably someone who would also be skilled in massage and other techniques of mind and body relaxation). Books? Not sure about this. We spend so much time reading and writing in our academic and archaeological jobs, I wonder if it would be a relief not to read anything. In the place of text-based books, I would ask for a collection of the most important early graphic novels: the works of Frans Masereel, Lynd Ward, and Milt Gross; also a complete series of Mad Magazine. If that were granted, then I would also need some sort of drawing equipment, so that I could create some visual work about my world on my island.

◈ Selected publications

Books:

D.W. Bailey, A. Cochrane, J. Zambelli, 2010, *Unearthed: a Comparative Study of Jōmon Dogū and Neolithic Figurines*, Sainsbury Centre for Visual Arts, Norwich.

D.W. Bailey, A. Whittle, D. Hofmann (eds.), 2008, *Living Well Together: Sedentism and Mobility in the Balkan Neolithic*, Oxbow, Oxford.

D.W. Bailey, 2005, *Prehistoric Figurines: Representation and Corporeality in the Neolithic*, Routledge, London.

D.W. Bailey, A. Whittle, V. Cummings (eds.), 2005, *(un)settling the Neolithic*, Oxbow, Oxford.

D.W. Bailey, 2000, *Balkan Prehistory: Exclusion, Incorporation and Identity*, Routledge, London.

Journal articles and book chapters:

D.W. Bailey, 2015, Eleven minutes and forty seconds in the Neolithic: archaeological representation of human behavior, in R. Bernbeck, R. Van Dyke (eds.), *Alternative Narratives in Archaeology*, CO.: University of Denver Press, Boulder, p. 123-45.

D.W. Bailey, 2014a, Which ruins do we valorize? A new calibration curve for the Balkan past, in B. Olsen, Þóra Pétursdóttir (eds.), *Ruin Memories: Materiality, Aesthetics and the Archaeology of the Recent Past*, Routledge, London, p. 215-229.

D.W. Bailey, 2014b, Touch and the cheirotic apprehension of prehistoric figurines, in P. Dent (ed.) *Sculpture and Touch*, Ashgate, London, p. 27-43.

D.W. Bailey, 2014c, Art // archaeology // art: letting-go beyond, in I. Russell, A. Cochrane (eds.), *Art and Archaeology: Collaborations, Conversations, Criticisms*, Springer-Kluwer, New York, p. 231-250.

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D.W. Bailey, L. McFadyen, 2010, Built objects, in D. Hicks, M. Beaudry (eds.), *The Oxford Handbook of Material Culture*, Oxford University Press, Oxford, p. 556-581.

D.W. Bailey, 2009, The figurines of Old Europe, in D.W. Anthony (ed.), *The Lost World of Old Europe: The Danube Valley 5000-3500 BC*, NYU and Princeton University Press, New York, p. 112-127.

D.W. Bailey, 2008, The corporeal politics of being in the Neolithic, in J. Robb, D. Borić (eds.), *Past Bodies*, Oxbow, Oxford, p. 9-18.

D.W. Bailey, 2007, The anti-rhetorical power of representational absence: faceless figurines in the Balkan Neolithic, in C. Renfrew, I. Morley (eds.), *Material Beginnings: a Global Prehistory of Figurative Representation,* McDonald Institute, Cambridge, p. 117-126.

D.W. Bailey, 2006, Studying the Neolithic: an argument against generalization, *Cultură şi Civilizaţie la Dunărea de Jos (Călăraşi, Romania)*, 22, p. 85-96.

D.W. Bailey, 2005, Beyond the meaning of Neolithic houses: specific objects and serial repetition, in D.W. Bailey, A. Whittle, V. Cummings (eds.), *(un)settling the Neolithic*, Oxbow, Oxford, p. 95-106.

D.W. Bailey, 2005, Towards new dimensions of meanings for Cucuteni/Tripolye figurines, in G. Dumitroaia, J. Chapman, O. Weller, C. Preoteasa, R. Munteanu, D. Nicola, D. Monah (eds.), *Cucuteni*, Institute de Archeology, Iaşi, p. 123-136.

Note: for a full list of publications and downloadable pdfs, see https://sfsu.academia.edu/DougBailey.

Stasis and change in Paleolithic times. A brief assessment of the Lower and Middle Paleolithic evolutionary dynamics

Mircea ANGHELINU*

Abstract: *Based on dual-inheritance and macro-evolutionary models, the paper focuses on the conformist dimension of cultural transmission and on the growth limits inherent in foragers' eco-cultural niche building. The apparent lack of innovation noticed in the Lower and Middle Paleolithic is briefly explored. The crucial role of demographical networks in the spread and persistence of innovation is also emphasized.*

Several lines of evidence suggest an early, Middle Pleistocene age for the emergence of typically human cooperative arrangements and cultural inheritance systems. A mosaic pattern of innovations is also recorded during the Middle and particularly Late Pleistocene. Their repeated failure in spreading and lasting is attributed to the dominant opportunist forager strategy and ultimately to the small size and vulnerability of local demographic networks.

Rezumat: *Pornind de la modelele propuse de teoria „dublei moşteniri" şi de cea a macro-evoluţiei, articolul tratează aparenta absenţă a inovaţiei în paleoliticul inferior şi mijlociu, punând accent pe dimensiunea conformistă a transmiterii culturale şi pe limitele de dezvoltare inerente construcţiei nişelor eco-culturale de către populaţiile de vânători-culegători.*

Mai multe tipuri de dovezi sugerează apariţia timpurie, încă din Pleistocenul mijlociu, a sistemelor tipic umane de cooperare şi transmitere a informaţiei culturale. Totodată, în Pleistocenul mijlociu şi, în particular, în Pleistocenul final se înregistrează un mozaic de inovaţii. Eşecul repetat al acestor inovaţii de a se răspândi şi rezista în timp este pus pe seama strategiilor dominant oportuniste ale vânătorilor-culegătorilor şi, în ultimă instanţă, pe seama dimensiunii reduse şi vulnerabilităţii reţelelor demografice locale.

Keywords: *macro-evolution, cognition, demography, Lower Paleolithic, Middle Paleolithic.*

Cuvinte cheie: *macro-evoluţie, cogniţie, demografie, paleolitic inferior, paleolitic mijlociu.*

◈ Introduction

Cultural evolution is generally acknowledged as largely autonomous and certainly, as much faster than biological evolution. Indeed, in comparison to the slow rhythms of geology and to the deep history of organic forms, the evolution of human species entails a short chapter, essentially reduced to the last 2.5 million years. Yet, the amount of accumulated cultural information is spectacular: a present-day *Homo sapiens* hosts a volume of extra-somatic data rivaling his genome in size (P.J. Richerson, R. Boyd 2001, p. 199). Conventionally, this impressive outcome is due to our species' unique cerebral architecture, which, among others, facilitated the fast transmission of adaptive information through the use of symbols and, in particular of language (M. Donald 1991).

It is no less true that, despite its rapidity, cultural evolution displays many episodes of slow, almost imperceptible change. The Paleolithic period offers the most obvious examples. Although undoubtedly inaccurate, Eurocentric, and relying mainly on the limited behavioral yardstick provided by lithic technology, the inner chronological landmarks are speaking for themselves: the Lower Paleolithic extends between 2.5 million and 200 ka BP, while the 'shorter' life of the Middle Paleolithic covers the following interval to ca. 40 ka BP. Taking these huge numbers at face value, many scholars tend to see these epochs as long intervals of stasis or at least adaptive redundancy, in which the cumulative character of cultural evolution is anything but obvious (*cf.* S. Kuhn, E. Hovers 2006). Negative innate differences i.e. lack of cognitive fluidity (S. Mithen 1996), discursive consciousness (C. Gamble 1999) or articulated language (R.G. Klein 2009) are often identified as the main causes for the low rates of cultural innovation and accumulation recorded during the Lower and Middle Paleolithic. As a consequence, the shifting pace of cultural evolution associated to the Upper Paleolithic in Western Eurasia is sometimes attributed to a reorganization of the executive functions of the pre-frontal cortex (S. Mithen 1996; W. Noble, I. Davidson 1996; F.L. Coolidge, T. Wynn 2001; R.G. Klein 2009).

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The purpose of this paper is to show that, paraphrasing the famous reply of Laplace to Napoleon, the last hypothesis 'is not necessary', starting at least with the Middle Pleistocene. On the one hand, based on the tenets of dual-inheritance and macro-evolutionary theories, I will suggest that the rationales of cultural stasis are inherent to the very nature of human cultural evolution and *Homo sapiens sapiens* makes no exception. These inner growth limits are particularly powerful in the case of a forager lifestyle and must have been forcefully augmented by the Pleistocene environmental settings and demographical patterns. On the other hand, on archaeological grounds, I will attempt to show that at least some of the allegedly missing key cognitive components were already present, starting with *Homo heidelbergensis* and all the more in the case of archaic *Homo sapiens* like Neanderthals. Innovative behaviors are also recorded from the Middle Pleistocene on. Finally, I will try to look for an alternative explanation for the slow evolutionary rhythm of the Lower and Middle Paleolithic, rather focused on the demographical networks carrying the human creativity than on biological essentialism.

◈ Gene and culture co-evolution

The dialogue between social sciences and biology has never been particularly harmonious (D. Nettle 2009). As a consequence, although focused on a lengthy period of crucial biological and cultural evolutionary changes, the Paleolithic research still relies on often incommensurable theoretical models, inspired either by primate ethology and behavioral ecology, or by hunter-gatherers ethnography (for a review, see R.L. Bettinger 1991). Notwithstanding this traditional segregation, the last decades witnessed an increasing number of contributions focused on the common features of both forms of evolution and on the complex feedback relations connecting them. One of the main outcomes of these convergent approaches bringing together environment, genes and culture, is the development of several related and increasingly coherent bodies of theory inspired by the neo-Darwinian synthesis, such as cultural evolutionism (W.H. Durham 1990), double-inheritance theory (for comprehensive outlines see P.J. Richerson, R. Boyd 2005; R. Boyd, P.J. Richerson 2005) and macro-evolutionary theory (see contributions in A.M. Prentiss *et alii* 2009)[1].

The central tenet of all these approaches is that culture, as extra-somatic information acquired from others, acts like a system of descent with modification and that Darwinian 'population thinking' can be fruitfully applied to cultural evolution. However, contrary to more orthodox Darwinian approaches like sociobiology, for which cultural evolution is equated to epigenetic/phenotypic development, this theoretical family grants culture and group level selection a key place in guiding human evolution. Many peculiar features of human social behavior, such as the high-level of non-kin cooperation, undifferentiated altruism, behavioral conformism, strong emotional affiliation to larger (e.g. ethnic) groups or simply deleterious cultural practices are explainable as outcomes of complex co-evolutionary games involving bias transmission, various forms of reciprocity, kin or group-selection, or moralistic punishment (see P.J. Richerson, R. Boyd 2005; R. Boyd, P.J. Richerson 2005).

Another important position commonly held by dual-inheritance and macro-evolution theorists is that, similarly to animal niche construction (F.J. Odling-Smee *et alii* 2003), culture creates novel environments, which in turn lead to new pressures for natural and social selection on both genes and behavior. These eco-cultural niches, generally seen as complex packages unifying environment, technology and social structures (I. Kuijt, A.M. Prentiss 2009; W.E. Banks *et alii* 2006), may be considered to express local optima of adaptive equilibrium in a rugged fitness landscape with multiple potential peaks[2]. Once a population reaches a particular fitness peak, climbing another, albeit higher, becomes difficult, as this transition necessarily involves a temporary reduction in fitness. However, severe environmental or demographic stress may serve to dislodge a population from its current fitness peak, allowing it to escalate a higher one, if accessible. Moreover, if historical hazard brings different adaptive strategies in close proximity they may compete, with the most successful eventually increasing on the expense of the other. Both ways of descending into fitness "valleys" are therefore leaving room for the directional, cumulative growth praised in most traditional social-evolutionary scenarios (R.L. Bettinger 2009).

Specific biases in transmission mechanisms (e.g. imitation) allow human to acquire fastly new behavioral rules, without exhaustively examining the immense amount of available social and

[1] For brevity reasons, some other important theoretical members of the Darwinian family, such as cultural selectionism (R.L. Lyman, M.J. O'Brien 1998) or human behavioral ecology (E.A. Smith, B. Winterhalder 1992) will not be analyzed here.

[2] For an evaluation of Sewall Wright's "fitness landscape" concept in cultural evolution, see R.L. Bettinger 2009.

environmental information. While granting culture its peculiar, cumulative character, the reliance on learning entails important trade-offs, with conformism as a most typical outcome (J. Henrich, R. Boyd 1998). To put it otherwise, living into a cultural niche, while advantageous in many respects, may also mean getting trapped into it.

Variously interfering with the co-evolutionary processes, demography plays a vital role in cultural evolution and thus provides a key candidate in explaining any major episode of cultural accretion or, for that matter, stasis. As a rule, cultural sophistication moves faster and further in larger than in smaller populations. The latter are always vulnerable to information loss and cultural "impoverishment" (i.e. the Tasmanian effect – J. Henrich 2004). Hysteresis loops further reinforce the pattern: preexisting larger populations have a strong tendency to remain large in times of crisis and have also better chances of escalating a higher adaptive peak, while small initial populations are more vulnerable to further demographic decrease and information loss (P.J. Richerson *et alii* 2009).

◈ Cultural stasis and the "sapient paradox"

Although there is little doubt that the gene and culture co-evolution started much earlier and carried huge consequences for the path subsequently followed by human evolution, the best evidence for this process comes from Late Pleistocene and Holocene times, for which improved environmental, genetic, and archaeological data are available. However, even in these cases involving strictly the modern human anatomy long episodes of stasis appear quite common in cultural evolution.

Colin Renfrew's "sapient paradox" (2001) provides a case at point: although the modern anatomy emerged somewhere in sub-Saharan Africa about 200 ka ago (I. McDougall *et alii* 2005), little cultural innovation is actually recorded before 50 ka BP. With the exception of several episodes of apparent sophistication (S. McBrearty, A.S. Brooks 2000), which punctuate the otherwise quite homogeneous record of African Middle Stone Age (MSA), no particularly cumulative effects are visible before the advent of the Upper Paleolithic around 40 ka BP, when the use of Mode 4 technology, together with portable and parietal art, spread across Western Eurasia. Thus, for thousands of millennia, *Homo sapiens sapiens* in both Africa and Middle East apparently behave similarly to his Neanderthal counterparts in Europe.

Even after the successful colonization of Western Eurasia by *Homo sapiens sapiens*, which undoubtedly brought important changes in mobility and subsistence patterns, technology and symbol use (P. Mellars 2005), the pace of change is still slow, at least in comparison to the Holocene cultural explosion. Pan-European technocomplexes such as the Aurignacian or the Gravettian, acknowledged as such precisely on the grounds of their quite homogenous material culture, lasted about ten millennia each. In various parts of the Old World (e.g. Australia, South Asia), the Late Pleistocene lifestyle and the related technology (including Mode 3 lithic technology) survived to recent historical times. Furthermore, recurring episodes of stasis and accelerated change are documented archeologically in various parts of the Holocene New or Old World (J.C. Chatters 2009; I. Kuijt, A.M. Prentiss 2009).

Thus, contrary to the narratives stressing a gradual increase in social complexity, the big picture of cultural evolution appears much more complicated, with long periods of stasis and adaptive equilibrium punctuated by episodes of fast, cumulative change. Highly dependent on unstable environmental settings, hunter-gatherers seem particularly susceptible in experiencing such a syncopated evolutionary pattern.

◈ Hunter-gatherers in the fitness landscapes

Although still a highly debated socio-type (S.B. Kusimba 2005; K.E. Sassaman 2004), hunter-gatherers, including the Paleolithic ones, are paradigmatically approached from an environmental perspective (R.L. Bettinger 1991), which generally allows only for simple, usually two-folded typologies. The most popular dichotomies separate foragers from collectors (L.R. Binford 1980), travelers from processors (R.L. Bettinger 2001), and immediate-return from delayed-return societies (J. Woodburn 1982). All these typological attempts found a systemic correlation between ecological settings and hunter-gatherers' subsistence, mobility, technology, demography and social arrangements.

As a large number or ethnographical case studies show, hunter-gatherers habitually respond to short and medium term environmental challenges through changes in location, mobility, seasonal

scheduling or group fusion/fission. Their choices are obviously channeled by preexisting environmental and technological knowledge and by their basic social structures; as a rule, socio-technical systems (B. Pfaffenberger 1992), for which hunter-gatherers actually provide textbook samples, are very resilient to piecemeal changes (J.C. Chatters 2009). In fact, the acknowledged socio-economic typological categories appear more or less conterminous to the adaptive strategies, or, in more elaborate terms, Resource Management Strategies (I. Kuijt, A.M. Prentiss 2009) gravitating around local adaptive peaks. Even in the context of the powerful presence of complex neighboring societies, the imbricated nature of these strategies makes the hunter-gatherer lifestyle very resilient to change (A. Barnard 2007). In order to explain their reluctance to innovation, some scholars even proposed a hunter-gatherers' "syndrome" (G. Lenski 2002): while subsistence base, mobility and technology inhibit the scope of material accumulation and social competition, the absence of the latter further dampens any important change in subsistence or technology. The egalitarian ethos characterizing most of these societies provides a strong mechanism discouraging innovation. Hereditary ranking, one of the most important outcomes and stimulus of complexity, is a rare occurrence among hunter-gatherers. More important for the current arguments, the middle-range (or "transegalitarian") societies are rare, precisely because, when initiated, social stratification makes fast progresses, leading rapidly towards the complex end of forager typologies (D. Owens, B. Hayden 1997; A.M. Prentiss *et alii* 2007). As a low demography is crucial for the elaborated collective control needed to sustain this peculiar circularity in social reproduction (K. Kosse 1994), any notable population growth, either as a local population growth or through extended contacts between groups (S. Shennan 2001), threatens it and gives way to novel adaptive responses.

Contrary to the short timespan available for ethnographers, Late Pleistocene and Holocene archaeology benefits from a better perspective on the *longue durée* in hunter-gatherer adaptation. Ethnographically, the more complex hunter-gatherer adaptations are associated to particularly productive environments (K.M. Ames 1995) and an elaborated technology (R. Torrence 2001), allowing for subsistence intensification (S.L. Kuhn, M.C. Stiner 2001). What archaeology in turn reveals is a more complicated picture, with "simple" and more "complex" strategies often succeeding each other (R.L. Bettinger 2001, 2009; S.B. Kusimba 2005; K.E. Sassaman 2004; I. Kuijt, A.M. Prentiss 2009). While small micro-evolutionary changes were frequent, any important alteration of basic adaptive strategies proved much more difficult and required dramatic shifts in hunter-gatherers natural or social landscape (R.L. Bettinger 2001; J.C. Chatters 2009). Prolonged times of environmental instability seem particularly prone in triggering niche cracking, which may be followed by adaptive innovations in isolated sub-populations (I. Kuijt, A.M. Prentiss 2009) or simply by important cultural loss (A.M. Prentiss, M. Lenert 2009).

Summing up, perhaps opportunistic in economic terms, the hunter-gatherer groups, like most human societies, are less flexible in the social realm and resilient to purposeful change. In fact, as Holocene archaeology suggests, many revolutionary leaps in hunter-gatherers' evolution, including the adoption of domesticates, were actually motivated by the desire to *maintain* the previous social and economic arrangements - G. Barker 2006. Their inner growth limits are not, however, explicable on cognitive capabilities. Although the demographic, environmental or social variables might have worked differently in Pleistocene contexts[3], it seem nevertheless reasonable to take any important resemblance in subsistence, technological or settlement patterns as documenting at least comparable structural constraints and opportunities.

◈ Meat, fire and children: solving coordination problems

Despite the recently widespread adherence to the neo-Darwinian research program, very few attempts have been made to link the co-evolutionary models with archaeological and paleoanthropological data provided by extinct hominids. Although in theory perfectly suited for macro-evolutionary modeling, the Pleistocene selective environments are considerably harder to reconstruct[4] - and evaluating ancient minds seems by far the most challenging task. Reconstructing past cognition,

[3] Environmental productivity, demographic encapsulation or technological innovations granted Holocene hunter-gatherers cultural responses which were neither needed, nor possible in the Pleistocene social and natural landscapes (R.L. Bettinger 2001).

[4] Most existing attempts are still focused on the Late Pleistocene (e.g. W.E. Banks *et alii* 2006).

and particularly the pre- or non-sapient minds, is a delicate endeavor, on both epistemological[5] and practical grounds. Restricted to analogical reasoning and bound to the preserved remains of past material culture, archaeology has only a poor access to individual rationality; what archaeology actually evaluates is a socially and culturally biased average, that is, the "collective" intelligence. Unfortunately, and sociologists know it for a long time, there is often a huge gap between individual possibilities of acting rationally and their actual behavioral choices in social contexts (J. Elster 2007). The focus here will be on the data proving the generic cognitive capabilities of the Pleistocene hominids grouped into the *Homo heidelbergensis/neanderthalensis* clade (I. Tatersall, J.H. Schwartz 2007). The reasons for selecting this Eurasian sample are pragmatic, as they provide a richer archaeological record.

There are serious grounds to infer that these big-brained hominids (G.P. Rightmire 2004) have had already solved complex adaptive issues, in both technological and social realms. The most important accomplishments refer to the cooperative arrangements involved in big game hunting, fire use and child rearing. While active scavenging probably represented the main means for meat acquisition in earlier periods (J.P. Brantingham 1998; P.S. Ungar *et alii* 2006), successful big game hunting is solidly documented from the Middle Pleistocene on (P. Vila, M. Lenoir 2009). The 400 ka old Schöningen spears (H. Thieme 1997) provide irrefutable direct evidence. Neanderthals' extensive reliance on herbivore hunting is widely acknowledged (for an overview, see M. Patou-Mathis 2000). Similarly, although on occasion contested (K. Schick, N. Toth 2001), fire control (and presumably cooked food) represents another early behavioral acquisition of the genus *Homo*, possibly predating the Middle Pleistocene (N. Alperson-Afil, N. Goren-Inbar 2006). Furthermore, the fragile newborns and the "modern" life history suggested by the anatomy of both *H. heidelbergensis* and Neanderthals makes a strong case for an early existence of some form of collective breeding.

Obviously, all these innovations must have had a long and complex social-evolutionary history and their first recording in the Middle Pleistocene may be simply a preservation artifact. The main point, however, is the existence of an extensive resource and risk pooling already in the Lower Paleolithic. As B. Dubreuil recently suggested (2010), solving these public good games required by default the existence of an inhibitory control on behavior. As sticking to cooperative arrangements in the face of competing motivations is an executive function of the pre-frontal cortex, no further changes of this area need to be associated to the emergence of *Homo sapiens sapiens*. However, as the same author suggested, a higher association of the areas in the temporo-parietal cortex, presumably responsible for superior perspective taking and a high-level theory of mind, was still needed. This missing neural reorganization seems to explain, for Dubreuil at least, the absence of symbolism, art or cumulative culture in the case of *Homo heidelbergensis*. Notwithstanding, following his very argument[6], proving archaeologically the existence of these features in the Neanderthal case, for instance, would make the changes in the temporo-parietal cortex redundant. Increasing archaeological evidence suggests that this was precisely the case.

◈ Early living in the cultural niche

An increasing amount of evidence, such as the Acheulean "Venuses" from Berekhat Ram (Israel) and Tan-Tan (Morocco) (F. d' Errico, A. Nowell 2000; R. Bednarik 2003), or the pervasive use of ochre in both domestic (M. Soressi, F. d' Errico 2007) and funerary contexts (P. Pettitt 2002) during the European Middle Paleolithic, supports an early emergence of symbolism. Complex lithic and organic technologies, including hafting (A.F. Pawlik, J.P. Thissen 2011), much like logistical hunting (M. Patou-Mathis 2000), long-distance transport of lithic raw material and elaborated settlement structures[7] are occasionally documented long before the Upper Paleolithic. The gradual colonization of higher, colder and highly seasonal environments by Neanderthals (T. Hopkinson 2007) implicitly points to other skills, such as tailored clothing. All these behavioral features, way remote from the aptitudes of any other primate, point to effective social networks and typically cultural transmission mechanisms, such as imitation, conformism, active social learning and teaching. To put it otherwise,

[5] Our own sapient cognitive framework, which by definition uses abstract concepts (E.J. Lowe 1998) renders difficult, if not virtually impossible a proper understanding of animal intelligence, for instance.

[6] "When a behavioral pattern is shared within one clade, it is more parsimonious to assume that it is produced by the same proximate mechanisms" (B. Dubreuil 2010, p. 61).

[7] Ranging from mammoth bone shelters in open air locales, such as Ripiceni-Izvor site (Al. Păunescu 1993) to "curated" cave settlements (J. Speth 2006).

although only few traces of inherently complex adaptations are preserved, living in the typically human "cultural niche"[8] (R. Boyd *et alii* 2011) was already accomplished. Additional evidence in the form of long-lasting traditions in stone knapping further strengthens the case for this, essentially "modern", extra-somatic inheritance system.

The Acheulean handaxes appear in the archaeological record about 1.5 Ma ago and occur sporadically in many assemblages in Africa and Eurasia until 200 ka BP, thus transcending several taxonomic clusters of the *Homo* genus, including the archaic *Homo sapiens sapiens* (K. Schick, N. Toth 2001). For some authoritative voices in dual-inheritance theory, the morphological similarities between the Acheulean handaxes argue *against* a purely cultural transmission, which would have automatically led to important divergences (P.J. Richerson, R. Boyd 2005, p. 142). However, although the actual diversity of Lower Paleolithic industries is certainly underestimated (K. Schick, N. Toth 2001), in the lack of an extra-somatic learning mechanism like imitation, the handaxes' longevity would have not been possible at all (S. Shennan 2001).

The gradual expansion of Mode 3 flake technology in both Africa and Eurasia proves another long-lasting trend, again cutting across acknowledged paleoanthropological subdivisions. Furthermore, there is now compelling evidence for the existence of some clear directional trends in the Mousterian (M. Langley *et alii* 2008). Stable technological traditions, or rather "social memory units" (J. Richter 2000; see papers in S.L. Kuhn, E. Hovers 2006), are documented in many areas in Europe and Middle East. If not a simple preservation artifact, their increased visibility in the second half of the Last Glacial clearly points to cumulative developments unconnected to any anatomical changes whatsoever. With the important exception of Chatelperronian[9] (J. Zilhão 2006), these patterns of change were not leaning towards the Upper Paleolithic style technological adaptation (i.e. blade production, bone industry), which makes perfect sense from a fitness landscape perspective (S.L. Kuhn 2006).

In sum, although the Lower and Middle Paleolithic do indeed appear as intervals of relative cultural stasis at least in what the generation of entirely novel forms of behavior is concerned (S.L. Kuhn, E. Hovers 2006), multiple lines of evidence indicates human learning abilities virtually indistinguishable from their modern counterparts. The issue to be addressed is therefore why innovations, clearly taking place at certain times and places, failed in disseminating into a wider social realm before the second half of the Last Glacial.

◈ A niche for few: the Lower and Middle Paleolithic adaptation

Although grounded on different theoretical perspectives, several approaches concur in granting demography a powerful explanatory role in Pleistocene cultural evolution (S. Shennan 2001; P.J. Richerson *et alii* 2009; L.S. Premo, S.L. Kuhn 2010; T. Hopkinson 2011). From my point of view, they provide a much needed help for a better understanding of the Lower and Middle Paleolithic evolutionary dynamics.

As already suggested, there is a strong correlation between the population size and the promotion, spread and persistence of innovation. Most Pleistocene demographic estimations put forward remarkably small numbers, suggesting both low local density[10] and an overall population growth rate close to zero. As J.L. Boone (2002) convincingly demonstrated, the explanation for the low rate stands in a long-term averaging across periods of relatively rapid local population growth interrupted by infrequent but massive crashes, caused either by local resource depletion or by dramatic environmental changes. Larger inter-birth intervals, higher physical stress and fertility levels below the extant foragers' average were also inferred for extinct hominids like Neanderthals (E. Trinkaus 1995). Models derived from metapopulation ecology (T. Hopkinson 2011), much like the genetic bottlenecks recorded (M.M. Lahr, R.A. Foley 1998) concur in reinforcing the image of a saw-like demographic graph, punctuated by possibly rapid growth and dramatic extinctions of local populations. Moreover, even the documented Middle Paleolithic patterns of change are far from sustaining a continuous, gradual accumulation of innovating behaviors, but rather fast cumulative

[8] If a culturally mediated migration was indeed involved in maintaining the low level of genetic diversity recorded for the Middle and Upper Pleistocene humans (S.L. Premo, J.J. Hublin 2009), it would point to an early emergence of symbolic principles of social inclusion/exclusion.

[9] If indeed a Neanderthal work, the Chatelperronian dilutes irrevocably the case of cognitive differences between archaic humans and *Homo sapiens sapiens.*

[10] The actual size of Paleolithic local groups is uncertain, but numbers close to the ethnographical forager average of 50 individuals are usually acknowledged (C. Gamble 1999).

"sprints", often followed by cultural loss. This mosaic evolutionary pattern seems therefore connected to the size and dynamics of local populations than to the evolution of global metapopulation (T. Hopkinson 2011).

On a large, biogeographical scale, the huge niche expansion initiated from Eastern and Southern Africa by Lower and Middle Pleistocene hominids was certainly connected to the ability of selecting suited habitats, that is, patchy, tropical grasslands (for an overview, see C. Finlayson 2004). The first persistent colonization of open and cold Eurasian is actually recorded very late, after the advent of Upper Paleolithic some 40 ka ago. The expansion of the *Homo erectus* ecumene suggests repeated fissions in previously unoccupied spaces, once the local environmental carrying capacity was reached. Involving carnivore competition, temporary shortages, colonization of unfamiliar landscapes, etc., this ability to "surf the ecological tide" was in no way unproblematic and certainly encouraged a strong selection for increasingly cooperative arrangements. However, simply sticking to familiar ecological niches, that is, less variable environmental settings might have entailed important consequences, such as low local populations and their propensity for conformism (J. Henrich, R. Boyd 1998; R. Boyd *et alii* 2011). This outcome is particularly likely if populations packed in adjacent areas maintained as expected a moderate level of inter-group mobility, but practiced a preponderantly vertical transmission of adaptive information (S. Shennan 2001). On a theoretical level, innovations are expected to preferentially occur in marginal populations, in which conformist pressure is lower (A.M. Prentiss *et alii* 2009). However, if the isolation of local populations was avoided, or if these occasionally isolated populations had only a short life[11] (T. Hopkinson 2011), the incorporation of new behaviors into the larger metapopulation could have repeatedly fail in spreading and being adopted. That would have led to a slow pace of innovation, acting as a gradual drift at the higher, metapopulation level. This seems to have been the case for a great part of the Lower and Middle Pleistocene. The crystallization of similar socio-technical packages (i.e. adaptive convergence) or mechanical constraints (i.e. technical convergence) might have also contributed to the largely homogenous aspect of Mode 1 and Mode 2 technologies. Furthermore, the Lower Paleolithic lithic hardware is mainly composed from expedient or highly symmetrical tools (e.g. handaxes), with a quite limited room left for morphological variation. Their overall simplicity also suggests a rather low investment in the technological aids to adaptation, which further questions the solidity of lithic-based assessments of Lower and Middle Paleolithic cognition and cultural evolution in general (M. Anghelinu, L. Niță 2008).

The late Middle and early Upper Pleistocene adaptation, when a shift towards a top predator niche followed by a relative extension of the social life is recorded (R.A. Foley, C. Gamble 2009), suggests a more intricate scenario. The details of the successful switch to herbivore hunting are unclear. Yet, once adopted and confronted to increasingly varying environments, the new adaptive strategy (which definitely involved diverse local tactics, indirectly expressed in the ethological diversity of hunted species - M. Patou-Mathis 2000), though higher in the fitness landscape, maintained nevertheless potentially high extinction rates for local groups. There are serious reasons to consider this forager adaptation as stable, effective, but nevertheless risky. Limited to habitats displaying mixed biota (C. Finlayson 2004) and focused on prime-adults herbivore hunting[12] with restricted technological means[13], the MSA/Mousterian almost by default implied residentially mobile, small local groups, quite vulnerable to swift environmental changes, local demographic crashes and information loss (L.S. Premo, S.L. Kuhn 2010). Given the constant relocation to more productive patches or refugia as a common reaction to climate degradation, the lack of correlation between environmental settings and Mousterian technological responses in both space and time (S.L. Kuhn, M.C. Stiner 2001; J.P. Boquet-Apel, A. Tuffreau 2009) appear less surprising.

From the Acheulean emergence to the MSA precocious developments and to the more complex Upper Paleolithic adaptations, possibly including the sexual division of labor and intensive use of low-ranked resources (S.L. Kuhn, M.C. Stiner 2006), Africa appears as a cradle of innovation. In the

[11]. Obviously, colonizing unfamiliar landscapes, coupled with environmental events certainly provided countless opportunities not only for the extinction of local populations, but also for isolating larger metapopulations. These occurrences are highly visible in the taxonomical diversity of *Homo erectus*, but less accurately captured in the archaeological record.

[12] A similar pattern seems to have characterized the MSA prey choice (*cf.* S. Shennan 2001).

[13] Except for the increased flexibility allowed by hafting and flake/blade production and the production of lithic points of various shape (Levallois, foliate), the MSA/Mousterian preserved technologies show no spectacular progresses in comparison to the late Middle Pleistocene.

same time, the size and stability of African hominid populations is clearly supported both by the current genetic diversity and by repeated wave of emigrants leaving the continent during the Pleistocene (M.M. Lahr, R.A. Foley 1998).

Similar arguments can be advanced for western Eurasia. At least some directional trends in the Eurasian Mousterian appear connected to local demographic increases (for the Middle East Mousterian, see L. Meignen *et alii* 2006). Both micro-evolutionary purposeful changes and simple drift could explain these gradual changes. The main point, however, is that although sharing a similar adaptive strategy, the MSA/Mousterian fitness landscape did not necessarily stand in peaks of equal heights; multistable population densities and hysteresis loops may actually explain the palimpsest of Mode 3 and 4 technologies recorded during the Late Glacial (P.J. Richerson *et alii* 2009). Anywhere favorable environmental circumstances allowed for denser demographic networks, cultural innovations not only occurred, but also lasted.

The high visibility taken by this process during the transition to the Upper Paleolithic, although magnified by paradigmatic biases (G.A. Clark 2009), is the outcome of a very particular complex of circumstances, in which modern human anatomy played no particular role. The successful colonization of the challenging, but seasonally highly productive steppe landscapes was possible through the adjustment of a likely allogenous adaptive strategy (C. Finlayson 2004; S.L. Kuhn, M.C. Stiner 2006) to local resources. This allowed the thinner and taller newcomers to climb quite fast a higher fitness peak in comparison to the ones occupied by Neanderthals and their African ancestor alike for hundreds of millennia. The new eco-cultural niche was already doing better in demographic matters by the time it reached Europe, and only a minor advantage would have sufficed to replace quite fast the previous strategy (E. Zubrow 1989). The advantage included a larger proportion of adult survival (R. Caspari, S.H. Lee 2004), but also the extension of social life through extensive symbol use (C. Gamble 1999; R.A. Foley, C. Gamble 2009). Both features are crucial for a successful transmission of adaptive information. Knitting together distant groups and taking advantage of the vast ungulate reservoir of the mammoth steppe, the Upper Paleolithic essentially opened a new eco-cultural niche characterized by wide communication networks. However, even this successful strategy was eventually overwhelmed by the Last Glacial Maximum and replaced through further adaptive shifts (C. Gamble *et alii* 2004).

◈ Conclusions

The issue of cultural stasis is certainly connected to the very complexity of human extra-somatic adaptation, whose emergence required the biologically expensive (L.C. Aiello, P. Wheeler 1995) ability for imitation. Complex, highly integrated socio-technical systems are better documented from the Upper Paleolithic on, but the cultural logic and rules governing both stasis and innovation are certainly much older. The cognitive "hardware" needed for symbolic thinking, long term cooperation and culturally-biased information inheritance most likely predates the Middle Pleistocene. In fact, it seems more profitably to focus the search for their emergence to the Lower Pleistocene and *Homo erectus* than on the *heidelbergensis*/Neanderthal clade.

The total lack of synchronicity between the African emergence of modern anatomy and the elaborate Eurasian Upper Paleolithic cultural repertory and the repeated episodes of stasis documented by Holocene archaeology leave little room for biologically based explanations. The African MSA, much like the European Middle Paleolithic record, is replete with examples of innovative practices which afterwards disappear with no long-lasting cumulative effects.

It was argued here that the redundant aspect of Lower and Middle Paleolithic adaptation, when contrasted to the more "creative" Upper Paleolithic, was not a matter of individual ability to innovate, but rather of finding a way for passing the innovation to larger groups. Although naturally variable in the local tactics, the opportunist forager strategy dominating these intervals both motivated and allowed only for limited innovation. Even when discovered, many novelties were subsequently lost. These failures were not simply caused by catastrophic environmental changes: previous demographic states and the limits inherent in human transmission mechanisms constantly interfered. Elaborating on their complex interplay, thus far better captured in theoretical models than in archaeological applications, opens a promising avenue for further researches on Pleistocene cultural evolution.

◈ Acknowledgements

This work was possible with the financial support of the Sectorial Operational Program for Human Resources Development 2007-2013, co-financed by the European Social Fund, under the project number POSDRU 89/1.5/S/61104. The author is indebted to dr. Radu Ioviță for English proofing of the text and for his comments on an earlier version of the manuscript, and to dr. Loredana Niță for the precious help provided in checking the references.

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The early prehistory of the Americas and the human peopling of the Western Hemisphere. An overview of archaeological data, hypotheses and models

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Abstract: *This article is a general overview of early American archaeology, an updated synthesis of the most important archaeological data and radicoarbon dates concerning the oldest phases of human presence in the Americas, during the Terminal Pleistocene and the Early Holocene. It discusses – in a resumed manner - the most relevant hystoriographical and geographical contexts and academic debates, reviews the existing knowledge on archaeological cultures and sites, lithic technologies and cultural dynamics, and analyses the theories and models that pretend to describe and explain the complexity of phenomena laying at the base of the pristine peopling of the Western Hemisphere. This topic is not well represented in the European archaeological literature and, for that reason, this paper is meant for the Romania/European reader who wants to explore, at a general level, the most important "secrets" of such an exotic subject. The enigma of when people set foot on American lands, at some point during the terminal stages of the Ice Age, has not been solved yet. The chronologies of the earliest migrations, the origins of the first settlers, the demographic expansion models and the relationship between the earliest cultures still represent delicate issues that cause vivid controversies, clashes of paradigms and an immense input of energy and passions among scientists. Indepenedent of the absolute dates, the arrival of the first human groups to that part of the world occurred much later than in Europe, Asia or Australia, perhaps during or after the Late Glacial Maximum, most likely not long before 18,000 years ago, as far as one can tell today. The most common theories suggest terrestrial migration routes starting somewhere in Siberia and crossing the Bering Land Bridge into Alaska and Yukon. In spite of the wide opinios and the increasing genetic data in favour of this hypothesis, there is little archaeological data to support it. Alternative hypotheses were proposed during the last decades, which point at other possible places of origin, such as Western Europe, for the earliest peopling of North America, or the Pacific, for the case of South America. For more than half a century, the traditional archaeology promoted the paradigm known as the "Clovis-first" model, according to which the first American settlers were a sophisticated hunter-gatherer culture known as Clovis, well documented over most of the United States and dated back to at least 11,500 RCYBP. Today, this model is considered refuted and there is increasing evidence in support of "older-than-Clovis" populations, not necessarily related to the famous mammoth hunters, both in North and South America. Some intermediary regions, such as Mexico and Central America, still fail to produce a consistent archaeological record for the earliest periods. Many archaeologists claimed very old radiocarbon dates for the human presence in their respective sites; nevertheless, the widely accepted earliest discoveries do not go further than 15,000 years ago. The peopling of the Americas continues to be today, one century after its beginnings as an academic field of research, one of the most debated and controversial subjects in world archaeology.*

Rezumat: *Acest articol reprezintă o vedere generală asupra preistoriei timpurii a Americii, o sinteză actualizată a celor mai importante informaţii arheologice şi datări cu C^{14} în legătură cu cele mai vechi faze de prezenţă umană în cele două Americi, în timpul Pleistocenului Final şi Holocenului Timpuriu. Aici se discută – într-o forma abreviată – cele mai relevante contexte geografice şi istoriografice ale temei şi dezbaterile academice în vigoare, se revizuiesc cunoştinţele disponibile despre siturile şi culturile arheologice, tehnologiile industriilor de piatră şi dinamica culturală şi se analizează teoriile şi modelele care caută să descrie şi să explice fenomenele complexe care stau la baza populării originale a Emisferei Occidentale. Această temă nu este obişnuită în literatura de specialitate în Europa şi, tocmai din această cauză, articolul de faţă este adresat cititorului român/european, celui care vrea să exploreze, la un nivel general, cele mai importante "secrete" ale unui subiect atât de exotic. Enigma asupra epocii în care primii oameni au pus piciorul pe pământ american, într-un anumit moment din timpul fazelor târzii ale Erei Glaciare, nu a fost rezolvată deocamdată. Cronologiile celor mai timpurii migraţii, originea primilor locuitori, modelele de expansiune demografică şi relaţiile între cele mai vechi culturi cunoscute încă reprezintă astăzi aspecte delicate care provoacă vii controverse, ciocniri de paradigme şi o enormă cheltuială de energie şi pasiune printre arheologi. Indiferent de datările directe, sosirea primelor grupuri umane în acea parte a lumii s-a produs mult mai târziu decât in Europa, Asia sau Australia, probabil în timpul sau după Ultimul Maxim Glaciar, cel mai probabil nu cu mult înainte de 18,000 de ani în urmă, din cât se poate spune azi. Cele mai vehiculate teorii sugerează migraţiuni terestre, pe rute care începeau undeva în Siberia şi traversau Podul Terestru peste actuala strâmtoare Bering înspre Alaska şi Yukon. In pofida opiniilor generalizate şi a rezultatelor genetice în favoarea acestei ipoteze, există foarte puţine argumente arheologice care să o susţină. În*

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Studii de Preistorie 11, 2014, p. 33-95.

ultimii ani s-au propus teorii alternative, care vorbesc despre alte locuri posibile de obârşie a primilor colonişti preistorici, de pildă vestul Europei, peste Atlantic, în cazul populării Americii de Nord, sau dinspre Oceanul Pacific, pentru America de Sud. Pentru mai bine de jumătate de secol, arheologia tradiţională a promovat modelul cunoscut ca şi "Clovis-first", după care, primii locuitori ai Americii au fost o sofisticată comunitate de vânători-culegători cunoscută sub numele de Clovis, bine documentată pe teritoriul Statelor Unite şi ale cărei începuturi datează pe la 11,500 RCYBP. Astăzi, acest model este refutat, în faţa crescândei avalanşe de descoperiri care arată ocupaţii "mai-vechi-decât-Clovis", nu neapărat relaţionate cu celebrii vânători de mamuţi, atât în America de Nord, cât şi de Sud. Unele regiuni intermediare, precum Mexic şi America Centrală, încă nu reuşesc să ofere contexte arheologice de încredere pentru epocile cele mai timpurii. Mulţi arheologi au vrut să arate datări foarte vechi pentru prezenţa umană în siturile lor; însă, descoperirile cele mai favorabil acceptate de comunitatea ştiinţifică nu depăşesc pragul de vechime de 15,000 de ani. Popularea Americii continuă să fie astăzi, la un secol de la începuturile sale pe scena cercetării ştiinţifice, unul dintre cele mai dezbătute şi controversate subiecte din arheologia mondială.

Keywords: *Prehistory of the Americas, First Americans, Peopling of the Americas, North America, South America, Mexico, Clovis, pre-Clovis.*

Cuvinte cheie: *Preistoria Americilor, primii americani, populatea Americilor, America de Nord, America de Sud, Mexic, Clovis, pre-Clovis.*

◈ Introduction

The early American prehistory is, perhaps, not among the most familiar topics for European readers, either scholars or members of the general public. The monumental and impressive later civilizations of the New World most likely built up a shield of oweness that often blocks the access to the more "insignificant" manifestations of culture belonging to the most remote periods of human occupation. Olmec colossal heads in the tropical jungle, Mayan and Aztec pyramids, Andean strongholds and monuments, rich tombs and mysterious hieroglyphs… They all contain enough magic and sufficient power to attract everyone's attention, flooding the mediatic environments, television and magazines. But, all these spectacular cultures, commonly labeled by archaeologists and public as "great civilizations", trace their remote origins to a handful of settlers who first pioneered the pristine human conquest of the Americas, many millennia ago, at the end of the last Ice Age, coming from a place we cannot assure yet and at a time we still ignore.

This article is meant to be a general introduction, like a very brief textbook, written for those who develop a first interest in the earliest epochs of the human presence on the American continents, for the students and researchers who want to acquire a general knowledge about the 'state of the art' in the subject of the earliest arrivals to this part of the world and the earliest stages of cultural manifestations west of the Atlantic Ocean. This paper provides a synthesis on what is currently known about those earliest human occupations in the Western Hemisphere (North, Central and South America) during the Terminal Pleistocene and the subsequent Transition to the Holocene; an interval considered, roughly, between about 18,000 and 10,000 calendar years ago (from now on, cal BP) (figs. 1, 2). This comprises the time span between the end of the Last Glacial Maximum (at the end of the so-called Wisconsin glaciation, the North American equivalent of the European counterpart traditionally known as Würm) and the establishment of the current climatic conditions in the Early Holocene, during which the ancient prehistoric American cultures appeared in the archaeological record, transformed over time and space, before being replaced by the later manifestations commonly called "Archaic" (fig. 3).

This paper does not pretend to be a full discussion of the topic and it could never be anything more than an incomplete and general survey of the current knowledge. The archaeological record is simply overwhelmingly rich in data and it cannot be dealt with in a journal article. The reader can find a bounty of detailed information on the theme in a wide array of synthetic publications written by renowned authors (R. Bonnichsen, K.L. Turnmire 2005b; T. Dillehay 2000; E.J. Dixon 1999; B. Fagan 2004, 2011; S. Fiedel 1996; D. Meltzer 1994, 2009; D. Stanford *et alii* 2005, etc.). The discussion here strictly embraces the most sounded cultural components of the archaeological record. Because of obvious space limitations, it is not possible to properly venture into the fields of palaeoenvironments, palaeoclimatology, linguistics and genetics. It rather focuses on archaeological sites, artifacts, human remains and subsistence patterns, emphasising the radiocarbon ages available.

I agree with David G. Anderson (2005) on the necessity to employ (when possible) calibrated dates, at least when doing macro-regional interpretations and continental comparisons of data; at least for North America, as the calibration curves for the Southern continent are still insecure. The

discrepancy of 1500-2000 years between the radiocarbon values and the actual calendar years - complicated by still insufficiently known fluctuations of the ^{14}C isotope atmospheric reservoir during the considered interval (*cf.* D.H. Mann *et alii* 2001) - could play tricks on the understanding of the real manifestations of the early human cultures in time and blur the results of comparisons at a continental level. Nevertheless, this text prefers to employ "radiocarbon years before pesent" (RCYBP) and introduces calibrated values only when provided by the cited authors in their publications. It is very important to warn the reader about a crucial detail: calibrated dates (calendar years) are expressed here as "cal BP", as they are always managed in the American prehistory, meaning "calendar years before present", so they should not be understood as "cal. B.C." (not "before Christ"). Specific cultural-historic frames are also avoided, yet making use of already established names of archaeological cultures and complexes. Such models can be mentioned in the text, but there is no formal commitment to any, for reasons of objectivity.

Inevitably, this paper is somehow closer to the cultures, issues and controversies manifested within the North American archaeology, particularly the United States of America, a region better known by the author. On the other hand, the Mexican territory receives some particular treatment from place to place in this article, as the author of these lines has been working in Mexico for several years so far. Certain equilibrium between the northern and southern parts of the Western Hemisphere was an ideal goal of this text, but, if that was not achieved, I apologise to the readers who felt disappointed.

◈ A few words on geography, terminology, time frames and American Pleistocene

The overall geographical settings for the regions discussed here are probably familiar to the majority of the readers. However, a few short considerations may be required, especially concerning the delimitations of large geo-cultural areas. In the first place, the two Americas, North and South, are assumed - by almost everybody in the Western Hemisphere – as two different continents; that is why one is expected to refer to them as "the Americas", in plural. Few people may have doubts about where South America begins; it commences, as a continent and geo-cultural "latin" entity, at the Panama Isthmus in the north and it has a well-defined contour all around its oceanic shores. Things are not that easy with North America though. Not only the general public, but scholars themselves, use to conceive North America as limited to its northern, mostly English-speaking half, meaning the United States of America and Canada, up to the frozen Alaska and Yukon regions in the northwest, where the "western world" meets Russia at the Bering Strait. For some reason, people forget to include Mexico. Curiously, almost everybody outside Mexico tend to locate this country in Central America. Now, strictly from a geographical point of view, Central America does not exist as a separate continent. It is only a geo-cultural sub-division of North America, perceived on the basis of linguistic arguments: that diffuse region full of jungles where everybody speaks Spanish. Then, in the eyes of the public, as a Spanish-speaking country, Mexico must be part of Central America. That is wrong even from the most liberal cultural-geographical perspective. Mexico is an inseparable part of North America; its geology, climate (in most of its regions), and even its prehistoric archaeological record link it strongly to North America. The reader should know that the landscape changes east of the Tehuantepec Isthmus, where Mexico narrows just west of the Yucatan Peninsula, becoming clearly more similar to Central America in climate, precipitations, flora and fauna. So, if one was to establish continental subdivisions elaborated on climatic and biological criteria, Mexico's Yucatan and Chiapas regions would indeed belong to the Central American sphere of influence. But, as such divisions on top of divisions would turn things even more complicated, it is convenient to assume Mexico as part of North America, alongside the US and Canada. It is probably worth specifying here that, in this text, the word "America" refers to an entire hemisphere, not only to one country, as most inhabitants of the United States are used to understand it.

This is not the appropriate place to start a long discussion about the general environmental conditions, causes and processes that characterised the Pleistocene epoch, also known as the Ice Age, an era that started 2.6 million years ago (figs. 1-4). Brian Fagan (2009) edited a splendid and beautifully illustrated introduction to the subject, for those interested. However, the non-specialist reader should know a few general facts about how the Americas looked like during the last major glaciation (only the last one in a long series of alternating cold and warmer periods comprised within the Ice Age) (fig. 2).

First, as it is widely known, during the glacial period most of the water on planet Earth was trapped in the glacier caps around the world, meaning that the ocean levels were about 100 m lower than today, exposing large portions of the continental shelves, according to the particular topography of each coast. In consequence, the contours of the Americas were slightly different from today, differences made more visible on the Atlantic shores and less pronounced on the opposite coasts where land drops more abruptly into the sea (fig. 4). That means that archaeologists today can hardly have access to the ancient shorelines and their corresponding archaeological record; a permanent bias in the debates over the earliest human arrivals and migration routes. Second, as sea levels were low, Alaska and Siberia represented a single landmass, known by archaeologists as Beringia: the famous Land Bridge supposedly used by the first settlers to move from Asia to America, according to the most widely accepted peopling models. Third, and curiously, during the Ice Age, Alaska was ice-free, covered by wide-open grasslands suitable for large herds of herbivores, with subarctic forests and rivers rich in resources. Fourth, enormous ice caps covered the entire northern half of North America. On the west, along the Pacific coast, a narrower ice sheet (known as the Cordilleran ice sheet) covered the entire Canadian coast and penetrated into Washington and Oregon in the current USA (United States of America). Almost everything else known today as Canada was covered by a second massive ice sheet (the Laurentide ice cap), about 3 km thick, whose southern margins reached the latitudes where today the American cities of Chicago and St. Louis are located (fig. 4). During most of the Pleistocene - until late at the very end of that chronological interval - these two ice sheets were completely stuck together, forming an endless, impenetrable, lifeless polar desert. This is a very important "detail", as the idea of a human pristine colonization by foot from Beringia, through an inland route leading to the vast grasslands south of the ice sheets cannot be taken lightly and as a self-evident fact (fig. 26).

It is necessary to mention the different perception we have of the idea of "antiquity" in the American prehistory. The time frames are compressed on this side of the world, in comparison to the European scales. For Old World scientists, archaeological finds of tens or hundreds of thousands of years of age are normal facts in everyday's academic life. Not so for us, in the Americas. Here, the battles are still harsh around every single new radiocarbon date. The infancy of the archaeological quests on prehistoric grounds has not reached its end yet. The Holy Grail of the American archaeology has not yet been found: when did the very first people enter the continent? Where did they actually come from? Before diving into more sophisticated matters about the first hunter-gatherer societies of the continent (social organisation, cultural behaviours and so on), archaeologists in the Americas are still struggling to find a definitive answer to these primordial and fundamental questions. This paper is trying to show how complicated and fierce the controversies still are around this crucial subject.

Unlike many other regions in the world the European reader may be more familiar with, in most parts of the Americas the "Stone Age" lasted for millennia until very recently, in some cases up to the European invasions and, regionally, long after that. Few cultures developed substantial metallurgy and most tools represented in the archaeological record are made of flaked stone (cherts, obsidian, basalt, rhyolite, limestone, quartz), almost regardless of the time period they belong to. Stone tools were still in use all over the hemisphere only a couple of hundreds of years ago, well after the establishment of the modern countries founded by the descendants of European colonists. Also, simpler societies of hunter-gatherers dominated entire regions of both American continents and continued to do so at the same time with the uprising of formidable states and empires inside more complex cultures. This historical and anthropological reality renders the task of identifying the first human occupations a difficult one, not suitable for superficial evaluation and *a priori* assumptions. For example, the discovery - let's say, on the surface - of crude, "primitive"-looking stone artefacts is no guarantee in itself for the presence of early hunter-gatherer groups, as they could belong to any epoch, in theory. Only the thorough knowledge of the technological patterns of stone flaking for each particular prehistoric culture and the direct dating of archaeological finds and sedimentary contexts would provide the scientist with the adequate basis for the identification of the pristine human occupations and the earliest migrations of human groups across the continent. Unfortunately, this is not always the path some of our colleagues choose to follow; sometimes, inferences are made and conclusions drawn upon superficial attributes of artefacts, general impressions, weathering and visual aspect of the stone tools, shapes and contours, ignoring the fact that, during 15,000 – 18,000 years (or more) of possible human presence on the continent, manufacture fashions and stone tool shapes could have returned periodically at different points in time. In the Americas, where thousands of societies employed stone tools for such a long time and over such vast territories, only very rigurous

technological analyses and absolute dating can make the difference between science and speculations.

Another unfriendly factor that affects the prehistoric research in some regions of North America (for example, precisely Northern Mexico where I conduct my own research on early human occupations) is the poor stratigraphy. Whether in many parts of the United States the earliest phases of human presence are buried deep into dark soils, beneath later, Archaic strata (meaning Middle to Late Holocene; fig. 3), in the desert areas situated at high altitudes the sedimentation is very slow, inconsistent, and sediments simply cannot accumulate due to high erosion rates. That leads to a veritable nightmare for prehistorians: artefacts from all possible periods cluster together on the surface or at very shallow depth, erasing any hope for a stratigraphic control. Also, cultural features are diffuse, with very low potential for identification through remote sensing or aerial surveys (C.F. Ardelean, J.I. Macías 2012). Nevertheless, more as an anecdote, the reader should know about an unofficial trick archaeologists in the Americas use to employ. It is believed that bow and arrow were a later arrival to the continent, at an unknown point during the Holocene (at least, there are no indicators to think otherwise), while the preferred weapon in the earlier cultures was the spear, bearing larger stone points, thrown with an "atlatl" or spear-thrower. In consequence, larger stone points are considered of higher probability of being older than the small arrowheads, which are assumed to be younger. Many of us used to employ this basic criterion for an initial sorting of artefacts. However, future discoveries may well prove us completely wrong.

Finally, terminology is another matter worth mentioning in relationship to American prehistory, especially if one confronts literature from different countries. We cannot actually refer to an "American Palaeolithic", not without risking generating unfortunate confusions. The term is dangerous. The history of archaeological research on the earliest inhabitants of the Americas knew very tense moments when very old, unsustained dates were alleged for the initial peopling of the continent or when - at the opposite end of the spectrum - skepticism manifested rigidly around almost any single radiocarbon date that dared to challenge the conservatory thresholds accepted by the dominant paradigms. So, referring to a Palaeolithic epoch in the Western Hemisphere would create an unwanted parallel with the Old World chronologies and, perhaps, too much legitimacy for the pseudo-scientists and enthusiasts who like to speak of the presence of humans beyond any scientific fundaments. Most specialists working on this topic in the Americas reject the employment of this term. Until recently, the most widespread word used for the earliest hunter-gatherer societies was "Paleoindian" – obviously, in the literature written in English. Frank Roberts first employed this term in the 1930's and it implied certain links between the Pleistocene and the Holocene, because it referred to archaeological cultures that extended, chronologically, over both the Terminal Pleistocene and the Early Holocene (R. Bonnichsen 1999b, p. 2). In the United States of America, mainly, people inherited this word, "Indian", from the colonial times, naming the local indigenous populations. Native tribes, to a certain level, also adopted the label to name themselves in their interactions with the "white men". But that was not the case in Mexico and most of Latin America: the word *indio* has always been considered offensive, as it had been used for centuries as a synonymous for social and race inferiority by the Spanish chronicles and Colonial documents, soon turning pejorative. In consequence, the term was never welcome in the academic writing of Spanish language (C.F. Ardelean 2013). During the last decades, the use of "Paleoindian" diminished and it almost disappeared. Today, the most common term to name the earliest phases of human development in the Americas is "Paleoamerican" (or "Paleoamericano", in Spanish), relatively recently introduced by R. Bonnichsen and considered to be a neutral and "a more descriptive geographical term", without any political implications (*ibidem*). It basically refers to "any humans predating 8000 RCYBP (about 10,000 cal BP), associated with cultures identified as Paleoindian, Early Archaic, or Paleoarchaic" (J.C. Chatters 2010, p. 54).

◈ The childhood of the North American prehistoric research

By the mid-nineteenth century, the eccentric Swiss geologist Louis Agassiz proved the existence of an Ice Age in Europe and pleaded for its manifestation at global scale. Later, he was offered a position at the Harvard University in the US and from there he boosted the commencement of the glacial studies in North America. By the end of the century, other scholars, such as Thomas C. Chamberlain, defined the first accurate maps of the Pleistocene ice caps and labeled the stadials (cold intervals) and interstadials (warmer phases) that composed the North American Ice Age (see B. Fagan 2009) (fig. 2). This way, during the initial decades of the twentieth century, scientists in the United

States were well aware of the existence of a recent, long cold period in the geological history of the continent and of now-extinct animals roaming a different landscape in the past. However, the coexistence of humans and extinct fauna, the existence of the "Glacial Man" in the Americas was not at all a certainty and it remained in doubt for a long time, until speculations and individual passions could be replaced by hard evidence based on archaeological data obtained under controlled scientific conditions (for a comprehensive story of the advent of prehistoric archaeology in the Americas, see B. Fagan 2004; J.M. Adovasio, J. Page 2003).

During most of the eighteenth and nineteenth centuries, academics could not accept the idea that local "primitive" native populations could have been able to create the monumental earthworks in Eastern USA or the large stone monuments of Mexico. Just like it happened in the case of "black" African archaeology, those achievements could only be attributed to white migrants from the Old World, perhaps Phoenicians, Greeks or survivors of a mysterious Atlantis lost continent. Since the sixteenth century, J. Fredericus Lumnius had declared that the ancestors of the modern "Indians" must have been the Ten Lost Tribes of Israel, once exiled by the Assyrians. Such ideas grew on fertile grounds for a long time and they even survive today in the religious beliefs of Mormon sects and inside the troubled minds of pseudo-scientists. In spite of the first academic approaches and the first amateurish excavations realised on the impressive earthen mounds of Eastern USA during the second half of the nineteenth century, few scholars accepted a local origin for the ancient cultures. Eventually, things changed slowly towards the end of the nineteenth century; especially after Stephens and Catherwood 'discovered' the Mayan lost cities in the Mexican and Central American jungles in the 1840's and pointed at their obvious local attributes. Nevertheless, the harsh controversies moved to another ground: the antiquity of Man in the Americas.

During the last decades of 1800's, North America started to feel the influence of the Palaeolithic discoveries in the Somme Valley of France. Boucher de Perthes had begun his archaeological revolution that set the basis for the study of prehistoric people and their ways of life during the Ice Age. Was there a "glacial Man" in America, as well? A handful of scholars were convinced that there was; unfortunately, it was not long before the arguments they contributed proved wrong. Charles Abbott was a physician from New Jersey, a passionate of natural history who loved to collect crude, old-looking stone artefacts from the riverbanks in northeastern United States, advocating for a deep antiquity of humans in the region, probably of the same age like the newly discovered artefacts in Europe. Frederick Putnam, the well-known director of the Peabody Museum at the University of Harvard, who had the same faith in an American Palaeolithic, influenced him. Soon, enthusiasts were searching for the so-called "palaeoliths" all over the countryside. In 1887, the 'Palaeolithic controversy' started officially with Thomas Wilson, a curator of archaeology at the National Museum, who had just returned from a five-years collaboration in European Palaeolithic excavations. He brought those ideas with him and, through official documents from the Smithsonian in Washington D.C., he invited people around the country to collect and deliver old-looking stone tools to the prestigious institution. If artefacts looked like something in the European Palaeolithic, that was a proof for an American Palaeolithic of similar antiquity. That was the beginning of a paradigmatic fight that, in a modified form, continues today: the antithesis between an enthusiasm for old dates and very old human occupations, on one side, and the skepticism, criticism and rigid scientific scrutiny, on the other side.

In contrast with the initial enthusiasm fed by the large numbers of "palaeoliths" collected on the field, a new paradigm was born soon enough: human presence was only a few thousand years old in the Western Hemisphere, at least for North America; perhaps only 2000 to 4000 years old. At that moment, the new official theory was not built up simply on sectarian controversies, but on a scientific analysis of the alleged palaeoliths. An influential character at the Smithsonian Institution, John Wesley Powell, commissioned William Henry Holmes to investigate the fundaments of the Palaeolithic euphoria in the USA. Holmes studied the incoming artefacts, visited the sites they came from and quickly reached the conclusion that they were not at all finished tools indicating remote occupations, but the flaking debris (cores, flakes, preforms) from arrowhead manufacture of very recent times. He even proceeded to experimental flaking in order to support his posture. Holmes struck a hard blow to the "liberal" opinions in American archaeology and gave birth to the new official attitude: skepticism. A few years later, at the beginning of the twentieth century, a Czech-born physical anthropologist, Aleš Hrdlička, joined the Smithsonian and became the fiercest guardian of the skeptical position. Using osteological comparisons and rigidly controlling the field discoveries around the country, he maintained for a long time the strict idea that the archaeological record lacked any arguments in favour of an Ice Age human occupation.

Hard archaeological indicators commenced to show up in USA during the interval between the two world wars. Since 1908, a local black cowboy named McJunkin, from a remote village called Folsom in the northeast of the State of New Mexico had found old bison bones and a few curious flaked stone artefacts (spear points) eroding out of the banks of a small creek (fig. 19). After seventeen years in the man's house, the small collection reached the Colorado Museum of Natural History, where its director, Jesse Figgins, quickly recognised in it the bones of an extinct species of bison, a Pleistocene variety. Could they have been associated in the same context? In 1926, Figgins started his excavations at the locality where McJunkin had made the initial discovery and found another stone point indeed associated with bison bones. He took the artefact to the Smithsonian, but a find removed from its context did not produce a positive effect on Aleš Hrdlička. During the 1927-1928 field seasons, Figgins was careful enough to leave all the newly discovered artefacts in place, so that other scholars could visit the site and witness themselves the association between man-made stone tools and an extinct form of bison. Although Hrdlička continued to be skeptical, the academic community now accepted the undeniable stratigraphic association of finds and the contemporaneity between people and extinct Ice Age beasts. That became a normal practice (even today) in the early prehistoric sites of the Americas: the doubts among colleagues are so high that, if you want to be believed by your peers, you need to organise visits of influential archaeologists to your controversial sites and allow evidence to be validated by others. With Figgins' work, the Folsom archaeological culture was born and the antiquity of Man in North America suddenly moved back 6000 more years, somewhere around 10,000 B.P., as it was guessed for long by the archaeologists before the invention of radiocarbon dating (figs. 11/H, 18).

Only a few years later, another locality, situated in the same State but southwards, came to erase any doubts on the existence of the Ice Age Man on this side of the Atlantic. In the early 1930's, a new road was being built between two small towns, Clovis and Portales, set not far apart. A quarry was opened near Portales, along a shallow creek named Blackwater Draw, in order to extract gravels and sands for the construction (fig. 9). A few boys from neighbouring Clovis town found the first lanceolate, fluted points that later would be called after their town (the daughter of the train station keeper at Clovis re-baptised the place with this name just because she loved to read books about the Frankish king, Clovis) (figs. 6-7). The history of the research there is long and complex (see L. Katz 1997; A.T. Boldurian, J.L. Cotter 1999). The site was also rich in Folsom period contexts, mainly a massive bison kill site at Locality 1, which started to be excavated in 1932 (fig. 10). Later, for years and years to come, especially during the pioneering work of 1949-1951 seasons, Blackwater Draw yielded several localities in which new Clovis-type artefacts were found in direct association with mammoth bones, clearly beneath the Folsom levels. Clovis culture proved to be stratigraphically older than Folsom. A few years later, the first archaeological samples to be tested by Libby's new radiometric dating method were precisely from Folsom and Blackwater Draw, confirming the ages estimated by archaeologists. In the eyes of academics and public, Clovis soon became the iconic manifestation of the "First Americans", associated with the mythical migrants that supposedly crossed the famous Beringian Land Bridge, those who subsisted on mammoth flesh and made stunning spear points. And the "Clovis-first" model stood like that, impenetrable, for half a century.

In Mexico, things went on a different path. Mexican archaeological environment evolved completely apart and separated from the effervescence on the North American stage alluded above (C.F. Ardelean 2013). Traditionally, Mexican archaeologists, mainly the prehistorians, used to keep very little contact with their neighbours across the border. In fact, the lack of communication was mutual, the USA side constantly ignoring (even today, with very few exceptions) what happens south of their border. Poor conditions for international cooperation, political and nationalistic adversities, anti-USA or anti-Mexican feelings largely contributed to this prolonged divorce. Paradigms were different, almost opposite. On the other hand, prehistory and early human occupations were never priority subjects in a huge country completely paved with massive pyramids and gigantic urban centres left by the Mesoamerican civilisations. The weight of individual persons (through their political and academic influences on colleagues) marked the pace in the development of the discipline in this Latin American country.

The birth of an academic prehistoric archaeology in Mexico occurred much later than in the United States, at the end of the 1940's and early 1950's. Like elsewhere on the continent, the Colonial times had produced a variety of opinions about the origins of native populations and the possible entrance routes into the New World, a theme too vast to be debated here (see C.F. Ardelean 2013; E. Matos 1987; A. González-Jácome 1988). For centuries, people in the countryside and workers building urban infrastructure in the capital city used to unearth "giant bones" (the popular term for

megafauna remains), but there was no formal, institutional interest in the dawn of humanity and no stone artefacts were still found in association with extinct animals. By the end of the nineteenth century, geologists had already identified, to a certain level, the Pleistocene stratigraphy in the Basin of Mexico and scholars were familiar with the greenish, bentonite Becerra Formation. The excavation of a drainage system at Tequixquiac, northeast of Mexico City, allegedly produced a curious artefact: a camelid pelvis bone sculptured in the shape of an animal head (M. Bárcena 1882 [1987]; L. Aveleyra 1965) (fig. 27). That was the first signal that drew the attention on the "Early Man" in Mexico, but controversies about its stratigraphic position and artificial nature persist today. In the 1940's, a US archaeologist, Helmuth De Terra, started the first systematic search for the earliest inhabitants of Mexico and his excavations at Tepexpan (not far from Tequixquiac) suggested an association between a human burial and mammoth bones (H. De Terra 1946, 1947, 1951, 1947 [2010]; H. De Terra *et alii* 1949). Today, we know that he missed the stratigraphic details of the site and the radiocarbon dates proved the burial to be of later Holocene age, but De Terra's work launched the quest for the Ice Age people south of the US border. The sediments and macroscopic remains he collected for radiocarbon dating – in spite of not being stratigraphically related to the discovery itself - were the *first* Mexican samples ever dated by the newly invented technique (H. De Terra 1951). At the same time, Richard MacNeish commenced his own investigation in northeastern Mexico, in the caves of Sierra Madre Oriental (R.S. MacNeish 1958, 1948 [2009]).

For the last 70 years, archaeology in Mexico was under the control of one institution, the National Institute of Anthropology and History (INAH, by its Spanish initials). INAH is the maximum authority in the matter today and it controls, legally and academically, everything done in archaeology throughout the country. In 1952, the Institute opened its short-lived Prehistory Department and, magically, the same year, a mammoth double kill-site was discovered at Santa Isabel Iztapan, basically in the same area like the previously-named sites of Tequixquiac and Tepexpan (today in the vicinity of Mexico City, some by the international airport and some close to the famouse pyramids of Teotihuacan) (fig. 27). The two specimens were found in a Pleistocene lacustrine environment, associated with a great diversity of stone tools, mainly spear points of different types (L. Aveleyra, M. Maldonado-Koerdell 1952, 1953, 1956). Always presented by the official archaeology (still today) as the landmark of national prehistory, the now-disappeared site at Santa Isabel Iztapan contains too many enigmas and unmatching pieces that generate doubts about the actual finds (C.F. Ardelean 2013). South of the Basin of Mexico, in the same period of 1950's-1960's, near the city of Puebla, an amateur prehistorian, Juan Armenta, had been gathering fossil bones and flaked stone materials from exposed lacustrine and gravel deposits at Valsequillo, a place meant to become one of the most controversial sites in North America (fig. 29). Institutions from the United States eventually became fully involved in systematic explorations around the Valsequillo basin and so did INAH for a short time at some point (J. Armenta 1959, 1978; C. Irwin-Williams 1967, 1981; C. Irwin-Williams *et alii* 1969; V. Steen-McIntyre 2006; V. Steen-McIntyre *et alii* 1981). The discoveries there - still blurry today and too much affected by stratigraphic controversies, international disputes and the lack of peer validation on site - gave a strong impulse to the development of a passionate and competitive search for the earliest inhabitants of Mexico. The main character in INAH in those years was a Spanish-born archaeologist, José Luis Lorenzo, a communist refugee of the Spanish Civil War and fierce adversary of the investigations and allegations of antiquity contributed by the USA teams at Valsequillo. Lorenzo dominated and still dominates the official paradigms in the Mexican prehistory through a chronological model he created, a particularistic and poorly fundamented scheme that has little to do with the actual empirical reality (J.L. Lorenzo 1967). Lorenzo and his team opened a new site, roughly in the same region, at the foot of a volcanic hill in Tlapacoya, where an ancient occupation of 20,000 years was soon to be announced (J.L. Lorenzo, L. Mirambell 1986, 2005; L. Mirambell 1973) (figs. 27-28). Myths were about to be born, based on this and other sites. The desire to provide proofs of very old human presence in Mexico, older than those accepted in the United States was not the healthiest influence on the accuracy of data produced by the Mexican projects in those decades. El Cedral, in the state of San Luis Potosi (not far from my own study area), was another locality that, since the initial reports in the 1970's (J.L. Lorenzo, L. Mirambell 1981, 1984) and until the very recent final publication (L. Mirambell 2012), maintains certain level of doubts and confusions about the validity of the data and the radiocarbon dates of more than 30,000 years claimed for the human presence there (fig. 27). However, in spite of such controversial aspects, the prehistoric investigation in Mexico was already well on its course and some of the explorations produced extremely valuable data that may contribute to the shallow understanding we have today on the earliest human occupations in the Americas. Nevertheless, unlike the United States of America, Canada or South America, where so many

specialists dedicate their efforts to the earliest periods of human history, in Mexico only a handful of archaeologists prefer this delicate field of research, most of our colleagues getting involved in the study of the monumental, Mesoamerican settlements.

◈ Mile Zero: the Clovis culture

Independent of how old the earliest radiocarbon dates will turn out in the future, the best known integrated prehistoric archaeological culture of Late Pleistocene Americas is Clovis, which maintains as an obliged point of reference. In the common language spoken by archaeologists of these latitudes, everything earlier than a conventional time-marker set at 11,500 RCYBP is usually called "pre-Clovis" and everything after Clovis' end (around 10,800 RCYBP, right at the onset of the Younger Dryas climate reversal) is labeled "post-Clovis" or "Late Paleoamerican". Clovis remains today the 'mile zero' from which North American archaeological reality is measured.

As it was said above, this culture was first defined in 1932 at its type-site, Blackwater Draw, in New Mexico, United States (figs. 5, 9-10), where the first diagnostic projectile points were found in stratigraphic context and in direct association with extinct mammoths (see A.T. Boldurian, J.L. Cotter 1999) (figs. 6-7). The discovery was soon followed by many other finds, mainly proboscidean kill sites (more visible in the field than simple open camps), and the characteristic concave-based and fluted stone bifaces defined as the "Llano complex" which later became better known as Clovis (E.W. Haury *et alii* 1959) (fig. 5). Since the initial find, and for the next five or six decades, Clovis and the American mammoth (*Mammuthus columbi*) turned into the heraldic image of the Pleistocene human occupation. A strong paradigm was rapidly adopted in the North American academic environment, known as the "Clovis-first" model. The model implies that this culture was the archaeological manifestation of the very first and only pristine population to migrate into the New World, through the Bering Land Bridge, formed between Siberia and Alaska when the ocean's levels were more than 100 m lower than today (fig. 4). They moved fast and restlessly and peopled the entire hemisphere in less than a millennium, giving birth to all the other Pleistocene cultures in that part of the world, supposedly including the South American ones. A strong pillar of the paradigm was the so called "Overkill" model: humans, once arriving in the Americas, specialised in Ice Age megafauna and drove several taxa to extinction, causing instability in the ecosystems and endangering many other species (P.S. Martin, H.E. Wright 1967; P.S. Martin, R.G. Klein 1984; P.S. Martin 1984) (fig. 26). Such a theory, emphasising an unlikely highly specialised economy obsessed with megafauna, is being refuted by new data.

With many archaeological sites across the United States and parts of Canada (but no so in Mexico!), Clovis became a well-defined horizon, with a strong epistemological advantage over other discoveries that since the 1970's have been trying to claim older and culturally different human occupations (R. Bonnichsen 1999b; G. Haynes 2002; G. Sánchez, J. Carpenter 2003; D. Stanford *et alii* 2005; L.F. Bate, A. Terrazas 2006; S. Fiedel 2006a, 2006b). This situation is still valid in Mexico, where the only securely dated old occupations belong to this horizon. The recently discovered proboscidean kill-site at El Fin del Mundo, Sonora, is the only well-dated Clovis site in Mexico (G. Sánchez 2010; G. Sánchez, J.P. Carpenter 2012; G. Sánchez *et alii* 2007, 2009a, 2009b) (fig. 27). But, with a handful of specialists still defending the idea that Clovis was the only demographic wave to first people America (S. Fiedel 1996, 2004, 2005, 2006a), today there is a consensus about both concomitant and earlier-than-Clovis cultural presences in the hemisphere (figs. 15, 23).

Clovis culture is known for its diagnostic bifacial projectile points, lanceolate in shape, with a more or less concave base, sometimes slightly out-flaring ears, displaying basal thinning and consistent grinding of the base and lateral edges towards the proximal end (figs. 6-7). Their most famous feature is the "flute" or "channel". This means that the biface shows a pronounced longitudinal flake scar on one or both sides, extracted from the base, after the setting up of an isolated platform carefully prepared for that purpose. Whether related to hafting techniques or ritual and symbolism (*cf.* B.A. Bradley, M.B. Collins 2013), the flute remains consistent across early North America, found also on non-Clovis artefacts (figs. 11, 16). Not all Clovis bifaces are fluted and not all the fluted unstemmed points are necessarily Clovis. What defines the culture is not the fluted point, but the highly complex lithic technology expressed in the rich artifactual assemblages (fig. 8). The presence of these people can be detected by identifying a series of very specific signatures in the flaked stone materials. The high incidence of biface thinning flakes, a proper blade industry using prepared wedge cores (fig. 8/D), biface cores to be used both as transportable raw material for blades

or as blanks for bifaces, flake cores, careful preparation of platforms, a consistency in the so-called "overshot" (or *outrepassée*) flakes, as part of the reduction procedures, are only some of the typically Clovis features (M.B. Collins 1999; B.A. Bradley *et alii* 2010).

The Clovis point was a lethal weapon (both projectile and knife), designed to penetrate and cut, to resist impacts and cause fatal bleeding, meant to go deep into the prey's body, made to be glued with pitch in notched shafts and wrapped around with sinew over the ground edges (B.A. Bradley *et alii* 2010; A.T. Boldurian, J.L. Cotter 1999; G. Frison 2005). It was a valuable possession, extensively reworked and rejuvenated before discarded. Clovis people manifested special preference for exotic raw materials. The common stone was chert, but they often procured fine-looking materials from hundreds of miles away, such as transparent quartz, translucent agate, chalcedony, jasper, and banded or colourful cherts. Such objects must have had social, symbolic or ritual meanings (D. Meltzer 2002). The use of rare materials could either mean large territories, interregional trade or social ties meant to bond distant groups. Such finely crafted artefacts often appear in caches deposited in shallow pits in the ground (G. Frison, B.A. Bradley 1999; M.B. Collins 1999; B.B. Huckell, J.D. Kilby 2014). Were they ritual offerings or safety boxes? Sometimes, the lithic inventory is burned (D.B. Deller *et alii* 2009). Some cases, such as the Anzick child burial (Montana, US), show intensive use of ochre powder spread on objects.

The rest of the Clovis lithic assemblage includes large bifaces, blade cores, blades used as tools, blades used as blanks, end and side scrapers on blade and flake, burins, gravers, adzes. Clovis people also worked bone and mammoth ivory in the form of scarcely represented artefacts. The art and symbolic expressions are scarce. In spite of the attempts to relate some engravings with >11,000 RCYBP occupations by experimental varnish dating (A.M. Tratebas 2004), there is no secure parietal art yet associated with early occupations. But Clovis people incised small limestone slabs with hatched patterns, such as those found at the Gault site, Texas; a tradition that continued into Archaic times (L.B. Davies *et alii* 2009) (fig. 8/C). Increasingly accepted evidence is the engraving of a proboscidean on a mineralised bone at Vero Beach, Florida (B.A. Purdy *et alii* 2011). Most of the "classic" Clovis occupations concentrate in the centre and southwest of the United States, where the states of Arizona (mainly the San Pedro Valley) and New Mexico offer the most important groups of kill-sites of large mammals, while Gault is the largest habitation camp known so far (D.S. Byers 1954; H.T. Wright, W.B. Roosa 1966; G. Frison, B.A. Bradley 1999; G. Haynes 2002; B.B. Huckell 2004; B.B. Huckell, J.D. Kilby 2009; M.B. Collins 1999, 2005; G. Frison 2005; D. Stanford 2005; R. Bonnichsen 1999b; C.V. Haynes, B.B. Huckell 2007; D. Meltzer 2009; M. Waters *et alii* 2011; B.A. Bradley *et alii* 2010) (fig. 5).

In spite of apparent unity, there is a substantial variation inside this cultural horizon (J.E. Morrow, T.A. Morrow 1999). In fact, the most intense presence seems to occur in Eastern North America, east of Missouri and Mississippi rivers, where the variability of artefacts actually defines distinct cultural traditions, with different and probably non-Clovis patterns (fig. 11). Nevertheless, whether pioneers or newcomers, Clovis spread very quickly all over the continent and many other groups adopted aspects of their culture; "the Ice Age equivalent of the spread of Coca-Cola or baseball caps", as T. Dillehay says (2000: xvi).

There is a recent and very interesting posture meant to explain the sudden appearance of Clovis in the North American archaeological record, proposed by B.A. Bradley and M.B. Collins (2013). The hypothesis is based on the concept of cultural revitalisation (and derived "revitalisation movements"), an anthropological product rarely applied to archaeological interpretations. This model describes a succession of steps that a cultural system follows in order to improve and turn more satisfactory in front of stresses received by human groups from either environmental or cultural stimuli. In my opinion, it interestingly parallels, somehow, the same mechanisms described by Thomas Kuhn (1962) for the decline and fall of paradigms within the model of 'scientific revolutions'. For Bradley and Collins, the role of the 'steady state' was played by the pre-Clovis populations of Eastern North America, originated in the Western Europe Upper Palaeolithic and living in proximity to productive coastal environments of the Late Pleistocene. With the deglaciation, sea levels rose, ecosystems lost productivity and large herbivores disappeared, deriving into factors of stress or pressure for the established cultural systems. In front of challenges menacing the survival and continuity of the groups, a cultural revitalisation is required, in order to produce adjustments that would render the system satisfactory in coping with the new conditions. Perhaps, a visionary person, a shaman or prophet, took the initiative and proclaimed a return to ancient values, maybe to myths, beliefs, customs and latent baggage of behaviours brought from their place of origin. By preaching and spreading these ideas, a 'new order' was settled and new cultural practices entered in vigour in

an almost sudden way, including the fine flaked stone technology that defines Clovis in the archaeological record.

But how old is the Clovis culture? These people showed up suddenly around 11,500 RCYBP and vanished from the archaeological record right at the end of the Younger Dryas cold event, in the middle of a serious drought, around 10,800 RCYBP or slightly later (C.V. Haynes 2005, 2006, 2007). D.G. Anderson (2005) situates them in his Middle Paleoindian phase, during the Allerød warm period. Roughly, in calendar years, their era was 13,500-13,000 cal BP (S. Fiedel 2004). The chronology varies widely in the literature, according to the region, site and changing accuracy of dating techniques. Numbers cluster between 11,400 - 10,600 RCYBP (J.E. Morrow, T.A. Morrow 1999; A.C. Roosevelt *et alii* 2002; D.G. Wyckoff 2005). The most recent re-evaluation of Clovis' radiocarbon dating concluded its duration was even shorter, between 11,050 and 10,800 RCYBP (M. Waters, T. Stafford 2007).

Mexico does not count with a consistent Clovis occupation. Some isolated finds of Clovis bifaces have been reported from northern and northwestern regions during the twentieth century (H. Aschmann 1952; J.L. Lorenzo 1953; C.C. Di Peso 1955, 1965; S. Arguedas, L. Aveleyra 1953; L. Aveleyra 1961). No Clovis artefacts were reported from the doubtful context at the mammoth kill-site of Santa Isabel Iztapan (a site that did not yield a single radiocarbon date) and no indicators of Clovis camps are found anywhere deep into the Mexican territory. The only exception is El Fin del Mundo, close to the US border in Sonora. But it clearly belongs to the packed cluster of Clovis sites of Arizona (together with Murray Springs, Naco and Lehner), so it does not even count as a proper Mexican discovery. The site of Oyapa, in Central Mexico, allegedly contains Clovis artefacts (G. Cassiano, A. Vázquez 1990), but the surface collection from Oyapa lacks a thorough analysis of lithic technology and the superficial similarities are not sufficient to sustain such a cultural affinity, yet (fig. 27).

◈ Clovis' competitors: The Others

It has always been said that Clovis people moved very fast over the continent (D. Meltzer 2002; G. Haynes 2002; C.V. Haynes 1964, 2005; S. Fiedel 2005); a sort of a "blitzkrieg", leaving mammoth carcasses and short-lived camps in their path (fig. 26). Independent of the relationship between this idea and the "Clovis-first" model, the geographic distribution and radiocarbon dates seem to agree with the fast move. Most explanations imply that Clovis people were highly mobile megafauna hunters who invaded an unpopulated continent, with plenty of space to occupy. An idea that is contrary to what we normally learn about hunter-gatherers around the world. In my opinion, the reality was quite opposite: Clovis faced competition and social pressure from other groups; so, they had to be on the move. If they originated elsewhere, they found an America already occupied by the "pre-Clovis" populations. Cultures were already established and foraging territories had already been defined. Clovis hunters were not alone. Then, who were "the others"?

Archaeologists signalled the variability in forms and technologies reflected in the repertoire of fluted points across the Americas (J.E. Morrow, T.A. Morrow 1999). The regional names assigned to different shapes of points received more acceptance as proper local cultural manifestations than mere stylistic variations of a monolithic Clovis culture. On the other hand, new investigations and recent radiocarbon dates tend to propose that other lithic forms and distinct cultural assemblages overlapped historically with the fluted varieties. Analysing the distribution and diversity of different fluted points, one notices a pattern of variability showing an increased evolution of forms towards 'waisted' and fishtail-like contours, from north to south. In North America itself, fluted points display more a lanceolate form with straight parallel sides in the west, north and southwest, and more composed contours with pronounced lateral indentation, to the east and southeast (*idem*) (fig. 11).

No reliable clues have been recorded yet about the supposed origins of the Clovis culture in Eastern Beringia (US Alaska and Canadian Yukon). In the far north, along the Arctic Foothills, the fluted points show distinct characteristics and overlap the reference interval (fig. 12). The Putu-Bedwell and Mesa sites revealed human-made hearths dating between 11,600 and 9700 RCYBP. The archaeological record shows blades and lanceolate points with certain similarities with contemporary manifestations in mid-continental North America (T.D. Hamilton, T. Goebel 2005) (figs. 12-13).

The valleys of the Nenana, Tanana and Teklanika rivers in Alaska cluster a group of early sites whose culture is divided between two archaeological complexes. The concern here is with the earliest one, the Nenana complex. This used to be the 'component I' in sites like Dry Creek, Moose Creek,

Walker Road, Owl Ridge, Broken Mammoth, and Swan Point (fig. 13). One of the core discussions about the Arctic cultures is whether they link, causally, with the Siberian Palaeolithic cultures, whose inventory is dominated by microblade industries. A Siberian affinity with microblades is evident in the following Denali complex, but not in Nenana. The lithic assemblage is characterised by blades, flake tools, scrapers, anvils, unifacial tools, lanceolate points and the teardrop-shaped "Chindadn" points (fig. 12). They hunted northern herbivores, small mammals, waterfowl, but hardly had contact with proboscideans (T.D. Hamilton, T. Goebel 2005; A.C. Roosevelt *et alii* 2002; D. Stanford *et alii* 2005). The complex is as early as 11,800 RCYBP and lasts until about 10,500 RCYBP. It has a 'pre-Clovis' start but it undoubtedly overlaps Clovis in the south, lasting longer. The early dates are accepted even by the "fossil" partisans of the "Clovis-first" dogma, as supporting argument for the origins of Clovis within Nenana's early phases (C.V. Haynes 2005; S. Fiedel 2005, 2007).

A mysterious culture existed about the same time as Clovis in the western United States, mainly in the Great Basin, the Snake River Basin, Rocky Mountains, intermountain valleys of the West and California (fig. 18). People there adapted to an environment of lakes, wetlands and highlands. It is known as the Western Stemmed Tradition (WST), characterised by a diversity of stemmed and shouldered types, lacking fluted points (figs. 18, 11/C, D, E). There are fluted bifaces in the area, but they must belong to a later penetration of Clovis groups migrating from the Plains. They were wide-spectrum, season-adapted foragers and do not seem to have been interested in megafauna. WST's lithic assemblage contains a variety of bifaces, lanceolate points, crescents, adzes and ground stone tools. The crescent (moon-shaped, curved biface) is a typical tool, although its function is still debated (A.J. Dansie, W.J. Jerrems 2004; D. Stanford *et alii* 2005) (fig. 11/E). This culture is a viable candidate for older-than-Clovis occupations in North America. Its chronology seems to expand over a long interval between 11,600-8000 RCYBP. C. Beck and G.T. Jones (2010, 2012) already proclaimed the presence of the Western Stemmed Tradition in the region long before Clovis, probably coming from the coast after the uprise of ocean levels, and then an inter-cultural encounter between the two; a theory questioned by others (S. Fiedel, J.E. Morrow 2012).

A contemporaneous cultural tradition, with bifacial technologies similar to the WST ones and dated at least to 12,200-11,200 cal BP, but perhaps as old as 13,000 cal BP, is the "Paleocoastal" maritime adaptation identified on the US coast of the Pacific and on the Channel Islands of California. As important as the Western Stemmed Tradition, the creators of this Paleocoastal culture were partially contemporary with Clovis and survived through the Younger Dryas cooling event. Their technology and geographic location indicate seafaring and island colonisation in early Paleoamerican times, a diversified maritime economy and a subsistence based on sea birds, marine mammals and fish (J.M. Erlandson 2002; J.M. Erlandson, M.L. Moss 1996).

The case of the Eastern and Southeastern US is interesting and complex. During Clovis times, the region was characterised by the presence of a variety of 'waisted' fluted points. Their shape is sinuous, contracted above the base, with outflaring ears (fig. 22). Most authors still consider them a Clovis variety, although they could reflect local variations belonging to very different groups. Many discoveries occur in Florida and Virginia, as isolated points, kill-sites and workshops. Florida is rich in artefacts made of bone and ivory. This part of the continent has always shown a clear foraging economy, without emphasis on the extinct large mammals (B.C. McCary 1951; M. Faught 2006; A. Hemmings *et alii* 2004; J.S. Dunbar, A. Hemmings 2004; D.G. Anderson 2005).

Florida precedes the Central American scenario. There is a weak presence of Clovis-like fluted points at a few sites, roughly contemporary with the northern mammoth hunters, but more likely manifesting at the onset of the Younger Dryas. Some authors consider them Clovis, anyway (A.J. Ranere 2006) and speak of a "circumgulf interaction" sphere, ranging from Florida to Panama: the same waisted form typical for the southeastern US, possibly born from a southbound later migration (M. Faught 2006). The sites worth mentioning here are located in Guatemala (Los Tapiales), Costa Rica (Turrialba) and Panama (La Mula West, Madden Lake, Nieto, Cueva de los Vampiros) (fig. 14). The dates are interesting, between 11,700-10,500 RCYBP, reaching almost 14,000 cal BP They imply controversy, showing contemporaneity and anteriority, rather than later Clovis-derived manifestations (*idem*). Actually, other authors deny any presence of Clovis in the region. According to A.C. Roosevelt *et alii* (2002), the points here are technologically different and the supposed flutes are rather base thinning flakes. The Central American fluting traditions could be indicators of parallel, independent occupations. It is worth investigating if the Mexican site of Oyapa, already mentioned above as a possible Clovis camp, with some fluting documented on bifaces, could also be a candidate for a different culture employing this technological marker.

"The first South Americans were not Clovis clones", as T. Dillehay wrote (2000, p. 6). And indeed, the austral continent, when seen from North American prehistory, looks like another world. It has never been affected by the "Clovis-first" paradigm, or by the biased views emphasising megafauna overkills. South America was diverse, culturally. It has never been dominated by a main culture. Highly eclectic in landscapes and ecosystems, almost void of glaciers and free to be peopled in all directions from very old times, this part of the world has always experienced a pronounced regionalisation and archaeological diversification during the Late Pleistocene and the Early Holocene. Lithic material is very diverse, communal kill sites are almost absent, hunted mammals were completely processed, campsites and inhabited rockshelters are abundant and the subsistence has always been a foraging one, based on a wide and complete use of resources (*idem*; L. Miotti 2004; R. Gruhn 2004, 2005; A. Borrero 2006). There are indications of the presence of possible Clovis points in Venezuela and Chile (L.J. Jackson 2006), but, as some specialists propose, they do not show proper North American filiation, rather being local manifestations of fluted forms (A.C. Roosevelt *et alii* 2002) (fig. 15).

The emblematic artefact in South America is the so-called "Fishtail" point (fig. 15/A). It is widespread over the continent, in Argentina, Uruguay, Chile, Peru, some parts of Brazil and Colombia. Fishtails hardly consolidated as a proper culture (with a more or less unitary artifactual assemblage), although they do define a horizon. These points are varied in shape (C. Gnecco, J. Aceituno 2006), although the prototype shows a stemmed artefact, with wide triangular or ogive-like convex-edged body, and a fluted concave-edged and concave-based stem. The variation in form is better explained by a high incidence of resharpening, as recently shown (R. Suárez 2003, 2009, 2010, 2011a, 2011b; C. Castiñeira *et alii* 2011). Fishtail makers also preferred exotic materials, such as translucent agate and quartz crystal, an aspect quite unique for the southern continent, where most tools are normally elaborated in locally available materials (H.G. Nami 2009; R. Suárez 2010, 2011a; C. Méndez *et alii* 2010). There is also a scarce unifacial variant, maybe by-products of the learning process (R. Suárez 2009). Most finds come from the surface, although the buried contexts increased recently. Its chronology is still not well understood. It is true that the Fishtail culture is a bit later than Clovis, more contemporaneous with Folsom culture in the north (L.J. Jackson 2006). Its average dates are 10,800-10,100 RCYBP (J.E. Morrow, T.A. Morrow 1999). But there are older dates, approaching 11,200 RCYBP, for example at the type-site of Fell Cave, where it was first recognised by Junius Bird (M. Massone 2003) (fig. 15). That makes it also contemporary with Clovis. The possible historical and cultural relationship between the two is still a vivid discussion, but Fishtails remain a local South American manifestation of the Late Pleistocene, employed by hunter-gatherers who exploited a wide array of ecosystems and lived on a diversity of resources, displaying formal and technological discrepancies with their counterparts in the north (L. Miotti 2004; L. Miotti *et alii* 2010; G.G. Maggard 2010; H.G. Nami, A. Castro 2010; R. Suárez, D.S. Leigh 2010; T. Dillehay 2000).

There are no well-defined cultures in South America contemporaneous with Clovis; at best, individual sites which do not form an integrated image, yet (fig. 15). All occupations start sometime during the Clovis interval and continue well into the Younger Dryas climate reversal. The barrier between the Terminal Pleistocene and the Transition to Holocene is not clearly expressed in the archaeological record. Among these sites, Agua de la Cueva in Argentina is dated to 10,950-9,200 RCYBP; a guanaco-hunting site using expedient tools made of quartz, rhyolite and chalcedony (A. García 2003, 2009; M.M. Paez *et alii* 2003). Also in Argentina, the sites of Cerro La China, Cerro Tres Tetas, Los Toldos, and La María-Casa del Minero 1, focused on camelids, revealed simple tools, dating around 11,500-10,000 RCYBP, maybe pushing back to 12,000 (M.M. Paez *et alii* 2003; R.S. Paunero 2003a, 2003b; T. Dillehay 2000). On the Peruvian coast, a fishermen community lived at Quebrada de Los Burros at 11,000-10,000 B.P. (D. Lavallée 2003). By the same time, coast-adapted people from Quebrada Jaguay subsisted on seafood and imported raw materials from the highlands (T. Dillehay 2000; S. Fiedel 2007; R. Gruhn 2004). On the Chilean coast, Quereo was a possible butchering site of Pleistocene fauna, in use by 11,600-11,000 RCYBP (T. Dillehay 2000; D. Jackson 2003). In Peru's highlands, Pachamachay Cave's inhabitants hunted vicuña with triangular and lanceolate points, maybe as early as 11,800 RCYBP, but surely around 10,500 RCYBP (T. Dillehay 2000; R. Gruhn 2004). El Inga (Ecuador) displays a strong Fishtail occupation with emphasis on obsidian, possibly occupied at 11,200 RCYBP (T. Dillehay 2000), but probably of a later age (A.C. Roosevelt *et alii* 2002). T. Dillehay (2000) stressed that northwestern South America had an important early unifacial industry, with simple cutting and scraping tools made on flakes, partly pre-dating Fishtails, at 11,400-8500 RCYBP. Its manifestations occur at Tibitó and Tequendama (Colombia), Tagua-Tagua (Chile), Talará (Peru) and as the Itaparica Tradition in Brazil. In the northeast of this

country, 12 sites cluster between 11,500-8500 RCYBP. At Caverna da Pedra Pintada, occupants left hearths, pigments, quartz and chalcedony artefacts by 11,200-10,000 RCYBP (A.C. Roosevelt *et alii* 2002).

One of the better-known sites of the period is AEP-1 rockshelter at Piedra Museo, in the Argentinean Patagonia. The earliest component there (Unit 6) ranges between 12,800 and 10,500 RCYBP, alledging a pre-Clovis occupation of 16,000 cal BP that lasts through the Younger Dryas. Pre-Fishtail bifacial tools were used to butcher horse, vicuña and ñandú (L. Miotti 2004; L. Miotti *et alii* 2003b; L. Miotti, R. Cattáneo 2003; L. Miotti, M. Salemme 2005; R. Gruhn 2005).

◈ After Clovis: the survivors

Clovis culture disappeared almost instantly between the end of the Allerød dry period (culminating in the so-called "Clovis drought") and the very beginning of the Younger Dryas, around 12,800 cal BP Something happened in a very brief period of time, powerful enough to induce significant changes in the lives of people and make cultural signatures disappear from the archaeological record. The situation can be appreciated very well at several archaeological sites, for example at Murray Springs, Arizona (C.V. Haynes, B.B. Huckell 2007) (fig. 5) and reflected in the recent reconsideration of radiocarbon ages (M. Waters, T. Stafford 2007). Understanding the changes that occurred during the Younger Dryas, in terms of cultural diversification and increased regionalisation, remains a difficult task. We probably should not assume Clovis as a culture reflecting an ethnic group, but maybe as a widespread technological approach (M.B. Collins 2007). Nevertheless, it is plausible to to see them as a network of strongly interrelated groups (perhaps in terms of behaviour and beliefs based on interregional objective or mythical kinships) who held an identity and consciously shared a specific technology. Because, as seen above, there were many other groups and traditions sharing the time and space with them and Clovis possibly meant more than just "a way of doing things". In my opinion, the reason to stick to a technology or adopt another has more to do with behaviour, traditions, culture hermetics, beliefs etc, than with the mechanism of adaptations and responses to environmental change. They only existed in the archaeological record for about 300-400 radiocarbon years, meaning around 500 calendar years. Why did they vanish suddenly while the other cultures continued with little changes during the subsequent centuries or millennia into the Holocene? It probably had to do with cultural porosity or versatility: inability to adapt customs, beliefs, and rigid norms to changes. Clovis people failed to do so and disappeared as culture. This subchapter is about those who survived.

The period is called "Late Paleoindian", in D.G. Anderson's words (2004, 2005) (fig. 3). Folsom is probably the most famous North American foraging culture that made it through the Younger Dryas. As said above, it was first defined in 1926 at the eponymic site in New Mexico, where a clear association between points and extinct bisons demonstrated, for the first time, the early presence of humans on the continent (A.T. Boldurian, J.L. Cotter 1999). Characteristic for the Southern and Northwestern Plains - but also for high altitude sites in Colorado Mountains (C.T. Hurst 1943) - this culture of bison hunters follows Clovis immediately, with a chronological range of 10,800-10,200 RCYBP (D. Stanford 2005; D.G. Wyckoff 2005) (figs. 18-19). Even so, there are no indications of causal cultural succession between Clovis and Folsom. This culture is part of the accelerated process of cultural diversification that one can notice in North America in that epoch. It is often referred to as the Folsom-Midland complex, some authors considering there is no real distinction between the two. Folsom is very homogenous compared to Clovis, and its typical projectile point is a smaller lanceolate point, with a deeper basal concavity. It is fluted on one or both sides and the flake scar is long, wide, occupying most of the biface's surface, almost reaching the distal end (fig. 11/H). Midland points are similar, but generally lack fluting. In some opinions, Midland and Folsom are likely different, but related technologies. Although wide-spectrum foragers, Folsom hunters organised large communal bison kills, with more than a hundred specimens per event. Among the important kill-sites are Lindenmeier, Lipscomb, Bonfire Shelter, Blackwater Draw, Lubbock Lake, with habitation camps at Horn Shelter, Adair-Steadman, etc. They don't use ivory anymore, but still employ bone artefacts and use red ocher for ritual purposes and hide processing. Their lithic assemblage is diverse, keeping interest in distant raw materials, but blade technology almost disappears (D. Stanford 2005; G. Frison 2005; J.M. LaBelle, C. Newton 2010; A.C. Goodyear 2010).

In the typical Southern Plains chronology, Folsom is followed by the Planview horizon (D.G. Wyckoff 2005) (figs. 11/G, 18). Remaining in the Plains' tradition of large bison hunts, probably

organised before important social gatherings between late Fall and early Spring, Plainview people were generalised foragers, too. Their projectile points lack fluting, but show different degrees of base concavity and thickness, maintaining basal thinning. There are several point varieties and, for this reason, the complex is better known as Goshen-Plainview, with particular variants, for example the St. Mary's Hall points as a later version (9900-8700 RCYBP). The chronology is rather confused in the literature, oscillating between contemporaneity with Clovis to more conservative views of 10,000-8000 RCYBP. Recent assays situate it in late post-Folsom times until about 9-8000 RCYBP. Together with Golondrina and Angostura traditions, Goshen-Plainview is one of the Transitional types between Pleistocene and Holocene (V.T. Holliday *et alii* 1999; K.B. Tankerseley 2004; D. Stanford 2005; D. Stanford *et alii* 2005; G. Frison 2005; P.C. Condon *et alii* 2009; M.E. Hill 2010) (fig. 11/F)). In Bruce Bradley's opinion, Folsom is technologically related to and rising out of Goshen, which is derived from some northern branch of "pre-Clovis" originated in the East, spreading northwest along the retreating glacial front, including Chesrow in Wisconsin[1].

Several other complexes define this Transitional period, well defined culturally but still confused chronologically, somewhere between 10,000-9000 RCYBP. The Agate Basin complex - probably contemporaneous with and later than Folsom - manifested over the Plains, their unstemmed and unfluted long, foliaceous and sometimes bipointed bifaces being "the most lethal weaponry" of those times (G. Frison 2005, p. 276; D. Stanford 2005) (fig. 20/A). The Hell Gap complex probably derived from Agate Basin, technologically alike. The points are flat-based stemmed lanceolates, with rounded shoulders, and slightly contracting grounded stems (fig. 20/B). The flaking technique included soft hammers and pressure. They hunted bison herds by traps and cliff falls (D. Stanford 2005; S.R. Holen, K.A. Holen 2009). The makers of the notched San Patrice points, likely related to the Dalton type, were also a Plains (southeastern) adaptation hunting bison during the Younger Dryas, from New Mexico to the eastern woodlands (S. Hurst *et alii* 2009). The Cody complex included various cultural manifestations represented by the Scottsbluff, Eden and Alberta types, all square-based, shouldered and barely stemmed, adding to the strange one-shouldered, stemmed "Cody knife" (fig. 21). The Transitional phase concludes in the US Southwest with the still mysterious and poorly known San Dieguito-Sulphur Springs complexes, tentatively situated at 10,000-8000 years ago. Already showing technological characteristics of the Holocene, these confuse cultures maintain certain ties with the earlier manifestations in their tool-kit (E.J. Dixon 1999; C.V. Haynes, B.B. Huckell 2007).

Even more interesting is the situation in North America's northeast and southeast. There are late variants of fluted points resembling Clovis, named Gainey, Debert, Cumberland, Barnes, Crowfield, and Redstone. They vary in size, contour, fluting and finish technique (D.G. Anderson 2005; B. Lepper 2005; D. Stanford, B.A. Bradley 2012) (fig. 11/A, B). In Florida, there are two typical forms for this period: Suwannee and Simpson, probably in this chronological order (fig. 22). They have composite shape, the first displaying expanding ears and the latter narrower base, with pronounced contracting point above it, looking like fish (J.S. Dunbar, A. Hemmings 2004; M. Faught 2006). In other views, Simpson could be of early dates, maybe pre-Clovis and, in this case, potential precursor for South American fishtails.

In Alaska, this period belongs to the Denali complex, dated to 10,200-8200 RCYBP. It appears in the younger levels of some of the sites already mentioned above as Nenana exponents, adding Panguingue Creek and the Tangle Lakes site cluster. This cultural manifestation is characterised by microblades, conical microcores, lanceolate bifacial points, wedge cores and blades, more akin to Siberian traditions (T.D. Hamilton, T. Goebel 2005; W.R. Powers, J.F. Hoffecker 1989). More recent assessments imply that the Alaskan fluted points are rather contemporary with late Northeastern fluted and late Folsom of the Plains.

In South America, the occupations belonging to the pre-Holocene Transition require more investigations. In Uruguay, Rafael Suárez (2003, 2011b) has recently defined the Pay Paso component (11,000-10,200 RCYBP) and the K87 (or El Tigre) points (10,420-9700 RCYBP), named after the eponymous sites, following the Fishtail occupation (fig. 16/B, C). Units 4/5 at Piedra Museo (Argentina), yet containing a few Fishtails, date at 10,400-9200 RCYBP (L. Miotti, R. Cattáneo 2003; L. Miotti *et alii* 2003a). Several other sites throughout Argentina show generalised foraging economies of later dates: Huenul cave, with obsidian and basalt debitage, 9530 RCYBP (R. Barberena *et alii* 2010), Arroyo Malo 3 rockshelter, 9000 RCYBP (S. Diéguez, G. Neme 2003), culturally modified guanaco remains at Chorrillo Malo 3 rockshelter around 9700 RCYBP (N.V. Franco, A. Borrero 2003),

[1] Bruce A. Bradley, personal communication, 2012.

simple tools plus guanaco bones dating to 9700-9000 RCYBP at Cave 7 of Cerro Casa de Piedra (M.T. Civalero, C.A. Aschero 2003), La Gruta 1 from Deseado Massif, with chalcedony and obsidian flaked tools from 10,800 RCYBP (N.V. Franco *et alii* 2010), rockshelter 1 from Cerro El Sombrero and six more sites in the Tandilia range in the pampa, with lithics, hearths and pigments spanning between 10,700-9500 RCYBP (D.L. Mazzanti 2003; N. Flegenheimer 2003).

On the southern coast of Peru, Quebrada Tacahuay sheltered marine-adapted foragers employing unifacial tools, who fished anchovies and hunted sea-fowl (T. Dillehay 2000; S. Fiedel 2007). Typical is also the presence of the Paiján culture in the Moche Valley, partially coexisting with the unifacial industries. Paiján points are slim, triangular, shouldered and narrow-stemmed (fig. 17/A). Its creators frequented coastal plains and adjacent foothills and lived on fish, deer, birds and lizards. The dates cluster between 10,800-8500 RCYBP (T. Dillehay *et alii* 2003). Probably contemporary and somehow similar are the Restrepo points encountered in open sites in central Colombia (T. Dillehay 2000). The Colombian locality of San Isidro seems to contain indicators of anthropic disturbance of forests by fire around 10,000 RCYBP, in accordance with an incipient control of plants (C. Gnecco 2003), although the problem of man-made fires and hearths versus wildfires in the archaeological record is always a matter of concern (R. Bonnichsen, R.T. Will 2005). The "south Andean central tradition" (Peru and Chile's highlands) enlists a series of sites dating to 10,800-9500 RCYBP (*idem*). In Brazil, the Paranaiba Phase (10,700-9000 RCYBP) manifests as bifaces and limaces, while the younger occupation of Santa Elina rockshelter contains hearths, limestone, chert and quartz tools and hematite plaquettes going back to 10,100 RCYBP (T. Dillehay 2000; A. Vilhena 2011).

◈ "Pre-Clovis" or those who came before

It is proclaimed that the "Clovis-first" model is dead (R. Bonnichsen 1999a, 1999b). Beyond the archaeological epic wars in the Americas, the current naked data presents it as a reality. This topic provoked an arduous debate lasting for decades, with very complex hues (*cf.* D.S. Whitley, R.I. Dorn 1993; T. Dillehay 2000; D. Meltzer 2009; D. Stanford, B.A. Bradley 2012, etc.). Unlike the Old World - where very ancient dates of human occupations come and go frequently without much distrust from peers and the academic mind is prepared to accept changes more easily - the American scenario transformed the "pre-Clovis" (or "older-than-Clovis") argument into one of the harshest battles in the history of archaeology. The debate continues today, as the skepticism remains unbeaten or slightly modified in a handful of North American authors (S. Fiedel 2006a, 2006b; C.V. Haynes 1964, 2005; A.C. Roosevelt *et alii* 2002). In spite of that, most skeptics have admitted the reality, for some time now (R. Lewin 1989). The situation has always been different between the two halves of the hemisphere, as in South America the conservative paradigm was never embraced (R. Gruhn 2004, 2005; A. Bryan 2004; A. Bryan, R. Gruhn 1989; L.F. Bate, A. Terrazas 2006; T. Dillehay 2000; A. Borrero 1999, 2006).

There are several aspects defining the discussion on older-than-Clovis discoveries: if the "pre" populations arrived in one or several migrations; if they are to be seen as Clovis progenitors or totally independent groups; if they are or not potentially visible in the archaeological record; what a pre-Clovis complex should look like (fig. 24); and, finally, how old the radiocarbon dates should be in order to become "acceptable". The ad-hoc "adaptations" one can notice in the publications of the detractors facing increasing evidence are interesting: older than 11,500 RCYBP are acceptable if they are "not too old" and help suggest progenitors for the Clovis protagonists (*cf.* C.V. Haynes 1964). And also, assuming there were very old human incursions into Americas that died out, demographically low without leaving recognisable signatures under ground. Otherwise, the evidence is guilty of "factual and logical weakness" (S. Fiedel 2006a, p. 45). Any new potential ancient presence encounters rigid criteria before being accepted (at least in the United States, because in Mexico there is much less care about the prefection of data). Contexts, stratigraphy, excavation technique, excavator's professionalism, dated material, everything is questioned and expected to be almost impossibly perfect. Going to extremes, even *Homo erectus* groups could have entered the continent at some point, after all, why not? But, as they must have died out without leaving trace, the status-quo is happily maintained (S. Fiedel 2006a; D. Meltzer 1989, 2009; A.J. Jelinek 1992; A.C. Roosevelt *et alii* 2002; D.G. Anderson 2005; C.V. Haynes 2005).

Many sites claimed such antiquity and most of them entered the "pre-Clovis credibility decay curve" (D. Meltzer 2002). The "fight for acceptance" is a constant reality for the intrepid discoveries in the New World (E. Marshall 2001). Once again, it is important to be remind that there is a

fundamental difference between such a debate in Mexico and the United States. In Mexico, the "Extremely Old Dates syndrome" manifested freely and without criticism, too widely accepted as a paradigm, was based only on the authority of the proponents (C.F. Ardelean 2013). And today those sites can be refuted. In the USA and the rest of the continent, the extreme skepticism and the pressure imposed by the "Clovis-first" model yielded a positive effect: today, there are secure older-than-Clovis occupations that passed the test of the doubt (fig. 23). Even so, nobody has safely produced such old dates as those traditionally claimed for Mexican sites (that is, in excess of 25,000 years).

Sandia Cave in New Mexico was once considered an old site, where one-shouldered bifacial points were reported in association with extinct fauna. It is dated today at no more that 3500 RCYBP, the initially alleged antiquity being the result of a hoax (D. Stanford 2005; J.C. Thompson *et alii* 2008; J.C. Thompson, C.V. Haynes 2012). In the same state, Pendejo Cave doubtfully claimed for dates in excess of 30,000 years, with alleged human hairs, fingerprints and Pleistocene mammals (R. MacNeish 1948[2009]; E.J. Dixon 1999). The Calico Hills site, California, built its fame on crude "tools" considered contemporary with the Old World's Lower Palaeolithic, as proclaimed by Louis Leakey's 'verdict' in 1963. The famous discoverer of the Olduway beds used to lecture widely in the USA in those years and for him it was natural to identify as natural an assemblage of crude, old-looking stones in a region of California. Today, they are known to be mere "geofacts" of natural origin, although their antiquity is sometimes defended (F.E. Budinger 2004; *cf*. D. Meltzer 2009). Association between humans and dwarf mammoths on the Channel Islands, California, and artificially modified bones of extinct animals at Trail Creek, Alaska expresse other such unclear cases (E.J. Dixon 1999). Several man-made hearths at Lewisville, Texas yielded valid dates of 36,000 years. But the ancient people there, who actually lived in much later times, burned ancient lignite in their fireplaces, cheating on us (D.G. Wyckoff 2005; D. Meltzer 2009). In Alaska, the fortuitous discoveries of artefacts, modified bones and mummified mammoths at the Fairbanks Muck Deposits are an intriguing and promising case for older-than-Clovis, but they lack secure contexts (E.J. Dixon 1999). Eastwards, in the Yukon territory (Canada), the Bluefish Caves and the Old Crow basin sites suggested very old human presence, with lithics and cut marks on bones, of 25 000-40 000 years of age; not sustained as valid evidence, yet (*idem*; J. Cinq-Mars, R.E. Morlan 2005; M.C. Wilson, J.A. Burns 2005; D. Meltzer 2009).

In Brazil, there are two important cases. The notorious one is Pedra Furada rockshelter, worked by French archaeologists who claimed to have discovered quartzite tools and hearths 15,000 and 30,000 years old (fig. 15). The case is dismissed, based on profound doubts on the artificial nature of the finds (D. Meltzer 2009; T. Dillehay 2000). The other case is a recent discovery, with more chances of survival in academia: the early phase at Santa Elina rockshelter, Mato Grosso, provided marginally retouched flakes, charcoal and *Glossotherium* ostheodemes dated to around 25,000 years ago (A. Vilhena 2003, 2011) (fig. 15). In spite of this spectrum of doubts, the pre-Clovis occupation has become a reality and some others even speak of patterns of archaeological manifestations, such as culturally modified bone, unifacial tools and flaked bifaces (D. Stanford *et alii* 2005).

Mexico has its own list of sites that came to life as supposed evidence of very old presence of people, as already mentioned earlier in this text. Tlapacoya, south of Mexico City, was one of them (figs. 27-28). Supposed hearths placed on an ancient cobble beach of an extinct lake yielded dates around 21,000-24,000 RCYBP. An obsidian hydration date on a prismatic blade trapped under an ancient tree log in the lower strata at the site suggested occupation in excess of 20,000 years; the wood itself was radiocarbon dated at about 23,000 RCYBP (J.L. Lorenzo, L. Mirambell 1986, 2005; L. Mirambell 1973, 2000, 2001). Tlapacoya has serious problems in being accepted as a valid older-than-Clovis discovery, although it continues to be blindly accepted by the majority of scholars in the country. The hearths may not have been hearths at all, but naturally formed features, the radiometric results show too large deviations, while the stratigraphic position of the obsidian blade is also questioned (G. Sánchez 2001; D. Huddart, S. González 2006, p. 98; S. Sedov *et alii* 2010). El Cedral, in the deserts of Central-Northern Mexico, is another sounded site that never misses in the Mexican literature and textbooks, with old radiocarbon dates beyond 30,000 years obtained from alleged hearths made of mammoth bones in a spring context, as well as a series of artefacts associated to the Pleistocene sediments (J.L. Lorenzo, L. Mirambell 1981, 1984) (fig. 27). Sadly, the documentation of the claimed contexts remains poor and unconvincing, even after the recent publication of the monograph (L. Mirambell 2012), the raiocarbon dates look not reliable and were never replicated, while there is no way to verify the accuracy and legitimacy of the information today. The story of the

discoveries around the Valsequillo reservoir in Puebla is much too complex to be related here (see C.F. Ardelean 2013). However, the confusions and controversies around the old dates at the site are much too strong to allow it to be considered a valid older-than-Clovis locality. I consider that, for the moment, there are no archaeological sites in Mexico able to prove a human occupation older than the Clovis threshold.

Then, after such a diversified controversy, what is the reliable evidence today on the continent?

In the Tanana valley, Alaska, there are two Nenana phase sites: Broken Mammoth and Swan Point. Going back to 11,800 RCYBP, they are considered by some as potential Clovis progenitors (C.V. Haynes 2005). The presence of microblades in the deepest levels (>12,300 RCYBP) is dubious, but sufficient to claim Siberian connections (S. Fiedel 2006b). With their excavated contexts and unifacial industries, these localities were in use by 14,000 cal BP (R. Bonnichsen 1999b; T.D. Hamilton, T. Goebel 2005; D. Yesner 2007). In the Northwestern Plains and adjacent mountains of USA, the evidence is absent so far (G. Frison 2005). The Northwest coast has the "Manis mastodon" (11,800-12,000 RCYBP) with a bone projectile tip found between its ribs (E.J. Dixon 1999). Lamb Spring, Colorado, below a Cody complex level, yielded an insecure butchering event 13,000 years old (*idem*). Burning Tree Mastodon site, Ohio, did not reveal artefacts, but a possible human-made meat cache, with dates reaching 11,600-12,200 RCYBP. Still uncertain is Burnham site's situation, in Oklahoma, where the association of bison and artefacts could be as old as 26,000 years (D.G. Wyckoff 2005). The open site at Shriver, Missouri, has an early non-point component probably slightly older than Clovis' onset. There is an interesting case in Wisconsin, too, known as the Chesrow complex. Settled closely to the Pleistocene ice front, focused on caribou hunting but still killing proboscideans, Chesrow people used thick, basally thinned, quasi-fluted, heat-treated and side-ground points. Flaked tools and cut marks appeared in the context of the Schaefer and Hebior mammoths, the most important sites of this cultural area (fig. 23). The dates are around 12,500 RCYBP, one millennium older than Clovis (D.F. Overstreet 2004, 2005; C.V. Haynes 2005).

In Eastern-Southeastern North America, the discoveries are more abundant and it's there where the most secure pre-Clovis finds appear (fig. 23). Saltville, Virginia, shows the intensive exploitation of a mastodon carcass, with associated bone and stone tools employed in the process, and also musk ox remains, apparently from 14,500 RCYBP (A.C. Goodyear 2005; D.G. Anderson 2005; J.N. McDonald, J.E. Wiederhold 2009). Topper site in South Carolina (dated only by OSL -Optically Stimulated Luminescence- and stratigraphy to about 16,000 cal BP) revealed concentrations of chert nodules, chert flakes, quartz artefacts, blades, retouched flakes and a supposed "smash-core" technology (D.G. Anderson 2005; A.C. Goodyear 2005; E. Marshall 2001). To the south, Unit 3 at Page-Ladson, Florida, has a possible pre-Clovis occupation of 12,400 RCYBP, manifested as potentially proto-Clovis points and chert artefacts in relationship with mastodon bones and ivory (J.S. Dunbar, A. Hemmings 2004; D. Stanford, B.A. Bradley 2012).

Three discoveries from the eastern regions have been recently brought into attention and they actually form the most important, intriguing and promising corpus of evidence for the older-than-Clovis occupations in North America. A Solutrean-like bipointed biface (known as the "Cinmar biface") was dragged from the bottom of the ocean in by the coast of Virginia, together with mastodon bones dated to 23,000 cal BP, from a place corresponding to the ancient coastline (figs. 23, 24/H). In the Chesapeake Bay, Maryland, an exposed profile at Miles Point revealed a large boulder used as an anvil for the production of stone tools, underneath the Tilghman paleosol, a known stratigraphic marker dated to 24,000-16,300 cal BP (fig. 24/E, F). In the vicinity, at Oyster Cove, a similar projectile point looking like the one at Miles Point and other early sites, appeared in the same palaeosol (D. Stanford, B.A. Bradley 2012) (fig. 24/G).

These points resemble those from Cactus Hill, southeast Virginia (figs. 23, 24/A, B). Considered by some as the best candidate for a secure pre-Clovis occupation (G. Sánchez 2010), it is still questioned by those who question everything (C.V. Haynes 2005; S. Fiedel 2006a). However, Cactus Hill, together with the discoveries in the above-mentioned Atlantic coastal sites, completes what possibly means the earliest cultural evidence of Pleistocene human occupation in North America. The Cactus Hill small triangular points of concave base are similar to some mentioned above and are technological pairs of the Miller point excavated from Meadowcroft Rockshelter (figs. 23, 24/C, D). Beneath the Clovis occupation, there was an older human presence manifested as hearth-like concentrations of charcoal, quartzite flakes and quartzite prismatic blades. Dates range from 15,000 to almost 17,000 RCYBP and there is little to discredit their authenticity (D. Stanford, B.A. Bradley 2012; E.J. Dixon 1999; A.C. Goodyear 2005). The traditional approach to the pre-Clovis problem

would have always emphasised Meadowcroft Rockshelter (see below). Today, thanks to the discoveries from Cactus Hill, Miles Point, Oyster Cove and thanks to the Cinmar biface, the emphasis shifts to these more clear archaeological arguments, in which the technology together with the radiocarbon dating and the geology became more solid arguments that will soon surpass in strength and relevance the older evidence that still carries behind a long history of doubts and confusions. However, the reader can notice something very important: the earliest archaeological sites in USA so far are situated in the east and northeast of the country.

At the opposite end of the country, at Paisley Caves, Oregon, there is another kind of indicators (fig. 23). Bones of butchered large mammals showed up in association with lithic debitage, a Western Stemmed-like obsidian point and human coprolites that yielded human DNA as additional evidence. The obsidian hydration and radiocarbon dates coincide: humans were there, in the Northwest, already by 16,000-14,300 cal BP (M. Gilbert *et alii* 2008; A. Oberling 2010). At the opposite end of the continent, in Venezuela, Taima-Taima is probably the second most important austral site claiming older-than-Clovis age, in spite of its decreasing fame in publications. Studied in the 1960's-1970's, the site is a waterhole in a small basin. In Unit 1, the butchered remains of a juvenile *gomphothere* (a warm-adapted smaller variety of proboscidean with straighter tusks) appeared in clear association with the medial fragment of an El Jobo projectile point sheltered in the pelvic cavity (figs. 15, 17/B). It was the first challenge for the "Clovis-first" model, when originally announced in 1976. Dates obtained from several materials in that context range between 14,000-12,500 RCYBP. El Jobo points (long, narrow, bipointed willow-leafed bifaces) remain mysterious and confusing. Hardly found in buried strata, these points duplicate the problems built around the Lerma points in North America (C.F. Ardelean 2013). Actually, if these taxa existed as objective archaeological realities, they might be culturally related (R. Gruhn, A. Bryan 1984; R. Gruhn 2004, 2005; T. Dillehay 2000; L.J. Jackson 2006; C. Gnecco, J. Aceituno 2006).

If a line were drawn connecting the two better-known and most famous pre-Clovis sites in the Western Hemisphere, it would probably be called "the Cross Creek - Chinchihuapi Creek line". It would be about 8800 km long, running in an almost perfectly north-south direction, along the 75ºW meridian. At one end, Meadowcroft Rockshelter, Pennsylvania, US. At the other end, the Monte Verde open site, near Puerto Montt, Chile (figs. 15, 23). These two sites stood for decades at the core of the older-than-Clovis argumentation. As mentioned above, at least for the North American end of the line, the current discussions started to shift emphasis towards the more intriguing recent discoveries from Maryland and Virginia. Nevertheless, these two sites must be presented, as they used to be the "classic" evidence and their historiographical importance in the debate is crucial.

Meadowcroft, Pennsyllvania, is a deeply stratified rockshelter with a very long cultural occupation. It is among the best-studied Paleoamerican sites, part of a complex and complete regional archaeological study that yielded hundreds of other old localities. Beneath heavy roof debris, stratum IIa provided one of the best arguments for older-than-Clovis presence. With the neighbouring site of Krajcic completing the image, the here-defined Miller complex includes a small, unfluted, resharpened lanceolate biface similar to others mentioned for the eastern North America (fig. 24/C, D). The excavators describe it as a unique, blade technology with standardised small polyhedral core-and-blade industry. The artefacts differ from what is known at any time in North American prehistory. The dates make the case: 12,800 RCYBP, calibrating around 15,000 cal BP Older occupation is suggested, but such ages are sufficient for the debate (J.M. Adovasio *et alii* 1978; J.M. Adovasio, D.R. Pedler 2005; J.M. Adovasio *et alii* 2005; C.V. Haynes 2005; A.C. Goodyear 2005; D. Meltzer 2009; D. Stanford, B.A. Bradley 2012). Other authors see today a similarity between Meadowcroft, Cactus Hill and Chesapeake technologies (D. Stanford, B.A. Bradley 2012).

Monte Verde, Chile, is a unique case in the world archaeology, a sort of South American Pompeii. Sealed under a bog peat formed after its abandonment, the site is well-preserved, a context frozen in time. Component MV-II is the most important. Tom Dillehay's multidisciplinary team excavated a large house with wooden foundations and pole-and-hide walls, with hearths and clayed storage pits, next to a wishbone-shaped structure used as a mastodon carcass processing shelter and healing house, with an amazing amount of perishable materials, human footprints and animal fat conserved for study. El Jobo-like points were found at the site, together with bola stones probably for hunting or fishing, unifacial tools, wooden digging sticks and mortars, bone implements, cordage, hide, etc. The academic community has now agreed on the antiquity of the component: 12,500 RCYBP (14,000 cal BP). The other component, MV-I, yielded dates of 33,000 years, but this is less secure and the excavators themselves showed cautious about them (T. Dillehay 2000; T. Dillehay, J. Rossen 2002; D. Meltzer *et alii* 1997; M. Pino 2003; D. Meltzer 2009).

Such is the "pre-Clovis" scenario at the moment. The oldest dates accepted and coming from coherent contexts cluster after the Late Glacial Maximum and approach, in lesser or greater measure, the 11,500 RCYBP conventional time bar. They rely on professionally excavated strata and have passed the scrutiny of the skeptics and the pressure of paradigms.

◈ Ancient human remains

There is something that does exist in Mexico, as an advantage in comparison to the United States: the freedom to study human skeletal remains, without the constrictions imposed by the famous NAGPRA law in the United States[2]. Starting as a supposed politically correct attitude, this legal requirement transformed into a nightmare for archaeologists, as many important discoveries lost the opportunity to be studied (*cf*. R. Bonnichsen 1999a, 1999b; D.W. Owsley 1999; F.P. McManamon 1999; A.L. Schneider, R. Bonnichsen 2005; J.R. Powell 2005). The discoveries are abundant in North America, much more than the shallow record in Mexico (fig. 25). But they are not very old. The genetic (DNA) 'evidence' is not discussed here, as that needs a specialised approach (see A.C. Stone 1999; T.G. Schurr, D.C. Wallace 1999; J.R. Powell 2005 and others). Neither mortuary patterns nor funerary contexts per se, for reasons of space (see G.D. Steele, J.R. Powell 1999; D.W. Owsley 1999; J.C. Chatters 2010). This section is limited to the revision of the available archaeological discoveries and related radiocarbon dates, in spite of their methodological complications (*cf*. T. Stafford 1994). It is important to specify that *none* of the existing human remains in North America (possibly excepting the very recent discoveries from the Yucatan Peninsula in southeastern Mexico) are older than Clovis, all falling in Late Paleoamerican times. It means they may relate to any possible founding events, incoming from any direction.

"Kennewick Man" was one of the most famous candidates for the Late Pleistocene bioarchaeological record and the object of hard legal battles under the NAGPRA law. Found accidentally in the northwestern state of Washington, it was an adult male showing many healed fractures and a Transitional/Early Archaic projectile point embedded in its iliac (fig. 25). It is not the oldest specimen, as its dating set at 9200-8400 RCYBP (J.C. Chatters 2004; J.R. Powell 2005). The list of relatively ancient remains continues with: Grimes Burial Shelter, 9700 RCYBP and Spirit Cave mummy, 9040 RCYBP, both from Nevada (J.R. Powell 2005; D.W. Owsley, R.L. Jantz 1999); Pelican Rapids, Minnesota, 7840 RCYBP (*idem*); Whitewater Draw, Arizona, 10,000-8000 RCYBP (J.R. Powell 2005; G.D. Steele, J.R. Powell 2002); Gordon Creek, Colorado, 9700 RCYBP (J.R. Powell 2005), Midland site and Wilson-Leonard Burial II, Texas, possibly both from 11,500 RCYBP (*idem*; E.J. Dixon 1999); Rancho La Brea, 9000 RCYBP, and Arlington Springs, 11,000 RCYBP, California (*idem*); Little Salt Springs and Warm Mineral Springs, Florida, 10,000 RCYBP, and finally the On Your Knees cave, Prince of Wales island, Alaska, about 9700 RCYBP (*idem*).

Three finds in USA are part of the oldest coherent bioarchaeological record. The Anzick burial of a two-year old infant was thought of as the only known Clovis individual. But this discovery in Montana, dated at 11,200 RCYBP, represents a mixed, non-primary context and it was not scientifically excavated (fig. 25). It contains associated Clovis artefacts: more than a hundred stone and bone implements, with red ocher that could have covered the dead and offerings (J.R. Powell 2005; J.E. Morrow, S. Fiedel 2006a, 2006b). The inclusion of red ocher continued 1000 years later, with Arch Lake Woman, New Mexico, a skeleton accompanied by talc beads, bone and stone tools, from 10,200 RCYBP (D.W. Owsley *et alii* 2010) (fig. 25). Older than this, related with the Western Stemmed Tradition, the young woman buried with artefacts at Buhl, Idaho, died around 10,670 RCYBP (J.R. Powell 2005; E.J. Dixon 1999). In South America, several human remains are situated in the Transition period between the Pleistocene and the Holocene. The most important is the adult female ("Luzia") from Lapa Vermelha (Lagoa Santa, Brazil), not older than 12,000 cal BP (J.R. Powell 2005; G.D. Steele, J.R. Powell 2002).

Mexico has some of the oldest known skeletal remains on the continent (figs. 25, 27). Unfortunately, none of them was found associated with artefacts, so there is no way to know their cultural affiliation. Also, they are all fortuitous finds, not discovered during systematic digs. The oldest

[2] NAGPRA means "Native American Graves Protection and Repatriation Act". It is a federal law introduced in the United States in November 1990 and it implies that any native tribes have the right to claim as their own the ancient human remains discovered accidentally or within archaeological projects and re-bury them acording to their own traditions. The most negative aspect of this law consists in that it does not specifically include the right of the scientists to study the remains before being re-inhumated.

specimen, radiocarbon-dated and accepted by the wider academic community, is the young woman known as the Peñon III Woman, found in Mexico City. Its age is set at 10,755±55 RCYBP, meaning around 12,800 cal BP, at the onset of the Younger Dryas cold period. Close to its age, an islolated skull from the site of Tlapacoya (unfortunately not found in excavation by the Lorenz'o's team, but by construction workers near the site, perhaps in one of the caves that face the modern highway: fig. 28), dated to 10,200±65 RCYBP, during the same climatic reversal. The Peñón III woman, at least, died during a plinian eruption of Popocatepetl volcano, at the same time with two other specimens dated by tephrachronology applied to the volcanic ash adhered to them: the Chimalhuacán Man and the Balderas Underground male skull, both from Mexico City, as well (S. González *et alii* 2003, p. 381; 2006, p. 70,74; J.A. Pompa y Padilla 1988, 2006; J.C. Jiménez *et alii* 2010). In recent years, amateur divers found human skeletons in a submerged cave system on the eastern coast of the Yucatan Peninsula. During the Pleistocene, the Caribbean Sea was many kilometres away, when the sea level was low. Posteriorly, the caves got inundated and human and animal remains were trapped inside. Archaeologists intervened and studied some of the bones, more than one skeletons presenting interest for the discussion here (A. Terrazas, M.E. Benavente 2006; A.H. González *et alii* 2006, 2008). The finds have not been entirely published yet, but preliminary informations indicate that the young adult woman from the Chrystal Cave might be 11,600 radiocarbon years old, potentially pre-Clovis. Another important specimen, a nearly complete young woman from the Hoyo Negro chamber, was dated at about 13,000-12,000 cal BP and yielded DNA results that seem to confirm the arrival of her ancestors from Beringia (J.C. Chatters *et alii* 2014). These data place these two "first Mexicans" among the oldest human beings known so far in the Western Hemisphere.

◈ Subsistence and mobility

Early Paleoamericans were generalised foragers. This new paradigm implies three lines of argumentation. First, they were not specialised and exclusive megafauna killers (they did not live on mammoth meat only); second, they exploited a very wide spectrum of resources, either food or raw materials; and third, they covered vast territories procuring goods, trading, social networking, adapting to a variety of niches and ecosystems.

Hunting proboscideans (mammoths, mastodons, gomphotheres) was indeed a cultural practice in the early phases of the first Americans, no doubt about that. But it was a rare behaviour; elephants were not an exclusive resource, not even a favourite one. The "specialised" and the "overkill" models are no longer sustained. There seems to be a specific relationship between this cultural custom, particular geographic regions and specific groups. There is a relatively high incidence of the practice in the Great Plains, Great Basin, parts of eastern North America, with a high concentration of kill-sites in southwestern USA. In other regions, such a practice is much less common or absent. On the other hand, proboscideans and many other large-bodied species maybe disappeared in North America at the onset of the Younger Dryas cooling event or during that event. So, most of the archaeological record involving the hunt of megafauna is restricted to the Clovis period: a Clovis-only fashion. The importance of these animals as chronological markers for the Pleistocene biased the objective knowledge, kill-sites being much more evident during surveys and preferred for study over other contexts whose subsistence indicators looked less promising. The discussion on megafauna hunting includes the large bison kills becoming increasingly common in post-Clovis times, with the Plains complexes adapting to the communal hunting of hundreds of animals, through diverse cooperative techniques. Even so, the archaeological reality speaks today of a very different socio-economic landscape: foraging, diversity and adaptability.

Several characteristics are shared by the Paleoamerican foragers from pre-Clovis to Holocene (even historic) times, all over the hemisphere: subsistence adapted to the particularities of each region or locality; wide hunting spectrum, including herbivores, small mammals, reptiles, amphibians, rodents, fish and an impressive reliance on birds and waterfowl; low weight of megafauna meat in the diet, compared to other resources; high importance of plant gathering and processing, like nuts, seeds, fruits, roots, on the same levels as in the Holocene; seasonality and relatively low mobility related to food procurement versus high mobility related to trade and social networking. This scenario is supported by data from a great variety of sites all over North and South America and across all considered historic intervals (see F. Wendorf, J.J. Hester 1962; R.L. Kelly, L.C. Todd 1988; L.C. Todd *et alii* 1990; M.F. Seeman 1994; P.L. Storck, A.E. Spiess 1994; D. Meltzer 2002, 2009; T. Dillehay, J. Rossen 2002; D.F. Overstreet 2005; M.B. Collins 2007; R.J. Dent 2007; J.S. Dunbar, P.K. Vojnovski

2007; K.D. Hollenbach 2007; M. Kornfeld 2007; S.R. Kuehn 2007; R.B. Walker 2007; B.N. Andrews *et alii* 2008; T. Dillehay 2000).

Nevertheless, the Ice Age was an epoch of large-bodied animals and humans were people of their times (V. Geist 2005). The procurement of mega-mammals was a real practice and had several purposes: obtaining meat, hide, sinew and bones or ivory for artefacts, clothing and shelter, and probably social and ritual ends (B.A. Bradley, M.B. Collins 2013). It manifested in several ways: hunting live free animals, killing weakened or trapped specimens, driving herds into traps, scavenging carcasses, quarrying bone and storing meat in the form of caches (R. Bonnichsen, M.H. Sorg 1989; F. Solórzano 1989; E.J. Dixon 1999; G. Haynes 2002; D.C. Fisher 2004; E. Johnson 2005; G. Frison 2004; C.V. Haynes, B.B. Huckell 2007). Killing proboscideans was not such a complicated task, as often believed. Humans are able to hunt any sort of animal if the correct strategies are applied, without the need to rely on bogged places or sick individuals, as clearly shown by G. Frison (2004). The difficulty of the hunt is not the matter here, but this: the relative scarcity of proboscidean killing events (in spite of the opposite general impression), the amount of meat such kills imply and the high incidence of abandonment of carcasses and under-exploitation observed in the butchering events, with intact bodies and unused parts. This is also valid for the massive bison kills from the after-mammoth periods.

So, the final question about subsistence strategies is: if we already know that the Pleistocene Americans were generalised foragers relying mainly on other resources, why did they hunt mammoth and bison in large numbers without using the entire meat available and abandoning large volumes of the obtained prey? In my opinion, the answers are: a) megafauna killings were seasonal, social events, meant to provide food for large social/tribal gatherings, a scenario for social bonding; and/or b) mammoth kills were rare ritual hunts reserved for the initiation of young adults, according to traditions and beliefs that will never be known.

◈ Peopling of the Americas and the "zombie models"

A Mexican colleague wrote: "The narrative of the First Americans is still a very speculative stage, although some narratives are more testable than others" (G. Sánchez 2010, p. 21). This is mostly the case when debating the time, entering routes and mobility of the earliest settlers into and throughout the continent during the initial 'colonisation' process, "an ecological event of enormous magnitude" (N. Jablonski 2002, p. 3). The space here does not allow details and the complexity of the debate can be appreciated elsewhere (E.J. Dixon 1999; T. Dillehay 2000; D. Stanford *et alii* 2005; D. Meltzer 2009; R. Bonnichsen, K.L. Turnmire 2005a, 2005b). This is a review of the major models proposed for this process and a discussion of some aspects from my own perspective.

Today, parallel approaches are employed in the search for the origins of the earliest newcomers. Linguistics, glottochronology, genetics and bioarchaeology seem to converge in the idea that everything started in Beringia (A.C. Roosevelt *et alii* 2002; C.G. Turner II 2002; S. Fiedel 2006b; A.M. Haeussler 2004; T. Goebel *et alii* 2008). But these theories are based on the study of evidence that does not belong to the period in discussion and forcefully assume the validity of untested assumptions (R. Bonnichsen 1999b; R. González-José *et alii* 2005). More efforts have been made to understand the environmental conditions of Eastern Beringia for the supposed time of the first arrivals across the Land Bridge, than for any other region (S.A. Elias 2002; D. Yesner 2007). The archaeological evidence still fails to definitive proof for a pristine and unique entry by land through that point. Today, science prefers the posture of multiple waves of arrival, in order to explain both the initial peopling and the subsequent cultural and genetic diversity (R. Bonnichsen 1999b; D. Meltzer 1989; M. Faught 2008; D. Stanford *et alii* 2005). "Multiple waves" is a tricky concept and can be intepreted in several ways: it can either mean simultaneous entries of distinct populations, successive migrations of groups following the same or different routes or completely separate events occurring at great distances in time. It is possible that migrations commenced very long time ago and many other pioneering populations died out, went extinct, remaining invisible in the archaeological record (N. Jablonski 2002). It is true that the "Clovis-first" model is dead, but that should not automatically allow exaggeratedly old dates for the initial peopling without criticism and supporting evidence, as some did (A. Bryan, R. Gruhn 1989). A model that does give theoretical cohesion to the peopling of the continent is the concept of "adaptive radiation", employed by Michael B. Collins (M.B. Collins 2012; *cf*. B.A. Bradley, M.B. Collins 2013).

There are three basic models for the initial peopling of the Americas: a) the inner route across the continental landmass, implying "colonisation" by land from Eastern Beringia to the territories south of the Laurentide and Cordilleran ice sheets; b) the Pacific coast route, supposing either walking along the coastline or travelling by watercrafts, bordering the shores; c) the North Atlantic route, with European Solutrean people seafaring across the ocean (fig. 26). Anderson and Gillam discuss these models and synthesise a series of options of demographic movement to the interior of the continents (D.G. Anderson, J.C. Gillam 2000).

The first option - *a priori* assuming the first touch point in Alaska - is centred on a crucial argument: it requires an opening between the two large continental ice sheets to allow people to pass southwards, the so-called "Ice-free corridor", which is believed to have opened around 12,000-11,500 RCYBP (fig. 4). If so, Clovis progenitors (probably Nenana groups) migrated through the long and very narrow passage between the immensely tall ice walls, subsisting on waterfowl and resources found around the young periglacial lakes, then flowed into the nowadays' United States, giving birth to the first cultures and, eventually, to Clovis and the rest of ancient societies all over the hemisphere (fig. 26/A, B). For those searching Clovis' ancestry in Beringia, this model is crucial (T.G. Schurr, D.C. Wallace 1999; C.V. Haynes 2005; M.C. Wilson, J.A. Burns 2005; S. Fiedel 2007).

The second option is related to the concept of maritime adaptations and also implies origins in Asia (fig. 26/C). If people took the coastal route, they had to be used to coastal environments, dominating seafaring technologies. If conservative views doubt about that (S. Fiedel 2007; T.D. Hamilton, T. Goebel 2005), others, using archaeological data and ethnographic analogies, consider it as an objective reality (R. Gruhn 1994; J.M. Erlandson 2002; M.A. Jodry 2005). South America has its variant, envisaging both oceanic shores, known as the "aquatic environments model", with people moving along the coast and exploring "eco-refuges" inlands, along the river valleys (L. Miotti 2004, 2006; L. Miotti *et alii* 2011).

The cross-Atlantic alternative has increased in strength and stabilised during the last decade as a viable theory (B.A. Bradley, D. Stanford 2004, 2006; D. Stanford, B.A. Bradley 2002, 2012). It is based on striking and undeniable technological and formal similarities between the Clovis culture and the Late Palaeolithic Solutrean counterpart in Europe. Coast-adapted Solutreans, using specialised watercraft, could have reached northeastern America during or shortly after the Late Glacial Maximum (fig. 26/C). The hypothesis has been strongly questioned by some peers (L.G. Straus 2000; L.G. Straus *et alii* 2005; T. Goebel *et alii* 2008; M. Kornfeld, A. Tabarev 2009) and supported by others (M.B. Collins 2005; C. Yahnig 2004; C.R. Moore 2012; C. Runnels 2012).

Any of these proposals could reflect the reality, maybe all at the same time. But crossing the Atlantic, crossing the Pacific, sailing along new shores or roaming across uninhabited and strange lands, all require some sort of justification and motivation. There are two models describing manners in which mobile populations would move through space: the "string-of-pearls" model and the "leap-frog" one. The first supposes a progressive move, with adjacent territories invading space after fissioning of groups and exhaustion of resources. The second implies long-distance "jumps" from one to the next settled territory, with culturally empty spaces left between (D.G. Anderson, J.C. Gillam 2000).

All these theoretical constructions are internally coherent and sound logical to the reader. But I question one specific aspect: moving elsewhere needs a reason. This could be: accidental (cast-aways, in the case of seafaring), social pressure (conflicts between groups, demographic increase, territoriality and buffer zones), environmental pressure (termination of resources, cataclysms, unsuitable climate or dangerous predators) or, simply, human curiosity and a sense for exploration. But, if we do not resolve the circumstances in which demographic movements occurred, we shall remain with what I would call "zombie models": people simply moving forward, along the coasts, across open seas, through virgin lands, like a mass of zombies, mysteriously chasing for something, or acting like they knew there was something to reach farther away. We should even avoid terms as "colonisation" or "migration", because they inevitably imply a goal, a consciously assumed target. They were people who did not have knowledge of the territories they were about to reach, who lacked maps and aerial views of what there might be beyond the hill (D. Stanford *et alii* 2005; D. Meltzer 2002, 2009).

The strangest "zombie model" involves the ice-free corridor of western Canada. If the corridor was closed before 12,000 RCYBP, the older dates can only be explained by coastal entries. But, even if it opened much earlier, even if that was the only possible land route, let us imagine this: the corridor was only a few kilometres wide, maybe 40-80 km at its widest, cold, humid, lifeless, with terrible floods and gigantic ice walls at sight, which probably even opened first in the south and later

in the north; with scarce vegetation and hardly anything to eat, with fish and waterfowl needing centuries before being established in the new-born lakes. But even if it had been a rich land, why would have anyone, on the Alaskan end, decided to enter a never-ending tunnel of ice leading into nowhere? Does it have and end? What's on the other side? What about the social behaviour, traditions, customs, social rules, myths, legends and beliefs regulating people's acts? These thoughts and the lack of sufficient archaeological evidence along the corridor's trail make me see this scenario as unfeasible.

◈ Concluding remarks

In conclusion, one can only ask, like in the title of a classic paper: "why don't we know when the first people came to North America?" (D. Meltzer 1989). Perhaps, the first answer coming to one's mind would be: because the archaeology of the earliest people in the Americas is still at its beginnings; but also, because passions, egos, conflicts, excessive skepticims or excessive enthusiasm affected the course of this field of research. And finally, because the first inhabitants of the American continents were relatively few in number and their shallow traces are almost invisible, spread as they are over an enormous and tricky geography.

A few final considerations might helpful in bringing together the main ideas disolved among so much data clustered in the previous pages:

1. The archaeology of the peopling of the Americas and the first human occupations in the Western Hemisphere is a field of research that competes, at least in some of the Latin American countries, against much more influential and visually 'attractive' topics, such as the large monuments of Mesoamerica and the Andes, with much higher impact on tourism and financial income.

2. The early prehistory in the Americas is still today, one century after its pioneering discoveries, the stage for hard and passionate academic disputes, controversies and confrontations of paradigms. In the United States, the scientific debates of the late nineteenth century set up the conditions for more cautious, even skeptic-dominated points of view about the accuracy of the archaeological data contributed by scholars to the "Early Man" debate; on the other hand, in other countries, such as the case of Mexico, discoveries commenced to appear much later during the twentieth century, but the attitude of the explorers was much more liberal, often causing an excess of trust in inconclusive archaeological indicators, an non-critical and easy management of absolute dating and the annoucement of conclusions based on poorly sustained data;

3. The use of stone tools lasted during most of the human history in the Americas, sometimes long after the European invasions and the establishment of the new political orders. That makes the archaeological record of the earliest societies become less evident at a first glance, diluted under an immense richness of cultures and lithic typologies;

4. The most widespread cultural-historical model in American prehistory, during its last nine decades of "official" existece, was the so-called "Clovis-first" model. This paradigm implies that the bearers of a particular lithic technology known as Clovis, radiocarbon-dated at ca. 13,500 – 13,000 cal BP in a wide variety of localities across North America, were the direct descendants of the first *Homo sapiens sapiens* hunter-gatherers who crossed into the continent over the Bering Land Bridge that existed during the last stages of the Pleistocene. They were conceived as highly mobile groups, particularly interested in the hunt of now-extinct Ice Age proboscideans, moving fast across the entire continent and peopling both halves of the hemisphere. In retrospective, this model proved to be something that haunted mainly the academic environment of the United States and it has never meant a serious paradigm to scholars in Mexico and South America;

5. Two massive ice sheets, the Laurentide and the Cordilleran, covered the entire northern part of North America during the Ice Age, practically blocking the passage of living beings between the unfrozen Alaska and the rest of the continent. It is still debated whether the so-called "ice-free corridor" opened between the two ice caps soon enough in order to make the terrestrial peopling from Asia a reliable model;

6. It is now widely accepted that the earliest inhabitants of the Americas were not specialised megafauna hunters; they were rather generalised foragers and the proboscidean kill-sites are restricted to particular regions of the United States (mainly in the south and southwest), within Clovis territories, with very few such cases in the rest of the hemisphere;

7. The "Clovis-first" paradigm is now obsolete and one can hardly meet archaeologists still sticking to the old model. Today, the scientific battle moved into the even more disputed field of the

"pre-Clovis" controversies; a new reference point has been set at around 11,500 RCYBP, taking into account a media of the earliest known Clovis dates. "Were there people in the Americas before Clovis" is not a valid question anymore; the new "Holy Grail" of the American archaeology is *how long before* Clovis we can document an indisputable human presence;

8. It is apparent that Clovis people were not alone during their historical period and they may have interacted with a variety of other groups. It is still not possible to say whether "the others" were descendants of earlier arrivals or completely different societies with a different origin. The archaeological record in the United States is very different from one in Mexico and from the discoveries in South America, one simply cannot expect to find the same artefact typologies everywhere; it si likely that the continent was occupied by a large variety of archaeological cultures before the end of the Pleistocene (let's say before the end of the Younger Dryas cooling interval at about 11,700 cal. B.P);

9. In North America, the earliest archaeological sites (candidates for an older-than-Clovis population) cluster in the east and northeast of the United States, in places like Meadowcroft Rockshelter, Chesapeake Bay, and Cactus Hill. Current investigations are analysing the posibility of "pre-Clovis" occupations in the west, wihin the Great Basin and the Pacific coast. In Mexico, several sites have provided extremely old dates, but their validity is still under discussion. South America has the earliest indisputable human settlement in the New World: Monte Verde, in Chile. The most conservative opinions situated the older-than-Clovis occupations at no more than 12,800 RCYBP (about 15,000 cal BP), while other specialists tend to consider the earliest arrivals twice that old;

10. The origin of the First Americans is still a mystery and no model can be considered as confirmed yet. The most common one states that the origin of the American cultures was Asia – Siberia, in particular – with two migration routes suggested, an inland one (through the "ice-free corridor" of Western Canada) and a coastal route, by seafaring. Other, more recent, theories suggest an income of people from the East, from Western Europe (perhaps Solutreans who touched ground in the northeast of the continent as early as the Late Glacial Maximum). For the case of South America, there is an increasing feeling that the peopling there represented a completely separate phenomenon, not related to the 'conquest' of the North. I personally prefer the hypothesis that the peopling of the Americas was a complex process, consisting of multiple entries from multiple directions.

◈ Epilogue

There is no evidence to support the belief that the very first people who actually *discovered* America for the first time were ethnically (or genetically) the same as later populations, such as the Clovis, Folsom, Plainview or even the same as the earliest occupants already documented for the eastern United States or southwestern South America. The question of "who were the Clovis people?" is not at all the same as asking, "who were the *first* inhabitants?". The linear view linking the archaeologically known cultures to the original settlers has no scientific or obliged support. The very first people who stepped on American land may well have been groups who came from a variety of places, at a very remote moment in time, and they could have disappeared, they could have died out without lasting long into the archaeological record; and we are still unable to find their trace. Later people could have been unrelated, secondary migrations. Saying that the First Americans came from the sea, perhaps even across the Atlantic or seafaring over the Pacific, is no contradiction – in essence – with the officially accepted theories about the origins of Clovis or other established cultures.

Very recently, an already famous paper produced a new revival of the debates. A team of scientists announced the results of genome analysis of the only Clovis-related funerary context known so far, the Anzick burial in Montana, USA (M. Rasmussen *et alii* 2014). The remains of an infant were inhumated at the base of a cliff about 12,600 calendar years ago, at the very end of the Clovis era. Many Clovis artefacts surrounded him, covered in red ochre. The DNA results indicate that the young individual was genetically related to the majority of the Native Americans living today and his origins can be quite surely traced back to Asia. That seems to be a valid and remarkable discovery, perhaps even a definitive argument in favour of the Siberian origins. However, in my opinion, the only thing I personally understand from these results is that the lineage of that particular child came from Asia. It does not mean that the entire Clovis population originated up there, as there is no evidence to assume that all users of Clovis technology were ethnically, genetically or linguistically alike. And even if they were, even if the Anzick child was one of the last members of a proper Clovis "nation", the

DNA results would only tell us about the Asian origins of Clovis alone, but solve nothing at all about the still mysterious origins of the *very first Americans*.

◈ Acknowledgements

I wish to thank Dr. Bruce A. Bradley and Dr. José Iriarte, both at the University of Exeter, United Kingdom, for their guidance and support during my recent doctoral studies there and for their supervision on the minimum content of the first version of this text, which was originally written as part of the introductory chapters of my thesis. I am also very grateful to Dr. Michael B. Collins, at Texas State University in San Marcos, United States, for all his cheering and friendship. I thank my colleague prehistorian Guadalupe Sánchez de Carpenter in Sonora, Mexico, for her constant support and suggestions. Also, I acknowledge the motivation received from several people in Europe who expressed their desire to read a synthetic paper like this.

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Era	Geologic period	Chronology (Ma BP)
Quaternary	Holocene	0.01 - present
	Pleistocene	2.6 - 0.01
Tertiary	Pliocene	5.5 - 2.6
	Miocene	22.5 - 5.5
	Oligocene	38 - 22.5
	Eocene	55 - 38
	Palaeocene	65 - 55

Fig. 1. The main geologic periods of the Tertiary and the Quaternary, following the end of the Cretaceous Era. The Pleistocene (or the Ice Age) started 2.6 million years ago (not 1.8 million as it has been traditionally known) and it ended about 10,000 years ago, when the actual warmer stage (the Holocene) commenced. The Pleistocene and the Holocene form together the Quaternary Epoch (data compiled after M. Williams *et alii* 1998; J.J. Lowe, M.J.C. Walker 1997. Image modified from C.F. Ardelean 2013, p. 73, tab. 3).
Principalele perioade geologice ale Terţiarului şi Cuaternarului, urmând finalului Erei Cretacice. Pleistocenul (sau Epoca de Gheaţă) a început în urmă cu 2.6 milioane de ani (şi nu cu 1.8 milioane, cum se considera în mod tradiţional) şi s-a sfârşit în urmă cu aproximativ 10,000 de ani, când a început actuala fază mai caldă Holocenul. Pleistocenul şi Holocenul, formează împreună Epoca Cuaternară (informaţii dupa M. Williams *et alii* 1998; J.J. Lowe, M.J.C. Walker 1997. Imagine modificată din C.F. Ardelean 2013, p. 73, tab. 3).

	Holocene		Chronology (Ka)
Late Pleistocene	Wisconsin Stadial	Late Wisconsin	35-10
		Middle Wisconsin	65-35
		Early Wisconsin	79-65
		Edwisconsin	122-79
Late Middle Pleistocene	Sangamon (inter-stadial)		132-122
	Illinoian (stadial)		302-132
Middle Pleistocene	Pre-Illinoian		26000 - 302
Early Pleistocene			

Fig. 2. The general chronological, traditional scheme of the Pleistocene in North America, which concludes with the Late Wisconsin glacial stage, comprising the Late Glacial Maximum, around 22,000 years ago. This is the only geological interval that witnessed the presence of humans on the continent, as it is known so far. Earlier stadials and interstadials (such as Nebraska, Aftonian, Kansas and Yarmouthian, not reflected in this scheme anymore) are no longer in use as separate stages and they are all gathered within the Pre-Illinoian. In fact, the current tendecy is to abandon these terminologies and replace the names of the glacial and inter-glacial periods with alphanumeric codes correlated with the isotope stages from the Arctic and Antarctic ice cores (based on data from M. Williams *et alii* 1998, p. 79, fig. 3.8; J.J. Lowe, M.J.C. Walker 1997. Image modified from C.F. Ardelean 2013, p. 74, tab. 4).
Schema cronologica generală, tradiţională a Pleistocenului din America de Nord, care se termină cu stadiul glaciar Wisconsin Târziu, în care se include Ultimul Maxim Glaciar, acum vreo 22,000 de ani. Acesta (Wisconsin) este unicul interval geologic care a fost martor prezenţei fiinţelor umane pe continent, din cate se ştie până acum. Stadiile şi interstadiile mai vechi (precum Nebraska, Aftonian, Kansas şi Yarmouthian, care nu se mai reprezintă în modelul de faţă) nu mai sunt în uz, fiind toate reunite sub numele de Pre-Illinois. De fapt, tendinţa actuală este să se renunţe la folosirea acestor denumiri din imagine, şi să se folosească pentru diferitele stadii glaciare coduri alfanumerice corelaţionate cu stadiile izotopice din nucleii de gheaţă obţinuţi din zonele arctice şi antarctice (informaţii bazate pe M. Williams *et alii* 1998, p. 79, fig. 3.8; J.J. Lowe, M.J.C. Walker 1997. Imagine modificată din C.F. Ardelean 2013, p. 74, tab. 4).

PERIOD		Chronology (calendar years before present
Historic		300 - ...
Late Prehistoric		1,200 - 300
Transitional Archaic		2,000 - 1,200
Archaic	Late	3500 - 2,000
	Middle	6/5,000 - 3,500
	Early	9/8,000 - 6/5,000
Paleoindian (or Paleoamerican)	Late	11,000 - 8,000
	Middle	13,500 - 11,000
	Early	>16,000 - 13,500

Fig. 3. The simplified general chronological model of the North American prehistory, as commonly employed mostly in the United States of America. The ages are approximate and orientative, only. This model is rarely used by Mexican archaeologists (based on data from E.S. Turner, T.R. Hester 1999; D.G. Anderson 2005 and others. Modified from C.F. Ardelean 2013, p. 75, tab. 5).
Modelul cronologic general simplificat al preistoriei Americii de Nord, aşa cum este de obicei folosit în Statele Unite ale Americii. Datele perioadelor sunt aproximative şi doar orientative. Acest model este rar utilizat de arheologii din Mexic (bazat pe informaţii din E.S. Turner, T.R. Hester 1999; D.G. Anderson 2005 şi alţii. Imagine modificată din C.F. Ardelean 2013, p. 75, tab. 5).

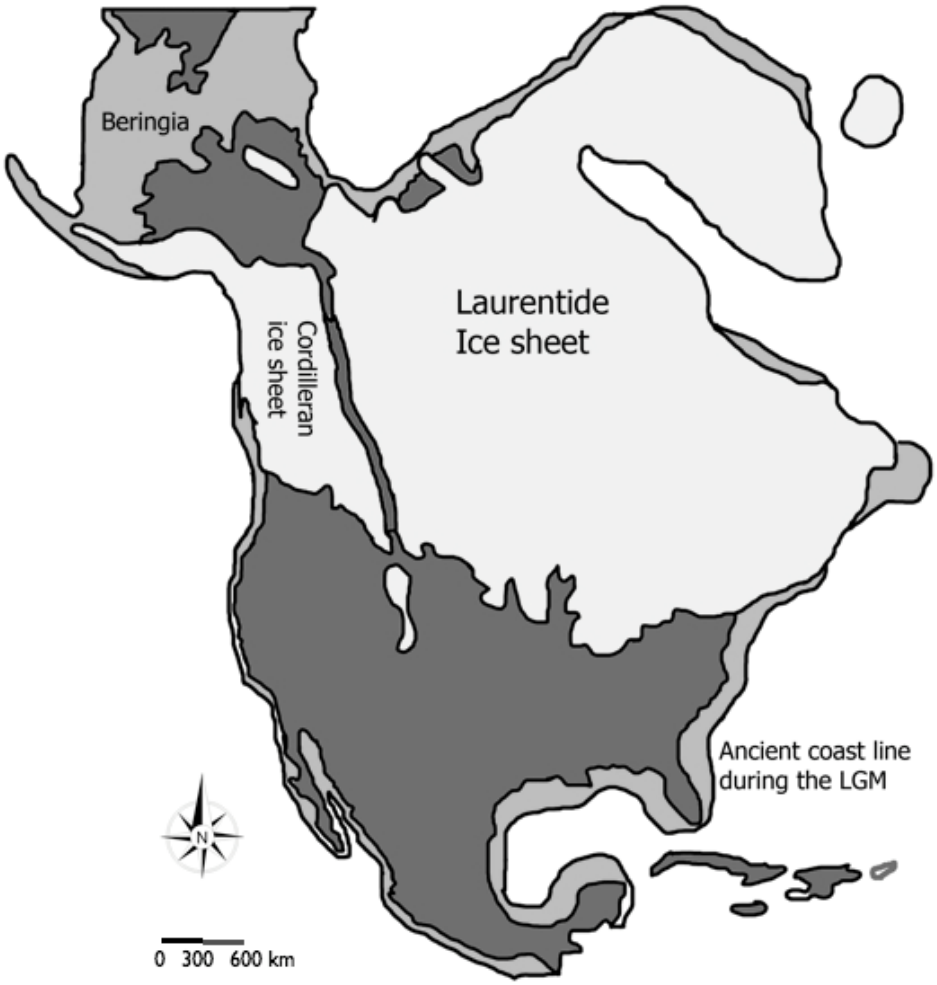

Fig. 4. Contours of North America showing the two large ice sheets that covered the continent during the Wisconsin glaciation (the Laurentide in the east and the Cordilleran in the west), with the "ice-free" corridor, opened around 12,000 ca. B.P., marked between them. The lighter surfaces around the contour of the landmass indicate the extension of the ancient coast lines, when the sea levels were much lower than today. That allowed the exposure of vast territories of land, such as the Land Bridge that connected Alaska and Siberia, known as Beringia (after D. Meltzer 2009, p. 2, fig. 1; modified from C.F. Ardelean 2013, p. 78, fig. 14).
Harta cu conturul Americii de Nord care arată cele două mari calote glaciare care acopereau continentul în timpul epocii glaciare Wisconsin (calota Laurentide spre est şi cea numită Cordilleran spre vest), cu "coridorul liber de gheaţă", deschis înspre 12,000 cal BP, sugerat între ele. Suprafeţele de culoare mai deschisă care înconjoară conturul Americii indică extinderea liniei de coastă, când nivelul oceanelor era mult mai jos decât astăzi. Aceasta a permis expunerea la suprafaţă a vaste teritorii, precum Podul Terestru care conecta Alaska cu Siberia, cunoscut ca Beringia (după D. Meltzer 2009, p. 2, fig. 1; modificată din C.F. Ardelean 2013, p. 78, fig. 14).

Fig. 5. Map showing some of the most important Clovis sites in North America (United States) (base map from www.freeworldmaps.net. Modified from C.F. Ardelean 2013, p. 76, fig. 12).
Harta cu unele dintre cele mai importante situri ale culturii Clovis în America de Nord (Statele Unite) (harta fizica de fond din www.freeworldmaps.net. Imagine modificată din C.F. Ardelean 2013, p. 76, fig. 12).

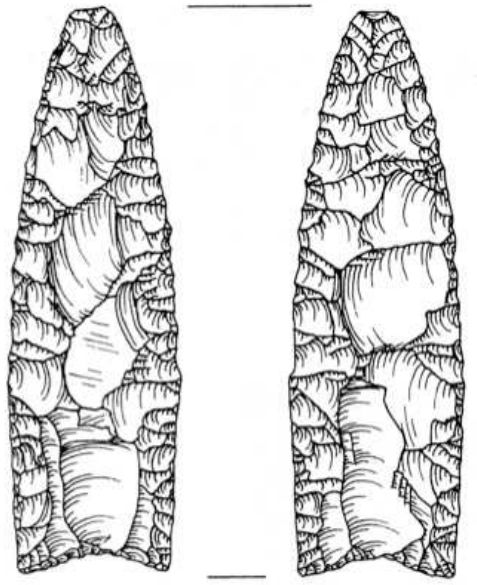

Fig. 6. The Clovis point type-specimen from Blackwater Draw, the first Clovis site near Portales, New Mexico, United States of America (modified from A.T. Boldurian, J.L. Cotter 1999, p. 59, fig. 25; taken from C.F. Ardelean 2013, p. 77, fig. 13).
Specimen tip al vârfurilor Clovis de la Blackwater Draw, primul sit Clovis descoperit lângă Portales, New Mexico, Statele Unite ale Americii (modificat după A.T. Boldurian, J.L. Cotter 1999, p. 59, fig. 25; preluat din C.F. Ardelean 2013, p. 77, fig. 13).

Fig. 7. A representative fluted-based Clovis-type biface from Blackwater Draw (photograph courtesy of Dr. George Crawford, Eastern New Mexico University in Portales, NM, United States).
Un vârf bifacial tipic Clovis, cu "flute" sau canal pornind de la baza artefactului, de la Blackwater Draw (fotografie cu acordul Dr. George Crawford, Eastern New Mexico University, Portales, NM, Statele Unite ale Americii).

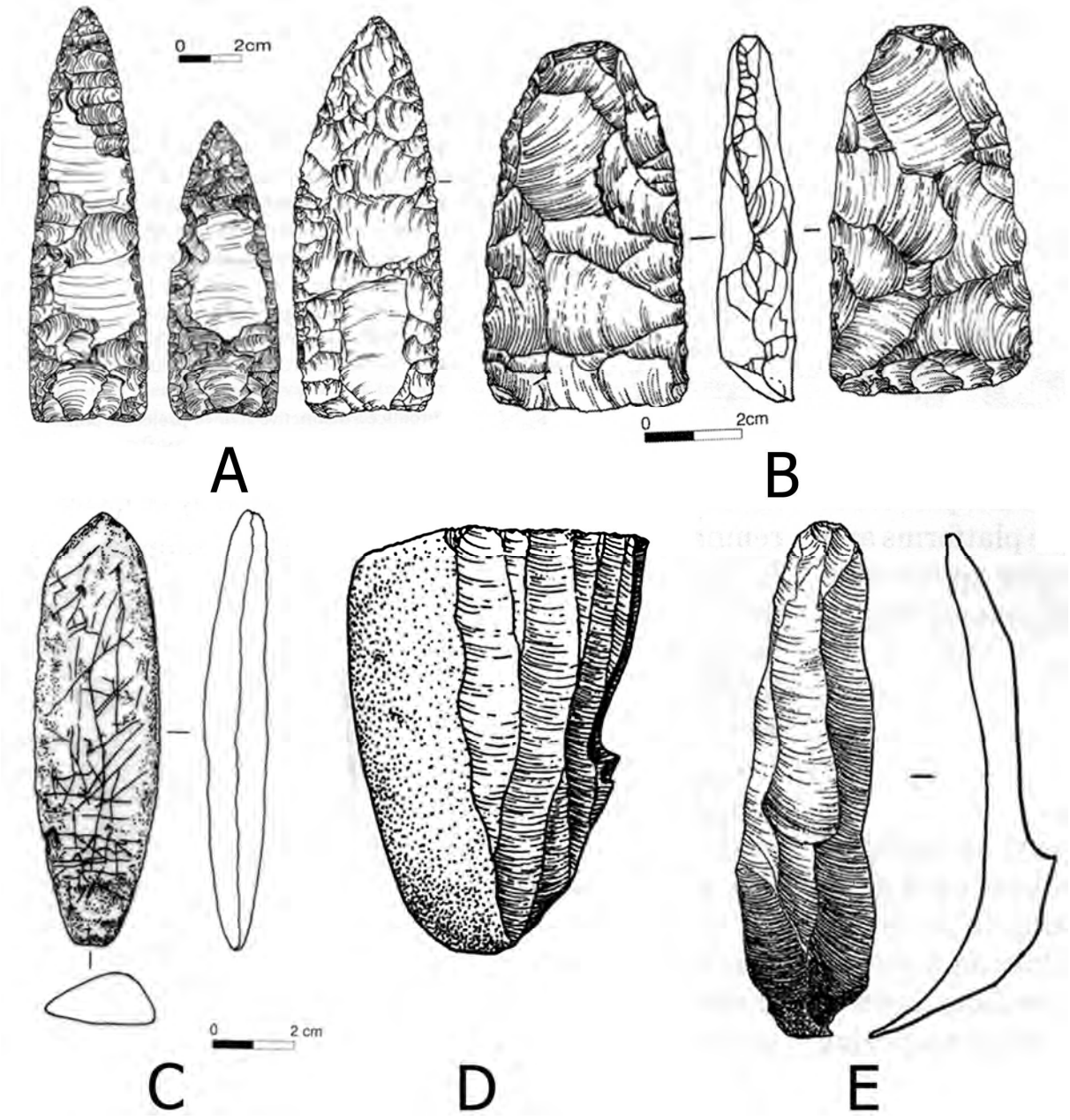

Fig. 8. Clovis stone artefacts: A) Clovis projectile points; B) adze; C) incised stone; D) blade core; E) blade. Artifacts are not at scale within the collage (modified from and based on D. Stanford, B.A. Bradley 2012; B.A. Bradley *et alii* 2010; image taken from C.F. Ardelean 2013, p. 80, fig. 16).
Artefacte Clovis din piatră: A) vârfuri de proiectil Clovis; B) tesla; C) rocă cu incizii; D) nucleu de lamele; D) lamelă. Artefactele nu sunt reprezentate la scara în cadrul colajului (modificat după şi bazat pe D. Stanford, B.A. Bradley 2012; B.A. Bradley *et alii* 2010; imagine preluată din C.F. Ardelean 2013, p. 80, fig. 16).

Fig. 9. General, partial view of the Blackwater Draw Clovis type-site, New Mexico, United States, showing the landscape disturbed by the gravel quarrying activities that originally led to the discovery of the famous prehistoric culture. A building can be appreciated in the center of the image: it is the dome built in the main area of the site, sheltering the open excavation shown in fig. 10, where tourists and specialists can observe the concentration of bison bones from the after-Clovis, later Folsom levels (photograph by Dr. Ciprian F. Ardelean, 2014).
Vedere generala parţială a sitului Blackwater Draw, situl tip al culturii Clovis, în New Mexico, Statele Unite, arătând peisajul modificat în timpul activitatilor de extragere de pietriş şi nisip care iniţial au dus la descoperirea celebrei culturi preistorice. In centrul imaginii se poate aprecia o clădire: este vorba despre edificiul construit deasupra zonei principale a sitului, acoperind săpătura deschisă care se vede in fig. 10, unde turiştii şi specialiştii pot observa concentraţia de oase de bizon aparţinând nivelelor Folsom posterioare culturii Clovis (fotografie de Dr. Ciprian F. Ardelean, 2014).

Fig. 10. The author of the article standing next to the Folsom level open excavation in the interior of the dome at Blackwater Draw, New Mexico, United States (photograph by Dr. Rafael Suárez, 2014).
Autorul acestui articol lângă săpătura deschisă cu nivele Folsom din interiorul domului de la Blackwater Draw, New Mexico, Statele Unite (fotografie de Dr. Rafael Suárez, 2014).

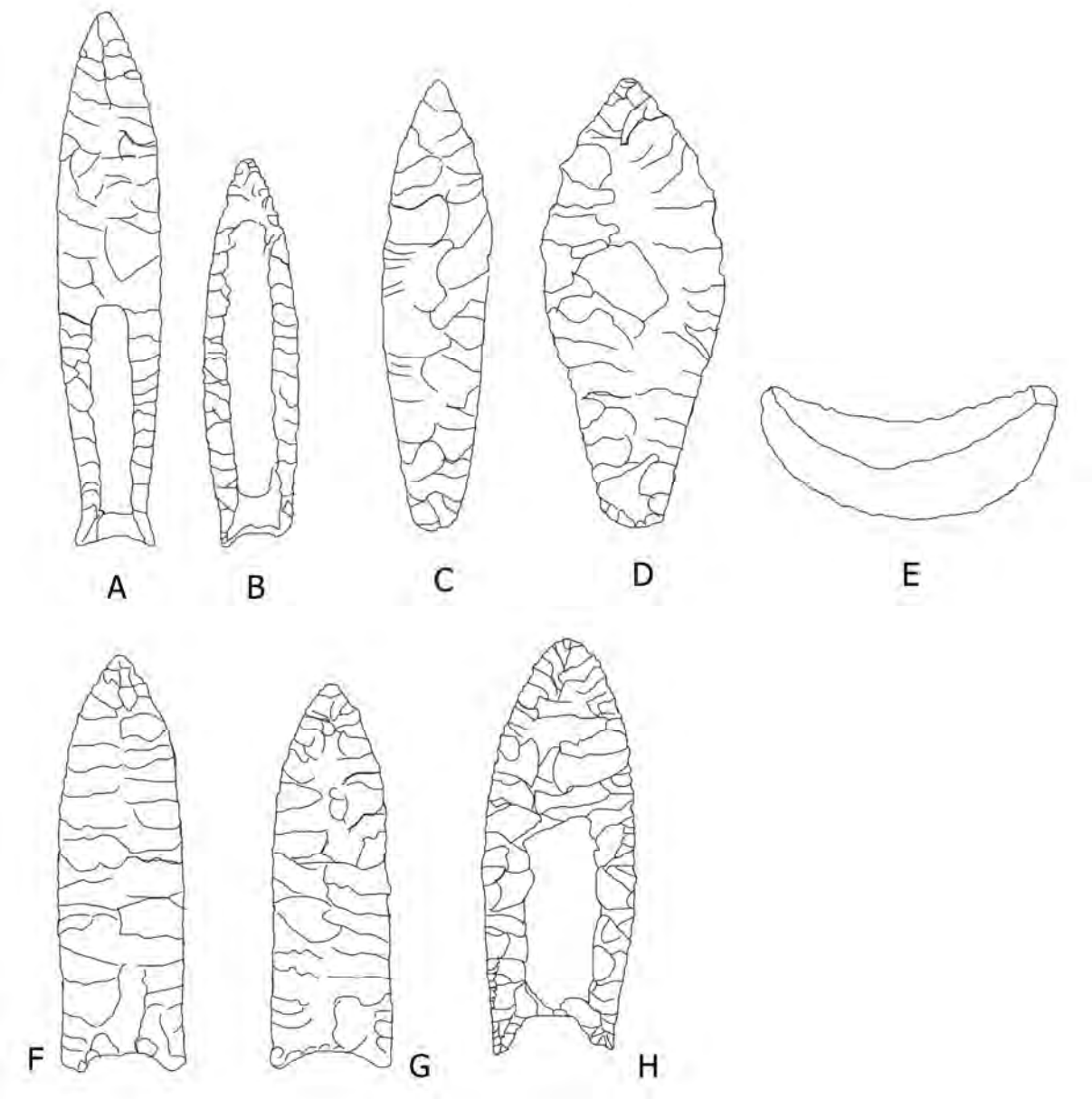

Fig. 11. Projectile point types contemporary with Clovis and post-Clovis: A) Cumberland, fluted (drawn after D. Stanford *et alii* 2005, fig. 5); B) Barnes, fluted (after *idem*); C) Western Stemmed Tradition (WST) point (after *idem*); D) WST point (after *idem*); E) WST crescent (after C. Beck, G.T. Jones 2010); F) Goshen (after D. Stanford *et alii* 2005, fig. 10); G) Plainview (after *idem*); H) Folsom (after A.T. Boldurian, J.L. Cotter 1999, p. 77, fig. 37) (Image taken from C.F. Ardelean, p. 83, fig. 17).
Vârfuri de proiectile de tipuri contemporane cu Clovis şi post-Clovis: A) Cumberland, cu "flute" (după D. Stanford *et alii* 2005, fig. 5); B) Barnes, cu "flute" (după *idem*); C) vârf Western Stemmed Tradition (WST) (after *idem*); D) vârf WST (după *idem*); E) crescent WST în semilună (după C. Beck, G.T. Jones 2010); F) Goshen (după D. Stanford *et alii* 2005, fig. 10); G) Plainview (dupa *idem*); H) Folsom (dupa A.T. Boldurian, J.L. Cotter 1999, p. 77, fig. 37) (imagine preluată din C.F. Ardelean 2013, p. 83, fig. 17).

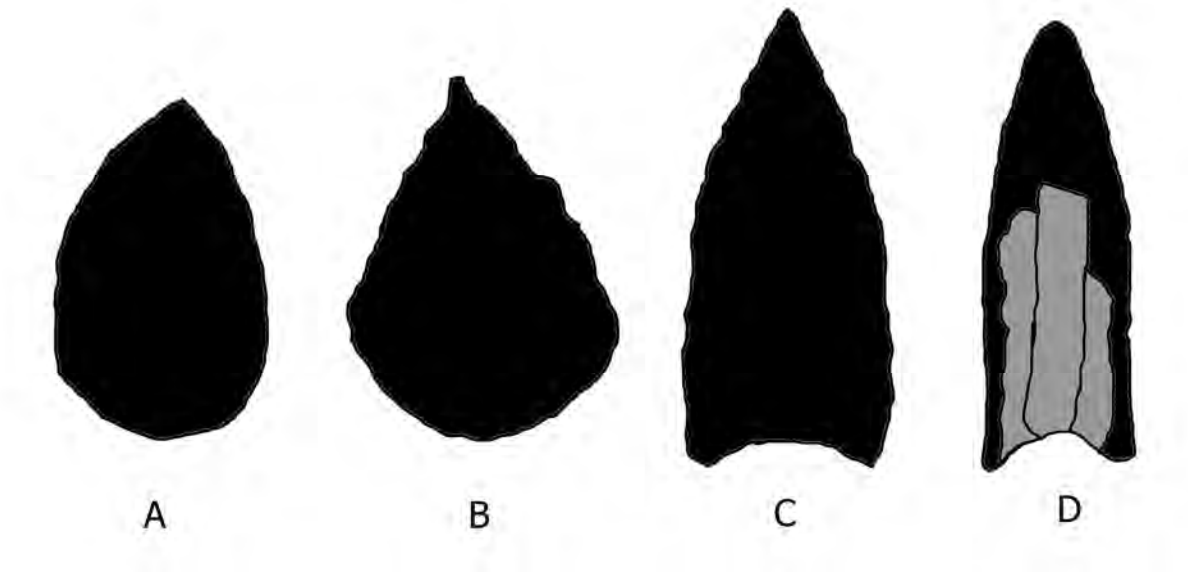

Fig. 12. Basic shapes of early Alaskan bifaces: A) and B) teardrop-shaped Nenana "Chindadn" points; C) Nenana concave-based point; D) Alaskan fluted point (based on artefacts from D. Stanford *et alii* 2005; D. Stanford, B.A. Bradley 2012. Collage taken from C.F. Ardelean 2013, p. 85, fig. 19).
Forme de bază de bifaciale timpurii din Alaska: A) şi B) vârfuri tip "Chindadn" în formă de lacrimă, cultura Nenana; C) vârf Nenana de bază concavă; D) vârf cu "flute" din Alaska (forme bazate pe artefacte din D. Stanford *et alii* 2005; D. Stanford, B.A. Bradley 2012. Colaj preluat din C.F. Ardelean 2013, p. 85, fig. 19).

Fig. 13. Map with some of the most important early Alaskan sites, exponents of the Nenana complex (adapted from D. Stanford *et alii* 2005; base map from www. freeworldmaps.net. Modified from C.F. Ardelean 2013, p. 84, fig. 18).
Hartă cu unele dintre cele mai importante situri timpurii din Alaska, exponente ale complexului Nenana (adaptat după D. Stanford *et alii* 2005; hartă de fond din www. freeworldmaps.net. Modificat după C.F. Ardelean 2013, p. 84, fig. 18).

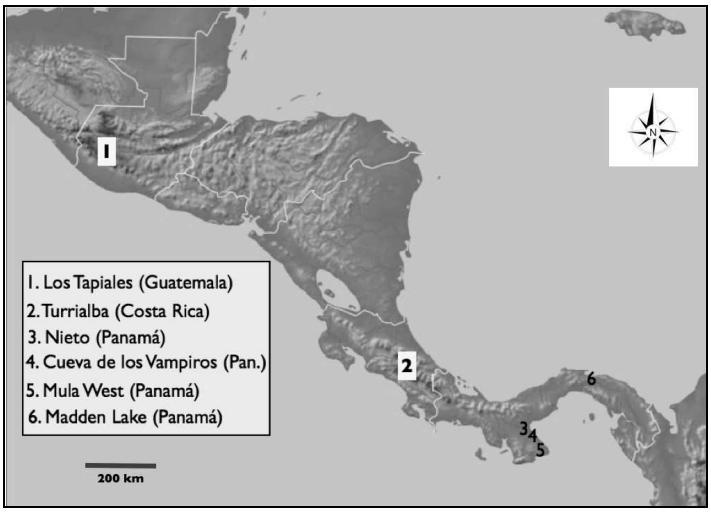

Fig. 14. Paleoamerican sites in Central America (base map from www.freeworldmaps.net. Modified from C.F. Ardelean 2013, p. 86, fig. 20).
Situri Paleoamericane din America Centrală (hartă de fond din www.freeworldmaps.net. Modificat după C.F. Ardelean 2013, p. 86, fig. 20).

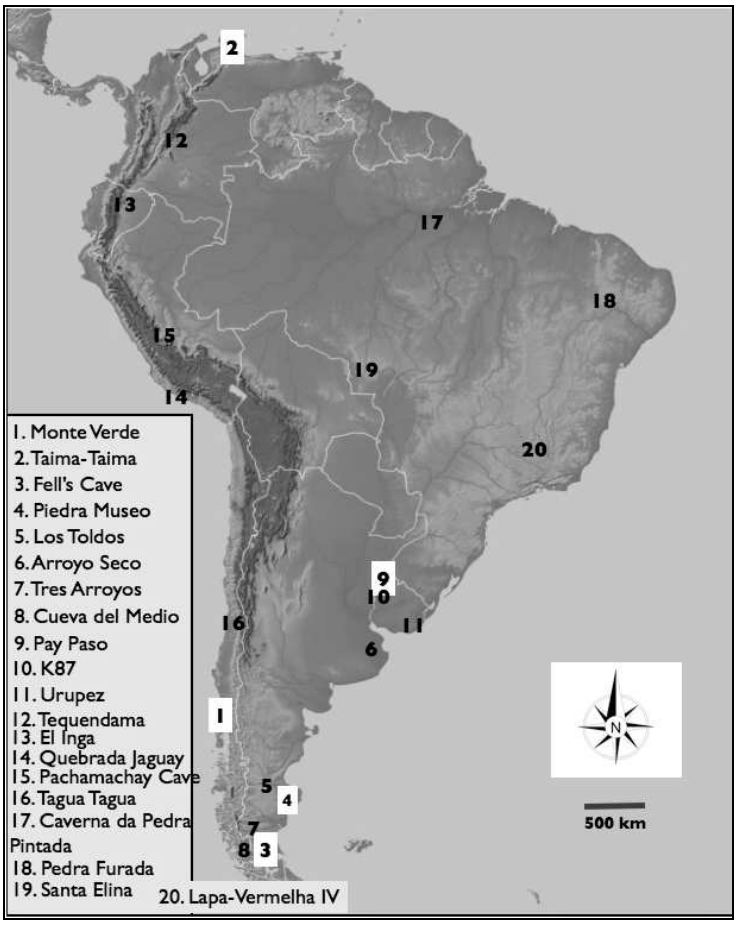

Fig. 15. The most important Paleoamerican sites in South America. The white squares indicate the earliest ones (base map from www.freeworldmaps.net; figure from C.F. Ardelean 2013, p. 90, fig. 22).
Cele mai importante situri Paleoamericane din America de Sud. Numerele cu fond alb indică pe cele mai timpurii (hartă de fond din www.freeworldmaps.net; preluată din C.F. Ardelean 2013, p. 90, fig. 22).

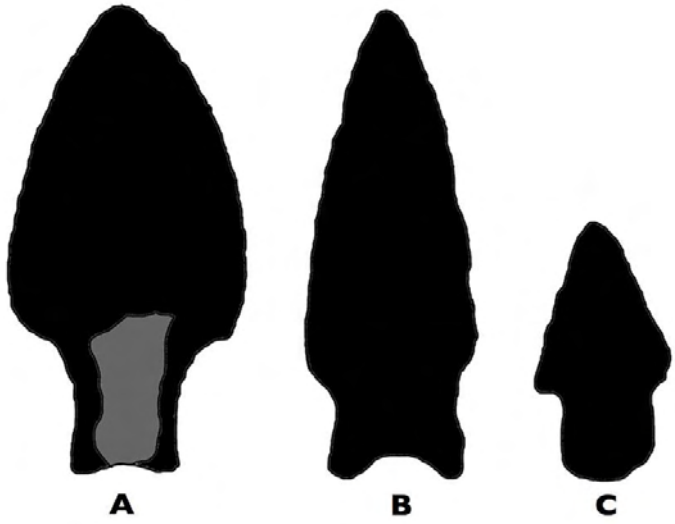

Fig. 16. Shapes of early South American points: A) fluted Fishtail point (after D. Stanford *et alii* 2005, fig. 13); B) Pay Paso point from Uruguay (after R. Suárez 2011b, p. 187); C) K87 – El Tigre point from Uruguay (after R. Suárez 2011, p. 192) (taken from C.F. Ardelean 2013, p. 88, 96; figs. 21, 28).
Forme de vârfuri timpurii din America de Sud: A) vârf Fishtail ("Coadă de peşte") (după D. Stanford *et alii* 2005, fig. 13); B) vârf Pay Paso din Uruguay (după R. Suárez 2011b, p. 187); C) vârf K87 – El Tigre din Uruguay (după R. Suárez 2011, p. 192) (preluate din C.F. Ardelean 2013, p. 88, 96, fig. 21, 28).

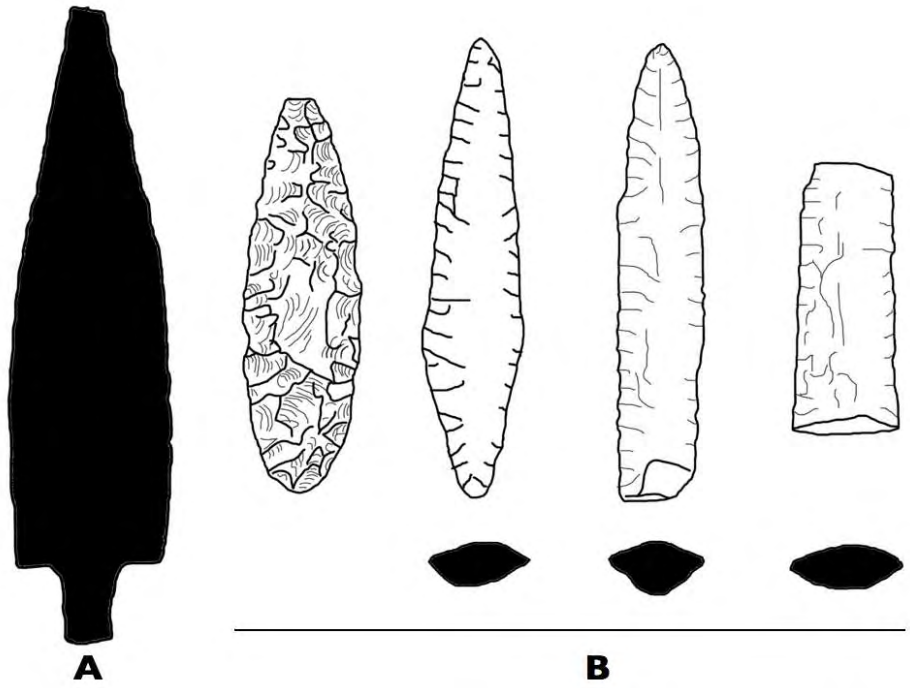

Fig. 17. Shapes of point types from South America: A) Paiján point from Western South America (after D. Stanford *et alii* 2005); B) varieties of supposedly pre-Clovis El Jobo points (after D. Stanford *et alii* 2005; R. Gruhn, A. Bryan 1984, figs. 5.3) (taken from C.F. Ardelean 2013, p. 96, 103, figs. 29, 32).
Forme de tipuri de vârfuri din America de Sud: A) vârf Paiján din vestul Americii de Sud (după D. Stanford *et alii* 2005); B) varietăţi de vârfuri El Jobo, considerate de vârsta pre-Clovis (după D. Stanford *et alii* 2005; R. Gruhn, A. Bryan 1984, fig. 5.3) (preluate din C.F. Ardelean 2013, p. 96, 103, fig. 29, 32).

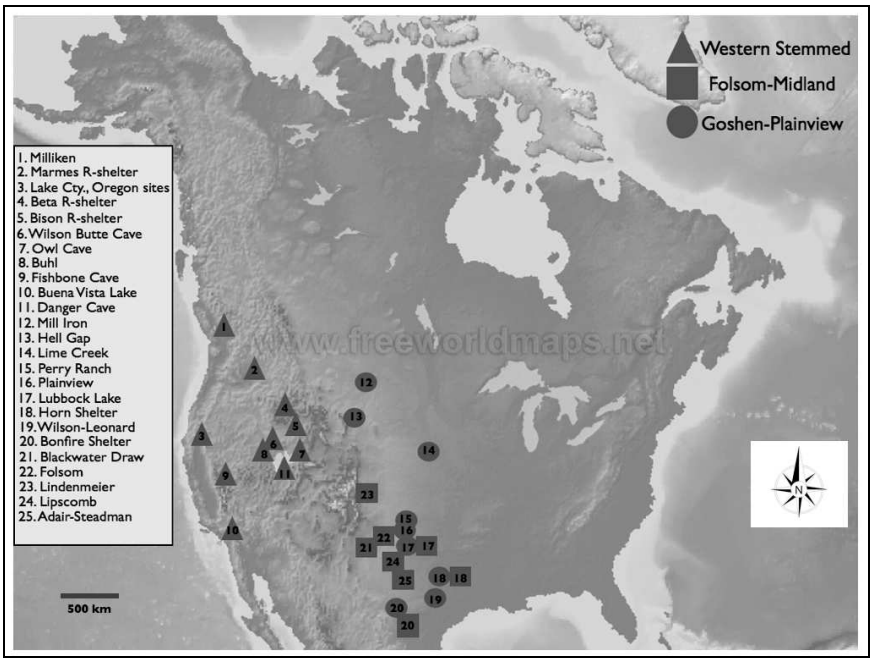

Fig. 18. Map showing the distribution of some of the most relevant archaeological sites belonging to the Western Stemmed Tradition, the Folsom-Midland culture and the Goshen-Plainview horizon (based on information from D. Stanford *et alii* 2005; map from www.freeworldmaps.net) (taken from C.F. Ardelean 2013, p. 92, fig. 23).
Hartă conţinând distribuţia geografică a unora dintre cele mai relevante situri arheologice aparţinând tradiţiei Western Stemmed, culturii Folsom-Midland şi orizontului Goshen-Plainview (bazat pe informaţii din D. Stanford *et alii* 2005; harta de fond din www-freeworldmaps.net) (preluat din C.F. Ardelean 2013, p. 92, fig. 23).

Fig. 19. The characteristic landscape around Folsom, New Mexico, United States, in the vicinity of the type-site of the post-Clovis bison-hunting culture (photograph by Dr. Ciprian F. Ardelean, 2014).
Peisajul caracteristic din jurul localităţii Folsom, New Mexico, Statele Unite, în apropierea sitului tip al culturii vânătorilor de bizoni din epoca post-Clovis (fotografie de Dr. Ciprian F. Ardelean, 2014).

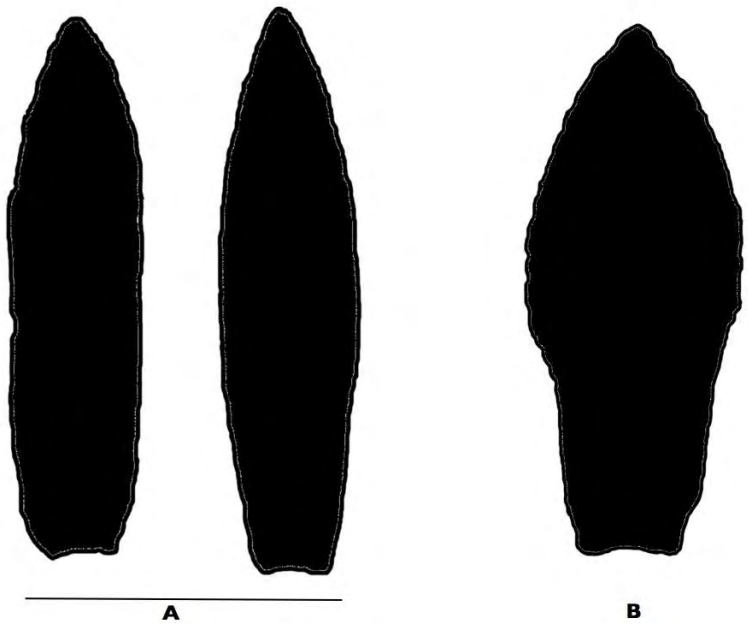

Fig. 20. Shapes of North American Paleoindian artifacts: A) Agate Basin points (after E.J. Dixon 1999); B) Hell Gap point (after E.S. Turner, T.R. Hester 1999) (collage after C.F. Ardelean 2013, p. 94, figs. 24-25).
Forme de bază de artefacte din America de Nord: A) vârfuri tip Agate Basin (după E.J. Dixon 1999); B) vârf Hell Gap (după E.S. Turner, T.R. Hester 1999) (colaj după C.F. Ardelean 2013, p. 94, fig. 24-25).

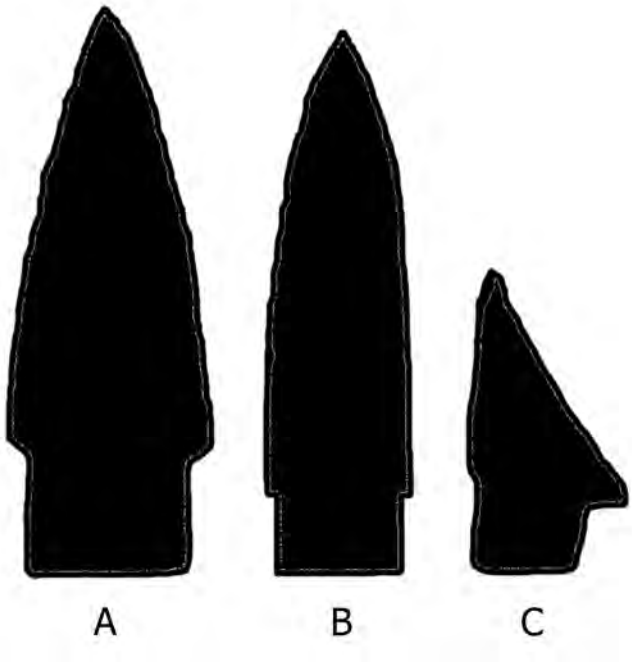

Fig. 21. Late Paleoamerican points from North America, belonging to the Cody Complex: A) Scottsbluff; B) Eden; C) Cody knife (based on E.J. Dixon 1999; E.S. Turner, T.R. Hester 1999) (image after C.F. Ardelean 2013, p. 95, fig. 26).
Vârfuri Paleoamericane târzii din America de Nord, aparţinând complexului Cody: A) Scottsbluff; B) Eden; C) cuţit Cody (conform E.J. Dixon 1999; E.S. Turner, T.R. Hester 1999) (preluată din C.F. Ardelean 2013, p. 95, fig. 26).

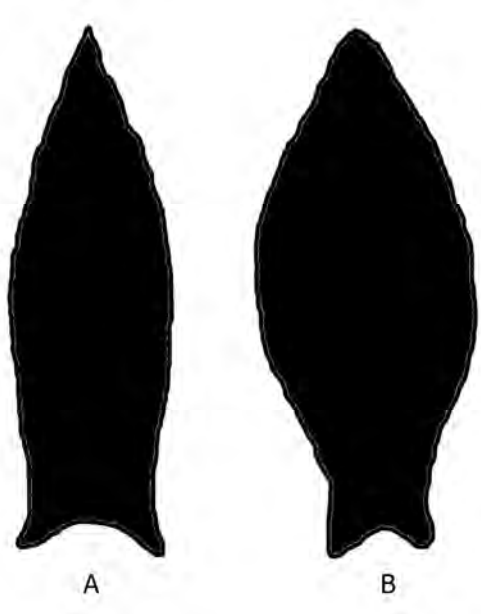

Fig. 22. Paleoamerican point types from Florida: A) Suwannee; B) Simpson (modified from J.S. Dunbar, A. Hemmings 2004, p. 67, fig. 1) (taken from C.F. Ardelean 2013, p. 95, fig. 27).
Vârfuri Paleoamericane din Florida: A) Suwannee; B) Simpson (modificate după J.S. Dunbar, A, Hemmings 2004, p. 67, fig. 1) (preluată din C.F. Ardelean 2013, p. 95, fig. 27).

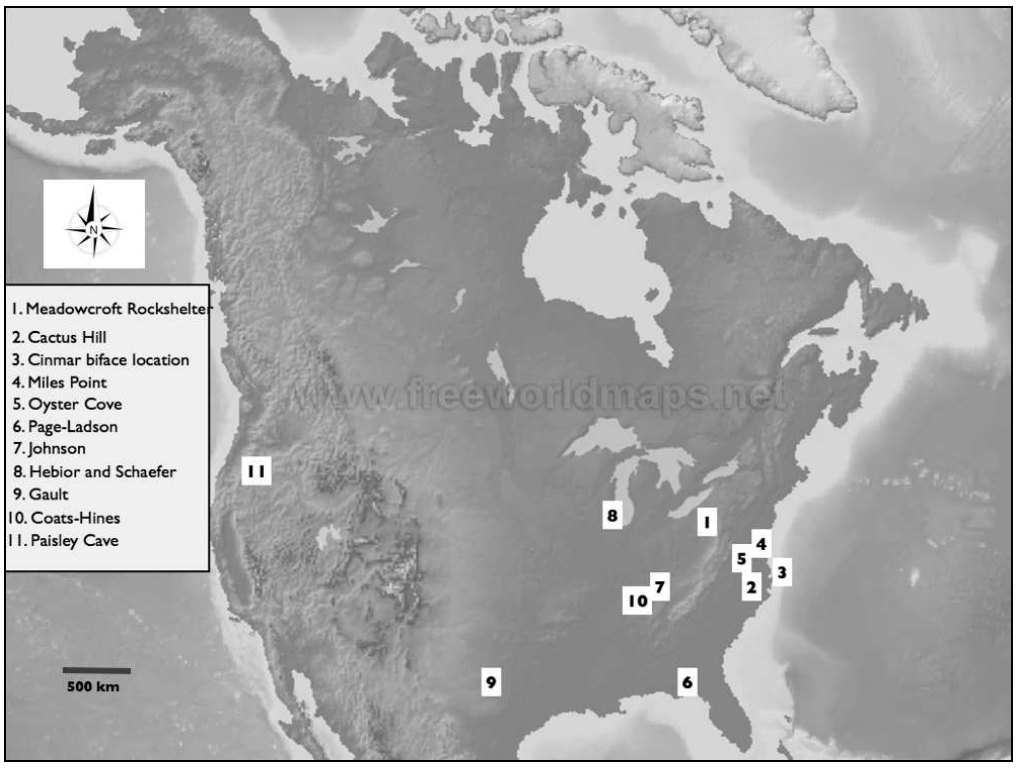

Fig. 23. Map of North America (excluding Mexico), with the location of the most important Pre-Clovis sites that provided more secure evidence. The majority concentrate in the eastern US (based on D. Stanford, B.A. Bradley 2012, p. 90, fig. 4.1; base map from www.freeworldmaps.net; figure taken from C.F. Ardelean 2013, p. 98, fig. 30).
Hartă a Americii de Nord (nu include Mexicul), cu poziţia geografică a celor mai importante situri Pre-Clovis care au oferit evidenţe mai credibile. Majoritatea se concentrează în estul Statelor Unite (bazat pe D. Stanford, B.A. Bradley 2012, p. 90, fig. 4.1; hartă de fond din www.freeworldmaps.net; figură preluată din C.F. Ardelean 2013, p. 98, fig. 30).

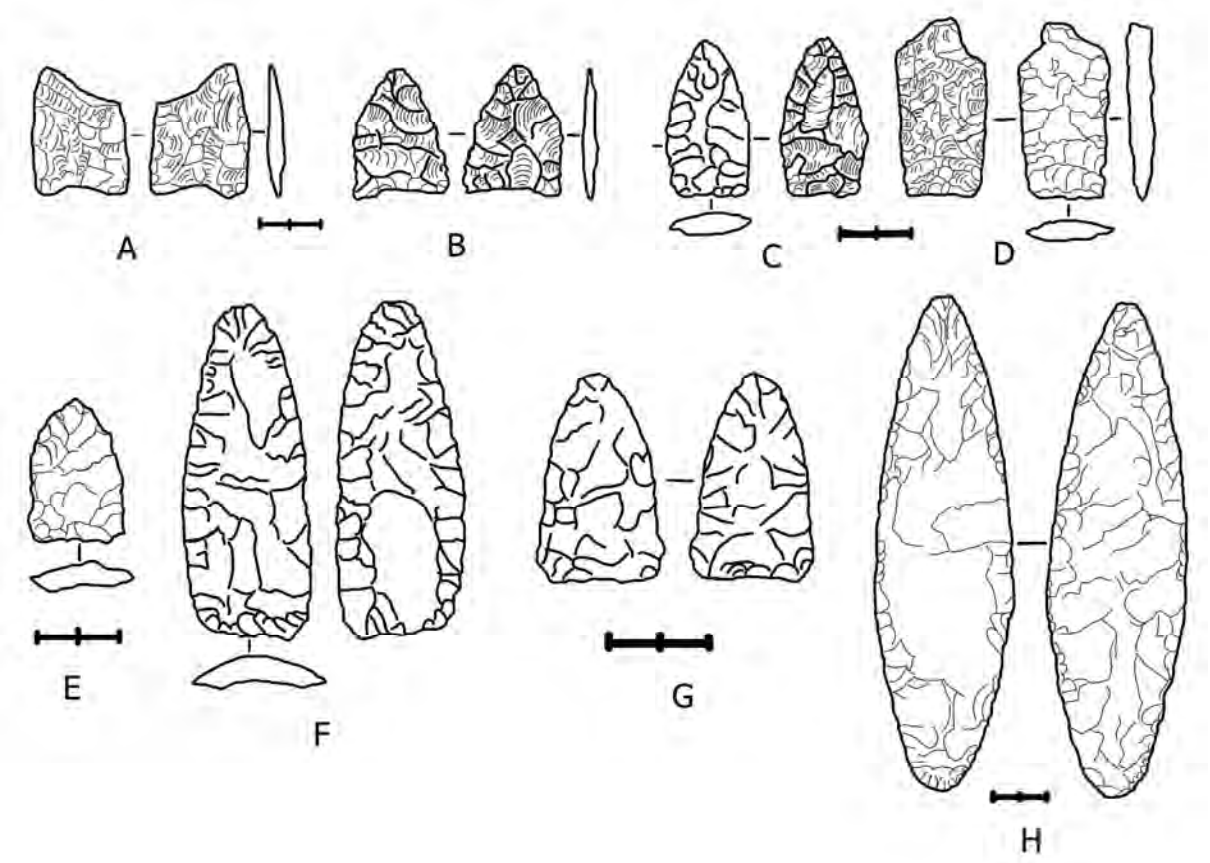

Fig. 24. North American flaked stone Pre-Clovis artefacts discovered in the United States: A) and B): Cactus Hill; C) and D): Meadowcroft Rockshelter; E) and F): Miles Point; G): Oyster Cove; H): the Cinmar biface. All scales have 2 cm (re-drawn from D. Stanford, B.A. Bradley 2012, figs. 4.3, 4.2, 4.4, 4.6 and 4.7; collage taken from C.F. Ardelean 2013, p. 101, fig. 31).
Artefacte de piatră ciolplită Pre-Clovis din America de Nord descoperite în Statele Unite: A) şi B): Cactus Hill; C) iar D): Meadowcroft Rockshelter; E) şi F): Miles Point; G): Oyster Cove; H): bifacial Cinmar. Toate scările au 2 cm (re-desenate pe baza a D. Stanford, B.A. Bradley 2012, fig. 4.3, 4.2, 4.4, 4.6 and 4.7; colaj preluat din C.F. Ardelean 2013, p. 101, fig. 31).

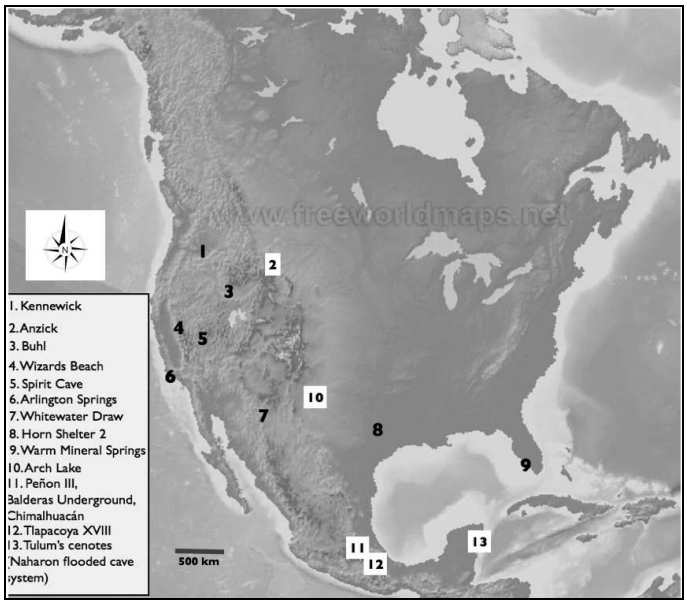

Fig. 25. Map of North America (including Mexico) showing the distribution of some of the most relevant discoveries of human remains of Late Pleistocene - Early Holocene age. The oldest ones are marked by white cases (after E.J. Dixon 1999; S. González *et alii* 2003, 2006; A.H. González *et alii* 2006, 2008; taken from C.F. Ardelean 2013, p. 105, fig. 33).
Hartă a Americii de Nord (inclusiv Mexic) cu distribuţia geografică a unora dintre cele mai importante descoperiri de resturi umane datate pentru Pleistocenul Final–Holocenul Timpuriu. Cele mai vechi sunt marcate prin pătrate albe (după E.J. Dixon 1999; S. González *et alii* 2003, 2006; A.H. González *et alii* 2006, 2008; preluată din C.F. Ardelean 2013, p. 105, fig. 33).

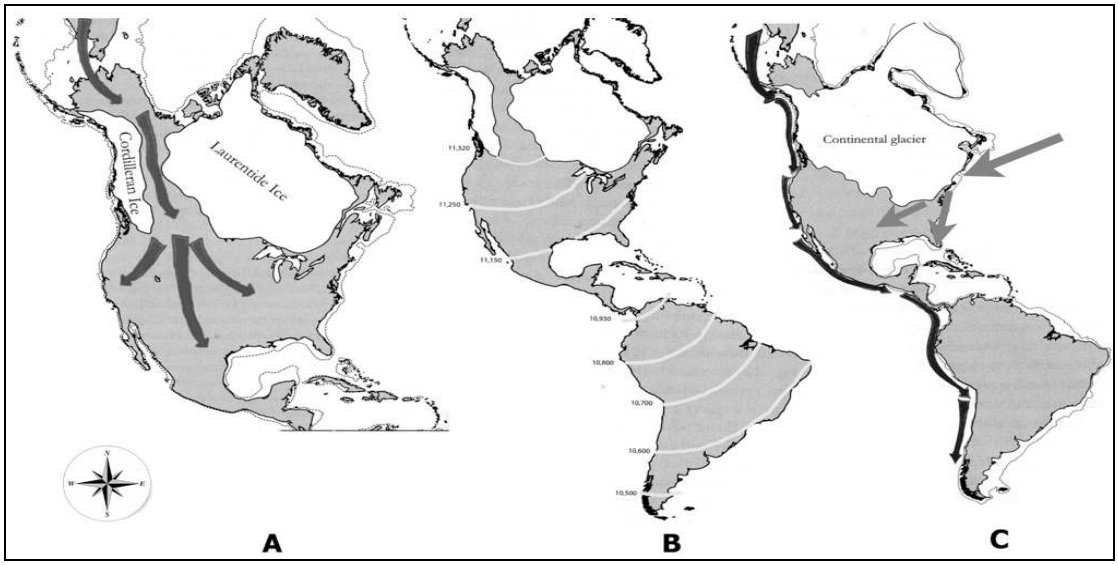

Fig. 26. The main models for the peopling of the Americas: A) the "classic" entry through Beringia and the migration through the "ice-free corridor", the base for the "Clovis-first" paradigm; B) the "bow waves" spreading of the innitial populations from north to south, in a fast movement that must have lasted less than a millennium; this is also linked to the "Clovis-first" and "Overkill" models; C) the alternative, maritime routes, before the opening of the ice-free corridor: the Pacific coast peopling, and the North Atlantic hypothesis, part of the "Solutrean connection" theory (base maps modified from E.J. Dixon 1999; figure taken from C.F. Ardelean 2013, p. 109, fig. 34).
Principalele modele pentru populare Americilor: A) pătrunderea "clasică" prin Beringia şi migrarea prin coridorul liber de gheaţă, baza modelului "Clovis first"; B) dispersarea în formă de unde ("bow waves") dinspre nord spre sud, într-o deplasare rapidă care ar fi durat mai puţin de un mileniu; acest model este legat la rândul lui de modelele "Clovis first" şi "Overkill"; C) rutele maritime, alternative, anterioare deschiderii coridorului fără ghiaţă: popularea dinspre Pacific şi popularea dinspre Atlanticul de Nord, parte a ipotezei cunoscute ca şi "conexiunea Solutreană" (harta de bază modificată din E.J. Dixon 1999; figură preluată din C.F. Ardelean 2013, p. 109, fig. 34).

Fig. 27. Map with the main prehistoric sites reported in Mexico. Only some of them are mentioned in the text (from C.F. Ardelean 2013, p. 72, fig. 11).
Hartă cu principalele situri preistorice cunoscute în Mexic. Doar unele dintre ele apar menţionate în text (din C.F. Ardelean 2013, p. 72, fig. 11).

Fig. 28. The volcanic hill from Tlapacoya, in the south of Mexico City metropolis. A controversial site was excavated around it, considered by the Mexican traditional archaeology among the oldest in the Americas (photograph by Dr. Ciprian F. Ardelean, 2013).
Dealul vulcanic de la Tlapacoya, în sudul metropolei Mexico City. Un sit controversat a fost săpat în jurul lui, considerat în arheologia mexicană oficială printre cele mai vechi de pe continentul american (fotografie de Dr. Ciprian F. Ardelean, 2013).

Fig. 29. General view of Valsequillo site, near Puebla, Mexico, the centre for long disputes and controversies about the antiquity of human presence in the Americas. Recently, the waters of the Valsequillo dam have completely covered the location of the old archaeological excavations (photograph by Dr. Ciprian F. Ardelean, 2013).
Vedere generală asupra sitului Valsequillo, lângă Puebla, Mexic, motiv de numeroase dezbateri şi controverse în legatură cu vechimea prezenţei umane în Americi. Recent, apele barajului de acumulare de la Valsequillo au acoperit complet locurile vechilor săpături arheologice (fotografie de Dr. Ciprian F. Ardelean, 2013).

Boian period ceramics from Teleor 008, a site in South of Romania

Laurens THISSEN*

Abstract: *This paper is about a technological and categorisation assessment of a sample of ceramics from a small site in the Lower Danube Plain, briefly occupied during two phases of the Boian period, all probably dated to the first half of the 5th millennium cal BC. Focusing on fabric use, firing methods and aspects of pottery use, an evaluation of fragmentation and post-deposition patterns helps in assessing the site's use life.*

Rezumat: *Textul de față se referă la evaluarea tehnologică și la clasificarea unui eșantion ceramic provenit dintr-un mic sit din câmpia Dunării de Jos, ocupat pentru o scurtă perioadă de timp de-a lungul a două faze ale perioadei Boian, ambele datate, probabil, în prima jumătate a mileniului V BC. Concentrându-se asupra compoziției pastei, metodelor de ardere și aspectelor legate de utilizarea ceramicii, o evaluare a modelelor de fragmentare și postdepoziționale contribuie la înțelegerea utilizării sitului.*

Keywords: *prehistoric pottery, technology, fragmentation patterns, Southeastern Europe, Neolithic.*

Cuvinte cheie: *ceramică preistorică, tehnologie, modele de fragmentare, sud-estul Europei, neolitic.*

The site Teleor 008 is located approximately 1 km west of the Teleorman River, several hundreds of meters removed from the terraced edges of the flood plain. It is one of a series of at least five flat settlements found by the SRAP Project situated on "sand islands" or gravel bars on the valley floor, all of which date to the 5th millennium cal BC Boian period (Teleor 001, Teleor 008, Teleor 009, Teleor 010 and Teleor 011) (D.W. Bailey *et alii* 1999, 2001)[1]. Occupation of the site shifted from west to east over three consecutive stages, as is concluded on the basis of differences in soil morphology (C. Haită 2001, p. 94), and as a preliminary assessment of the pottery seems to confirm (R.-R. Andreescu, P. Mirea 2001). In order to trace developments in ceramics over time, both morphologically and technologically, a sample of material was selected for study representing the three discrete occupation stages. This sample includes pottery from the earliest Boian stage in Sondage 36, from the subsequent stage in Sondage 39/41/44, and ceramics from the final Boian stage as present in Sondage 24/48 (fig. 1). According to R.-R. Andreescu and P. Mirea (2001, p. 13f.), the occupations in Sondages 36 and 39/41/44 belong to the Boian-Giuleşti phase, and those in Sondage 24/48 to the Boian-Spanţov phase (see also D.W. Bailey *et alii* 2002, p. 352).

Up till recently, the typo-chronological method (e.g., E. Comşa 1974) has dominated Boian pottery studies in Romanian archaeology, while work dealing with its technical/technological aspects is limited to one brief petrological report (E. Stoicovici 1974). A quantification of the different fabric groups, and of categories ("types") has never been attempted. The aims for the present paper are, therefore, among others, a) to get a clear picture of the development of Boian pottery over time; b) to assess the fabrics in use, production methods, firing methods; and c) to investigate pottery use during the Boian period.

◈ Context

Sondage 36 yielded a structure close underneath topsoil and traces of its plan, size and orientation were heavily disturbed by ploughing. A hearth and patches of a floor were recovered, as well as a substantial amount of burned daub fragments giving clues to building methods used. This building was founded on virgin soil. In nearby Sondage 43 (outside of the study area) remains of another heavily damaged structure described as a "pit-dwelling" (C. Haită 2001, p. 82), oriented NE–SW are possibly contemporary to the Sondage 36 house. In Sondage 39/41/44 the second Boian occupation on Teleor 008 is represented by one structure, again close to topsoil and severely

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[1] A ^{14}C sample from Teleor 008, Sondage 24/48 (Boian-Spanţov phase), being an animal bone from a secure context, provides a date of 4770–4530 cal BC at 2sigma (Beta-148762, 5790±40 BP) (D.W. Bailey *et alii* 2002, p. 352).

disturbed by agriculture. Fragments of daub and remnants of a hearth "placed on a burnt level" could be traced (R.-R. Andreescu, P. Mirea 2001, p. 12). Sondage 24/48 representing the last Boian stage yielded the remains of a hearth associated with a layer of "burnt clay material" (S. Trick 2001, p. 44, p. 45, fig. 5.2), all on a horizontal level sitting on virgin soil. Each area represents a discrete, single-layer occupation horizon, subsequently abandoned and finally covered, according to Haită (2001), by layers of silt accumulated during periods of flooding of the valley-bottom. Given the limited extent of the Teleor 008 gravel bar each occupation phase cannot have harboured more than one or two dwelling structures (cf. Sondage 36/43 evidence). The duration of the intervals between these three occupations cannot be gauged, but may have been of short duration in view of the cohesion in the ceramic assemblages.

◈ Fabrics

A total of 2,941 sherds have been analysed, amounting to 28,970 g. Of these, 997 sherds were considered as diagnostic – being feature sherds such as rims, bases, handles, decorated sherds, surface-roughened sherds, carinated and offset-neck body sherds. The ceramics are divided among a total of seven fabric groups by examining fresh fractures under a 20x microscope. Two groups make up 90% or more of the total amount during all three stages of occupation (fig. 2).

Fabric 1 Untempered fine

Vessels manufactured in Fabric 1 have dark brown–black cores, and grey-brown, grey-black, more rarely ochre-brown interiors and exterior sides. Fractures are zoned accordingly, with only very thin (0.5 mm) inner and outer margins. Hardness is about 2–3 on the Mohs scale (can be scratched with fingernail), the surfaces feel smooth, while also fractures are smooth/regular. Non-plastics consist of sparse, fine-sized, occasionally medium-sized, quartz/quartzite inclusions, of whitish, slightly glistening colour, which are well sorted. They are subangular–subrounded. A well-sorted mica-shimmer is present in the paste and visible on the in- and outside surfaces. Vessels are medium to highly burnished all-over, including the exteriors of the bases. This fabric is used preferentially for cups and straight-walled beakers with fine *plissé* or fluted decoration and small notches on rims and widest diameters. Wall thickness varies between 4–6 mm. Occasionally occurring in Fabric 1 are thick-walled (up to 12 mm) body sherds, which are strongly convex in section, but undiagnostic as to vessel shape or location. They indicate, however, that larger vessels were produced in this fabric besides the drinking cups and beakers.

Fabric 2 Limestone

Vessels manufactured in Fabric 2 have zoned fractures brown–black–brown (margins 1 mm), and light brown in- and outside colours. Hardness is 2.5 on Mohs scale. Fractures are smooth–irregular. Non-plastics consist of a) sparse–moderate quartz, medium-coarse sized (up to 3 mm), ill sorted, subangular–subrounded; b) medium–coarse sized (1–2 mm), yellowish-white limestone granules which are powdery when scratched, present in moderate frequency, ill-sorted, subrounded; c) a sparse amount of finely chopped chaff, well-sorted. Again present is mica, both in the paste and on the interior and exterior surfaces. The interiors are smoothed and lightly–medium burnished all-over; exteriors are usually surface-roughened, this in compliance to Fabric 7 vessels, suggesting that F.2 is a variant of F.7. The only category in F.2 fabric is made up of holemouth pots.

Fabric 5a Fine chaff

This fabric is exactly similar to Fabric 1, apart from the fine chaff inclusions occurring in moderate frequency and well sorted. Due to these additives, fractures are slightly more irregular than Fabric 1 fractures. The fracture zonation is similar (brown-black-brown), with again very small margins. Vessels are burnished all-over. Fabric F.5a is reserved for beakers and bowls occasionally.

Fabric 6 Shell

This fabric is similar to F.7, apart from the inclusion of small, very sparse, crushed-shell fragments, of white colour, perpendicular to fracture. The shells being very sparse, and the fabric very rare, it is likely that F.6 is not a deliberate fabric and that the shell fragments occur by accident being part of the basic alluvial clay. Despite the fact that shell as a temper is very resistant to thermal shock and thus a potentially highly suitable variable for cooking pots (cf. O. Rye 1976, p. 120f.), this quality

was obviously not known to Boian potters. One diagnostic sherd is from a holemouth pot, confirming the parallel to F.7.

Fabric 7 Chaff

Vessels made in F.7 have velvety black cores and brown to black interior and exterior margins and surfaces. Fractures are zoned. Hardness is 2.5 on Mohs scale, while the feel of the sherds is smooth or rough depending on the presence or absence of exterior surface-roughening. Fractures are irregular. The non-plastics consist of abundant chaff, 3-4 mm in size, well-sorted, leaving black carbonised voids, which are shiny and stand black against the black core. In addition there is sparse–moderate quartz of glistening whitish–grey colour, medium sized (≤1 mm) and fairly sorted. The particles are subangular–subrounded. Also occasionally present are sparse yellowish-white limestone particles of medium size, and ill sorted, which are very soft and scratchable, of powdery texture. As in all Teleor 008 fabrics, there is a constant mica shimmer of well-sorted particles, fine sized, both observable in the paste itself as on the in- and outside surfaces. With the exception of the cups and beakers, nearly all other categories attested on Teleor 008 are produced in this fabric.

Fabric 8 Grog

Sherds belonging to this fabric have a grey-black core, and ochre-coloured in- and outsides. Hardness is 2.5 on Mohs scale, feel is rough. Fractures are laminated. The grog is abundant, coarse-sized, ill sorted, and occurs as flat, and concave/convex elements of brown colour, which are easily scratched. The fabric is extremely rare and is attested only in Sondage 36. The two observed sherds are not diagnostic and might belong to the Gumelniţa period intrusion here.

Fabric 10 Quartz

Brown paste, very dense grit (>30%), white quartz sand, very little chaff; moderately sorted, subrounded. Hardness is soft, feel is irregular. The fabric may be a variant of F.7.

Intrusive material mostly from the Gumelniţa period has been classified under "fabric 11" and is not our concern here.

Through time, there is little variance in fabric use, but there is a decrease of F.1 in the last Boian stage of the site, concomitantly with an increase of F.7 (fig. 2). All fabrics are made of clay possibly retrieved from the close vicinity of the site, from alluvial silty deposits in the valley-bottom. Indicative of this are the occasional inclusions of limestone, shell and the rounded aspect of the quartz grains, all of which were probably natural to the clay. The mica non-plastics occur in all fabric groups as a constant factor and are natural to the clay as well. The fineness of F.1 may either be a result of careful levigation of the clay, or else the clay for F.1 may be taken from a separate clay bed of more silty structure. Fabric 1 is the only group to which no chaff has been added. The chaff used in all the other fabrics may possibly have been added to increase the green strength of the clay. The use of chaff may further have been found favourable for pots used in for cooking, making them better resistant to thermal shock. Rye has observed that the burnt out voids from organic temper "are advantageous in cooking vessels because they interrupt cracks that form as a consequence of thermal stress during use" (O. Rye 1981, p. 34). It is plausible to assume that the Boian potters were aware of the positive aspect of plant-tempered vessels when used for cooking. Indeed, all the holemouth pots are made in F.7.

◈ Manufacturing methods

In several sherds clear signs of coil building were noticed, where sherds were fractured along the joins of the coils, or where coils were clearly visible in the sherds sections. The holemouth vessels which have flat or disk bases were built from the base upward by coiling. No traces of mat impressions occur among the sample studied. Interior and exterior walls were smoothed to obtain even surfaces. Holemouth pots were then given a barbotine or roughened outlook on the exterior, leaving a small burnished zone along the collar or rim. Handles do not occur. The manufacture of the beakers and cups is not by coils, since no traces of them have been observed. Most likely these small vessels were formed by means of pinching a ball or slab of clay to the desired shape, starting from the base and then "pulling up" the body. Next they were burnished while the clay was in a leatherhard state. Dishes and bowls may have been made using various techniques including coiling, pinching or

drawing. Among the carinated bowls, there is some evidence of the top- and lower body having been manufactured separately (cf. fig. 9/2).

Remains of kilns have not been attested at Teleor 008, nor such material cues for monitoring kiln firing such as draw trials (e.g., small vessels, rings or blocks) (O. Rye 1981, p. 105), although kiln-firing is known from slightly later Cucuteni contexts (E. Comşa 1976) and the high temperatures routinely reached in, e.g., Vinča ceramics amounting to 900°–1000°C (cf. T. Kaiser 1984, p. 256, 259; R. Tringham *et alii* 1992, p. 376) at least suggest great mastery of pyrotechnology. The Boian pottery has not been fired at such high temperatures, but the repertoire does suggest that there was a high degree of control over firing (as well as cooling) procedures, several of the categories evidencing different, but carefully monitored procedures aiming at acquiring preferred outcomes. Most of the F.1 and F.7 vessels with the exception of the excised group show thin, sharp core margins, these margins being moreover of equal width. The colour zonations on the fractures display black cores with lighter margins, the sharpness of the zonation indicating firing was done in neutral to reducing conditions (O. Rye 1981, p. 116). These margins show the "natural" clay colour indicating that the vessels were cooled in the open air, creating the oxidation of the in- and outsides of the pots. The presence of such sharp, oxidized zones is, according to Rye, "diagnostic of open firing followed by very rapid cooling in air" (1981, p. 118).

By contrast, the thick-walled, excised group in F.7 fabric has well-burnished exteriors and unburnished, slightly porous interiors. Colours are contrasting: black for outsides, orange, brown or reddish tones for the insides. The fractures are not zoned, but diffuse according to the surface colours. Possibly we have here an entirely different way of firing, much as was suggested by Loe Jacobs (Pottery Technology Institute, Leiden University) for a different context:[2]

> "The vessels are placed upside down in the fire, and fired in an oxidizing atmosphere. At the end of the firing they are subjected to a short reduction process by extinguishing the fire, and closing off the oxygen flow by covering the vessels (with sand for instance). In that state the pots cool down. This process creates black exterior colours. The interior colours to shades of red or brown, dependent on the amount of oxygen remaining inside the vessel. Moreover, a red/black colour separation is always present on the fracture (…)."

The blackness of the outsides was obviously intentional and must be linked to the white fill of the excised patterns common in this group of vessels.

◈ Categorisation

On the basis of the diagnostic sherds a preliminary grouping into categories has been attempted along basic-level categories, where I divide into open and closed shapes and in special shapes (Tab. 1). Dominant in each of the three Boian assemblages from Teleor 008 are beakers in F.1 fabric, and holemouth pots with surface-roughened exteriors in F.7 fabric (fig. 3). A third group consists of F.7, thick-walled vessels that have excised decoration, which is often filled with a white paste. For an overview of basic-level categories and subordinate categories the reader may refer to figs. 7–11, discussion limited here to the most salient categories.

Telor 008 beakers are vertical-walled with flat or concave bases. A random survey of complete beakers recently published as "goblets" (M. Neagu 1999, p. 47, nos. 171-173) gives an average diameter of 9.76 cm, with an average height of 12.91 cm (n=7), making quite substantial vessels that are not easily gripped by one hand. Handles are absent. Carefully made and finished, the vessels are usually decorated with *plissé* or flutings and/or small indentations on the rims or on the widest diameters. Assuming these beakers as drinking vessels, the flutings on the rim must have produced specific effects to the lips, mouth and fingers. The fluting itself may be associated with liquids. F.1 beakers are fired at a higher temperature as the other fabric groups, and F.1 might have a different clay-source. The beakers are presumably fired separately from the F.7 vessels, and we might conjecture a different production centre altogether for these F.1 beakers. Such beakers remain a constant factor over time on Teleor 008, and there is hardly any change in shapes, proportions and decoration patterns from the Boian-Giuleşti to the Boian-Spanţov occupation on site (fig. 4).

[2] Technical analysis of pottery from the Chalcolithic site of Dündartepe, Turkey (L. Thissen 1993, p. 215f.).

POTTERY	
A. OPEN FORMS (4)	
I. Cups (D≤12 cm; H<D)	(fig. 7/1-5)
II. Beakers (D≤12 cm; H≥D)	(fig. 7/6-10)
III. Dishes D 15–30 cm; H≤½ D)	(fig. 8)
IV. Bowls (3)	
a. hemispherical bowls	not illustrated
b. carinated bowls	(fig. 9/1-3, 6)
c. shouldered bowls	(fig. 9/4, 5)
B. CLOSED FORMS (2)	
V. Pots (2)	
a. holemouth pots	(fig. 10/1-4)
b. offset neck pots	not illustrated
VI. Large vessels (unknown form)	not illustrated
C. SPECIAL SHAPES (4)	
VII. Lids	(fig. 10/5, 6)
VIII. Sieves	(fig. 10/7, 8)
IX. Excised vessels (unknown shapes)	(fig. 11/1-6)
X. Grooved vessels (unknown shapes)	(fig. 11/8-12)

Tab. 1. Category structure of Teleor 008 ceramic assemblages. Within the superordinate category of *POTTERY* the syntax is A. COVERT CATEGORY; I. Basic-level category; a. subordinate category.
Structura categoriilor repertoriilor ceramice de la Teleor 008. În cadrul categoriei superioare de *CERAMICĂ* sintaxa este A. CATEGORIA GENERALĂ; I. Categoria de bază; a. Categoria subordonată.

Even more dominating the ceramic repertoire are holemouth pots, all of them having exterior surface-roughening (or streaked barbotine). Due to the high degree of fragmentation on Teleor 008 (see below) no complete profiles are available, but body contours must have been simple, without very sharp inflexion points. On the basis of the published evidence, Boian cooking pots possibly had simple convex-walled contours, with base diameters only slightly less than rim diameters. Taking into account aspects of stability, these vessels were likely to be not much higher than as indicated by the rim diameter. Handles, knobs or lugs are never attested. Bases are flat. Rim diameters range from 11–23 cm, but seem to group in two clusters, one around 12–15 cm, the other around 17–18 cm. Base diameters range from small to large, from 8–25 cm, with no particular clustering apparent from the sample studied. On the basis of shape, quantity and surface treatment these vessels are considered to have been used as cooking pots. Interiors are always smoothed and lightly but carefully burnished, probably as a kind of sealing method to reduce permeability of the vessels during the cooking process (cf. M. Schiffer 1990). A few of them have faint blackish attrition marks on the interiors, usually on fragments from near the base area. There is no change over time in the appearance of these vessels.

Of very fragmentary nature are the vessels with excised decoration. Shapes are not at all clear, but seem to consist of shouldered pots, pedestaled vessels (fig. 11/4, 5) and carinated bowls, when reviewing the published record on Boian ceramics (e.g., M. Neagu 1999). They are usually thick-walled, with black exteriors and brown–orangey interiors. Decoration consists of V- and/or U-shaped carving or excision, executed when the clay was in a leatherhard state (cf. O. Rye 1981, p. 90). Rather characteristic for this group of vessels are zones of cut-away clay alternating with the medium-burnished vessel surface. Patterns consist of intricate meanders, chevrons and triangles. Quite typical are cut-away triangles repeated in circumfering zones in a horizontal plane, either along rims, pedestal rims or on critical inflexion points of the vessel. These excised triangles are usually filled with white paste, and are commonly known as "wolf-tooth". The excised motifs may be joined by deep grooves that may be white-filled as well. The wideness of the carved zones is commonly seen as a time marker: the Boian-Giuleşti stage preferring narrow cut-away fields, the Spanţov stage pottery showing wide carved zones in between the normal vessel surfaces. Also "wolf-tooth" decoration

seems an older decorative feature, at Teleor 008 not attested in Sondage 24/48 which dates to the Spanţov stage.

On the basis of the published Boian record, these excised vessels must have been of substantial size, of intricate design and of impressive appearance, their usual blackness of surface contrasting deliberately with the white incrustations. While having burnished exteriors, their insides were not burnished, and only lightly smoothed. It is surmised that such vessels were used for the storage of (dry) goods, and were on permanent display, probably evidencing a certain status of the household. Dry goods storage is more likely than liquid because of the slightly porous and unburnished interior surfaces. The storage function is confirmed by the occurrence of large lids with similar decorations fitting such vessels and attested on other sites (e.g., M. Neagu 1999, nos. 73, 127, 133, etc.).

Cups resemble beakers in being carefully made in F.1 fabric, and are structurally linked to them in having similar *plissé* decoration and notches as well. The proportions differ. It may be that these cups played a similar role in the social practice of drinking.

◈ How many pots?

The percentage factor of measurements of the rim radius (see also further below) gives insight in the minimum number of vessels represented in the sample studied. Using intervals of 10% of basic-level category rim diameters, the following result is obtained (Tab. 2).

	Sondage 36 (n=102)	Sondage 39/41/44 (n=62)	Sondage 24/48 (n=31)
cups	1.6 (6)	1.0 (1)	0.2 (2)
beakers	3.9 (35)	2.4 (24)	0.7 (7)
dishes	0.7 (7)	1.0 (10)	0.8 (8)
bowls	1.4 (13)	1.0 (10)	0.3 (3)
pots (holemouth)	3.9 (35)	1.7 (17)	1.0 (10)
large vessels	0.1 (1)	0	0
lids	0.2 (2)	0	0
sieves	0.1 (1)	0	1.0 (1)
excised vessels	0 (no rims)	0 (no rims)	0 (no rims)

Tab. 2. Teleor 008. Minimum number of vessels on basic-level category level, using percentage factor of rim radius (in brackets total number of rim sherds).
Teleor 008. Numărul minim de vase în raport cu nivelul categoriilor de bază, utilizând procentajul razei buzelor de vas (în paranteze: numărul total al buzelor de vas).

Assuming that the pottery as deposited on Teleor 008 has remained more or less *in situ*, it is clear from Table 2 that even while these are minimum numbers for each category they show that the total number of vessels used during the life span of each occupation is restricted. As such, the extent of occupation must have been short, certainly not surpassing one generation, and probably much shorter than that. The amounts of vessels represented, admittedly yielding only coarse-grained evidence, do not contradict the architectural record that the pottery as retrieved basically reflects the use and discard patterns of one single household, whether on seasonal or permanent basis. Especially the minimum number of cooking pots, even when doubling the amount, may very well fit use patterns of one family, if we take into account breakage rates of daily used kitchen gear, where the maximum life span for cooking pots is at about 3 years (cf. D. Arnold 1985, p. 152ff.). While these are minimum vessel numbers set off against the rim sherds counted for each category, they display the high degree of fragmentation in all three individual pottery assemblages of Teleor 008. There are only three complete profiles – not coincidentally of small vessels.

◈ (Post-)deposition patterns

Fragmentation, breakage patterns or (post-)depositional aspects are assessed through the variables of radius, sherd size, weight and abrasion. Sondage 36 contexts 233, 212 and 217, all from the ploughzone, yield a definitely secondary debris. Sherds are mostly heavily fragmented, joins very

few and there is much "light–moderate" abrasion. Typical is a thick calcium carbonate ($CaCO_3$) crust covering many sherds. Often this crust is obliterating the surface-roughening applied to many of the F.7 sherds, and possibly the amount of SFRW sherds is higher than could be established. In 212 occur a few sherds which might be of Gumelniţa date. Contexts 252, 213 and 226 from the underlying deposit containing building material have a similar aspect as the ploughzone sherd material, including the $CaCO_3$ crust. From context 213, underlying 212 directly, again Gumelniţa intrusions were retrieved, so perhaps there was a Gumelniţa pit in this area. Contexts 270 and 278 below 252, 213 and 226 are again similar: $CaCO_3$ crust, heavy fragmentation, no joins, fairly abraded. Although 278 has an Iron Age burial cut, no apparent mix of sherds from different periods was observed.

In Sondage 39/41/44, area 44 there are several joins within the three excavated contexts (255–263–267) and also between one context and the other. The abrasion is dominantly light. Notable is a complete profile of a cup (fig. 7/1 from context 267). Also from area 39 several sherds can be joined. By contrast, sherds from adjoining area 44 yield heavily eroded non-joining pieces.

From Sondage 24/48, context 269 several sherds are affected by fire, either by being refired to red, or else being covered by a burnt granular crust, resembling though different from the calcium carbonate crust attested in Sondage 36. Such sherds may be linked to the find of six chaff-tempered clay weights also secondarily fired to orange-red from the same 269 context, as well as a large sieve fragment (fig. 10/8). Together with a flat grinding stone and a round stone ball possibly for grinding also, from underlying context 276, all finds from this area (24/48 SW Ext.) can be connected to the find of a hearth here. The burnt/refired sherds might have been part of the construction of the hearth. In general, however, the degree of abrasion in 24/48 is higher than in the two other sondages.

The overall degree of abrasion was assessed on the diagnostic sherds (fig. 5). Abrasion is lowest in the most western area, Sondage 36, and highest in the most eastern one, in Sondage 24/48. Here, more than 50% of the sherds shows heavy traces of abrasion, against 15% in Sondage 36, and 30% in the middle Sondage 39/41/44. The degree of fragmentation is similar overall, with no great fluctuations in the sherd size in the different soundings. Fragmentation itself is high, with 80–90% of all sherds being smaller than 5 cm (fig. 6). This high level of fragmentation is also apparent from the measurement of the radius of the sherds (mostly rim- and base sherds, occasionally also body sherds where the widest diameter was measurable) (cf. B. Egloff 1973). Hardly any difference occurs here (tab. 3).

Radius	Son 36 (n=284)	Son 39/41/44 (n=144)	Son 24/48 (n=97)
10%	90.85	88.19	87.63
20%	6.69	6.94	10.31
30%	1.41	2.08	2.06
40%	0	0.69	0
50%	0.7	0.69	0
60%	0	0.69	0
80%	0.35	0.69	0

Tab. 3. Teleor 008. Percentage factor distribution of radius measurements per stage.
Teleor 008. Distribuția procentajului măsurătorilor razei în funcție de etape.

◈ Evaluation

Large, decorated vessels often have black exteriors, brown-red interiors, indicating an initially oxidizing firing atmosphere, which was then abruptly changed to a reduced atmosphere. The black colour must have been a deliberate objective, because it is all-over, and makes the white fill of the excised design stand out in a visually impressive way. Possibly such large vessels are for functional display, e.g., long-term storage (but not water, as the vessels, though not burnished on the insides and slightly porous, are well burnished on the outsides). Added to this visual display aspect may be the fact that such vessels are occasionally fitted out with pedestal bases, making them stand out even more. The fine table-ware consisting of beakers and cups with rim notches and fine fluting/*plissé* are, by contrast, more tactually than visually impressive, both to the hands and to the lips – the fine fluting

often only visible when turned in the light. A such, these beakers are more for "feeling" than for "viewing". The beakers always have heavily use-wear bases, indicative of their heavy use.

As to gestures, there are no handles in Boian pottery, apart from occasional small knobs on bowls (fig. 9/1). Vessels are taken and carried by the rim (large cooking vessels), within the hand (beakers, cups), or taken and carried with both hands. Gestures of hands are clasped, fingers together, and cupped. Gestures do not involve separate fingers, which point and penetrate (as in the case of lugs, or strap handles). Vessels can stand by themselves (all having flat bases). In this way, Boian pottery, in continuation of Vădastra practices, significantly restructures and revives Early Neolithic practices concerning gestures and tactility, and contrasts with Dudeşti patterns.

While the Boian period sites in the explored section of the Teleorman valley bottom are temporary in the sense that each stage's use-life did not last over one single generation at the most, the ceramics do yield a comprehensive repertoire meeting the requirements of daily life on the site. The absence of simple storage containers, apart from the large excised vessels, could indeed point to a seasonal use of the site, but the presence of wooden, reed and unbaked clay containers, as well as storage pits cannot be ruled out.

Obviously, the Boian pottery of Teleor 008 played a role in possibly ritualised or institutionalised practices such as communal drinking and feasting, given the sophisticated large drinking beakers of invariably good technical quality and subtly decorated. While the F.7 cooking pots fit in with a long tradition starting in the first days of pottery making in the Danubian Plain and continuing basically unaltered in the ensuing Gumelniţa period, it might be premature to infer that also cooking habits and by extension food habit patterns remained unchanged as well over the centuries, and much circumstantial evidence is needed here.

The preference by Boian people to expend care and attention, as well as value on display storage is evidenced by the black containers with their intricate excised decorations. Unfortunately, the interrelations of such vessels, their various forms, the decorative patterns and the possibly discrete functions concerning storage cannot be gauged from the Teleor 008 corpus, although these interconnections must surely be reckoned with. It is indeed probable that such storage vessels represent status objects, possibly as part of marriage rituals or as part of a trousseau.

It is far from certain whether such vessels and also the F.1 beakers were locally produced. Presently, detailed data on Boian pottery are yet too scarce to test the hypothesis that expertise at making F.1 beakers as well as F.7 excised vessels were all part of common household know-how, and the variance in manufacturing and firing techniques might point away towards the existence of specialised centres. Whether or not all the pottery was manufactured on site, the cohesion shown in the fabrics points to manufacture somewhere in the wider region, making use of the rich alluvial soils existing in the flood plain. If we accept the existence of specialised production centres within the wider region of Boian occupation in Southern Romania, the presence of such vessels at the small sites at Teleor 008 suggests the existence of local area networks, where it was easy to acquire and/or exchange such obviously highly valued objects. Accepting such hypotheses would, in addition, mean that not in all the cases of the Boian pottery categories the producers and the users were the same, or concentrated in one settlement. In order to address such questions, it is necessary to pursue technical and morphological analysis of Boian pottery assemblages on a detailed level over more sites in the larger region of Southern Romania.

◈ Acknowledgements

Thanks go out to Douglass Bailey and Radian Andreescu for enabling the study of the Teleor 008 Boian material as part of the Southern Romanian Archaeological Project. Special thanks to Cristi Mirea, Radu-Alexandru Dragoman and Sorin Oanță-Marghitu for discussions and friendship. This material was studied in 2001 and the report originally submitted as part of the 3rd SRAP preliminary reports, which was never printed. The present text is largely unaltered, apart from some minor tweaking and editing.

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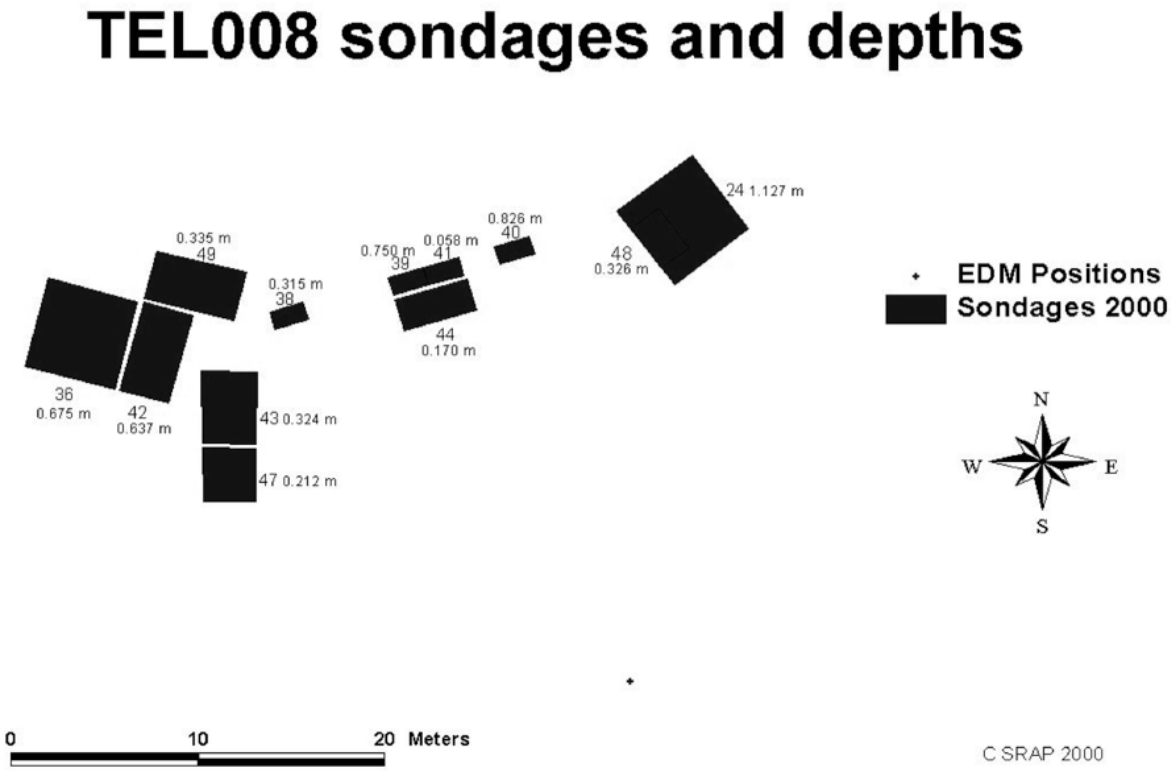


Fig. 1. Location of the areas of study (plan courtesy SRAP Archive © 2000).
Localizarea arealelor studiate (plan reprodus cu permisiunea SRAP Archive © 2000).

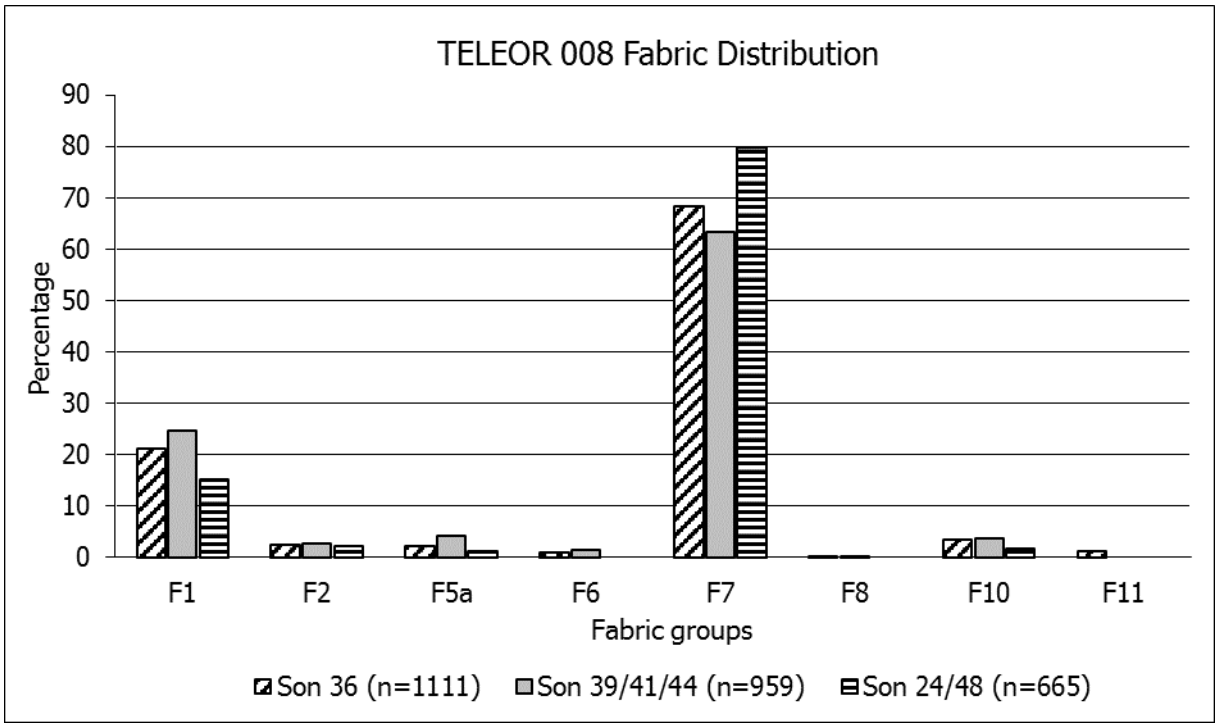


Fig. 2. Teleor 008. Frequency distribution of fabrics.
Teleor 008. Distribuția frecvenței compozițiilor de pastă.

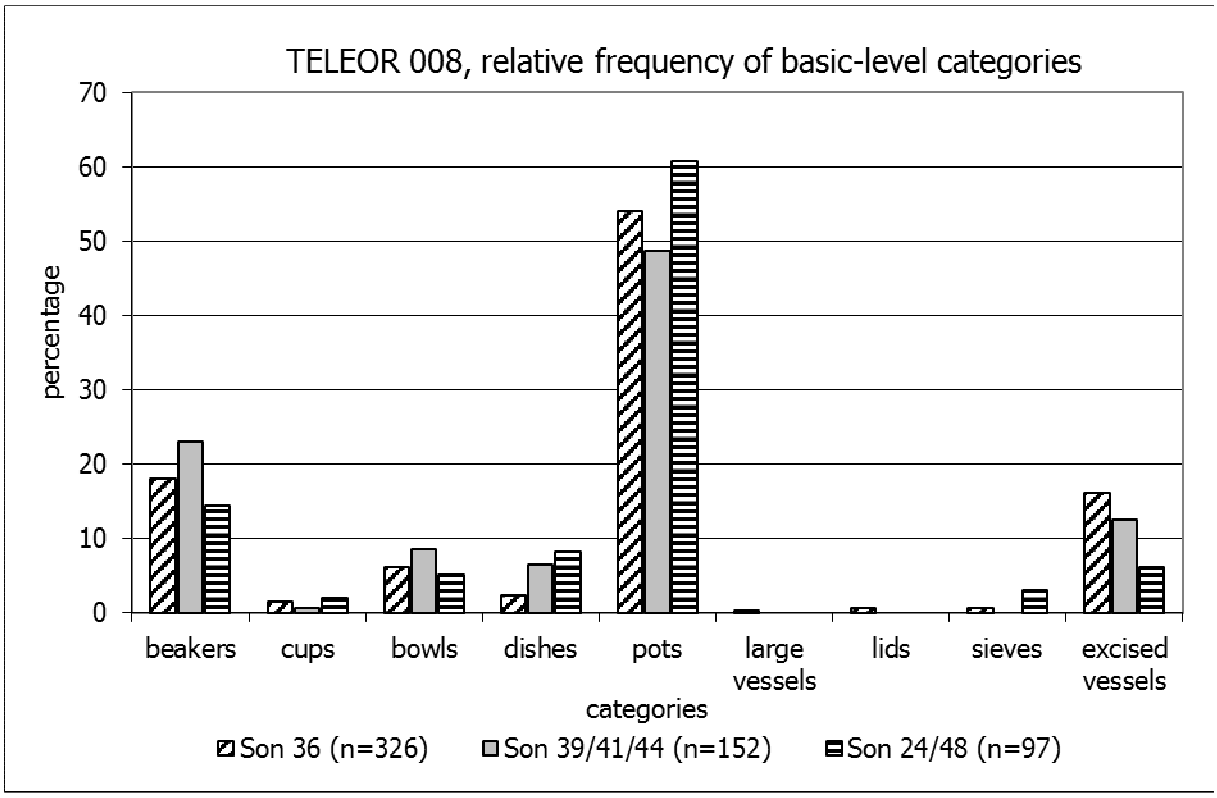
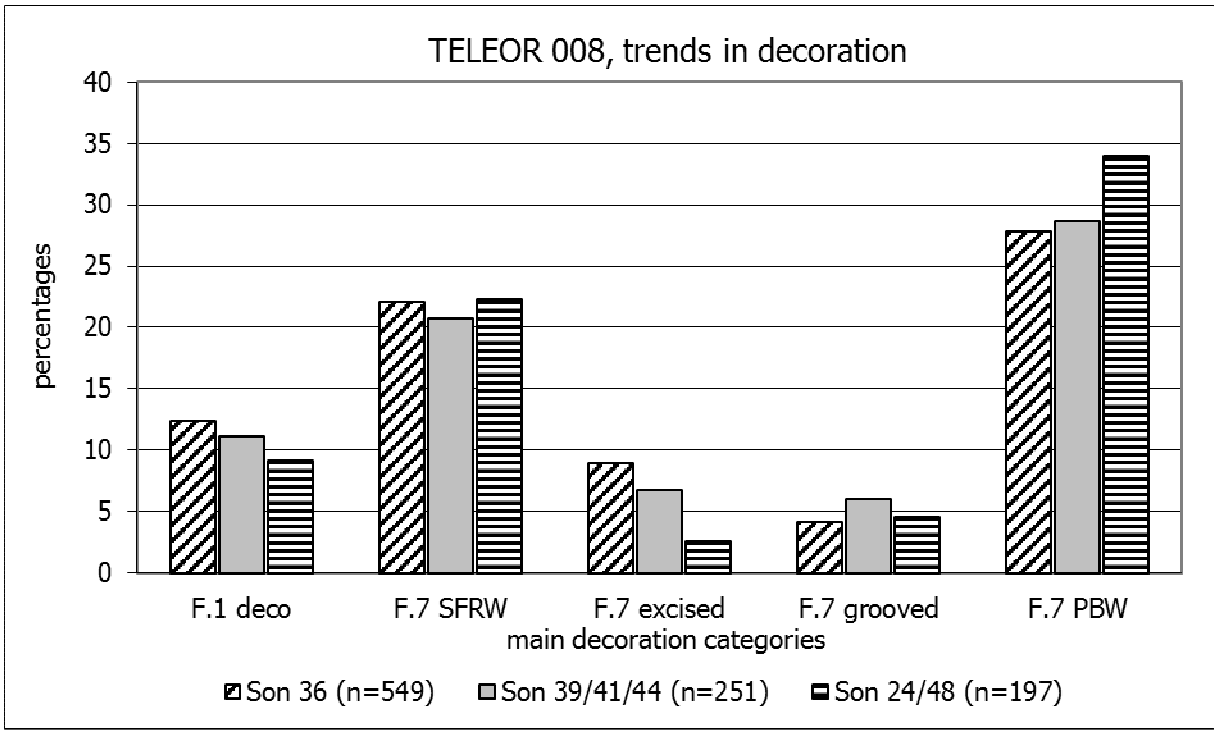


Fig. 3. Teleor 008. Distribution of categories over time, based on diagnostic sherds.
Teleor 008. Distribuția categoriilor de-a lungul timpului, pe baza fragmentelor ceramice tipice.



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Teleor 008. Tendințe decorative de-a lungul timpului, unde F.1 reprezintă pahare canelate, F.7 SFRW sunt oale cu suprafața nelustruită și F.7 PBW sunt fragmente ceramice lustruite nedecorate.

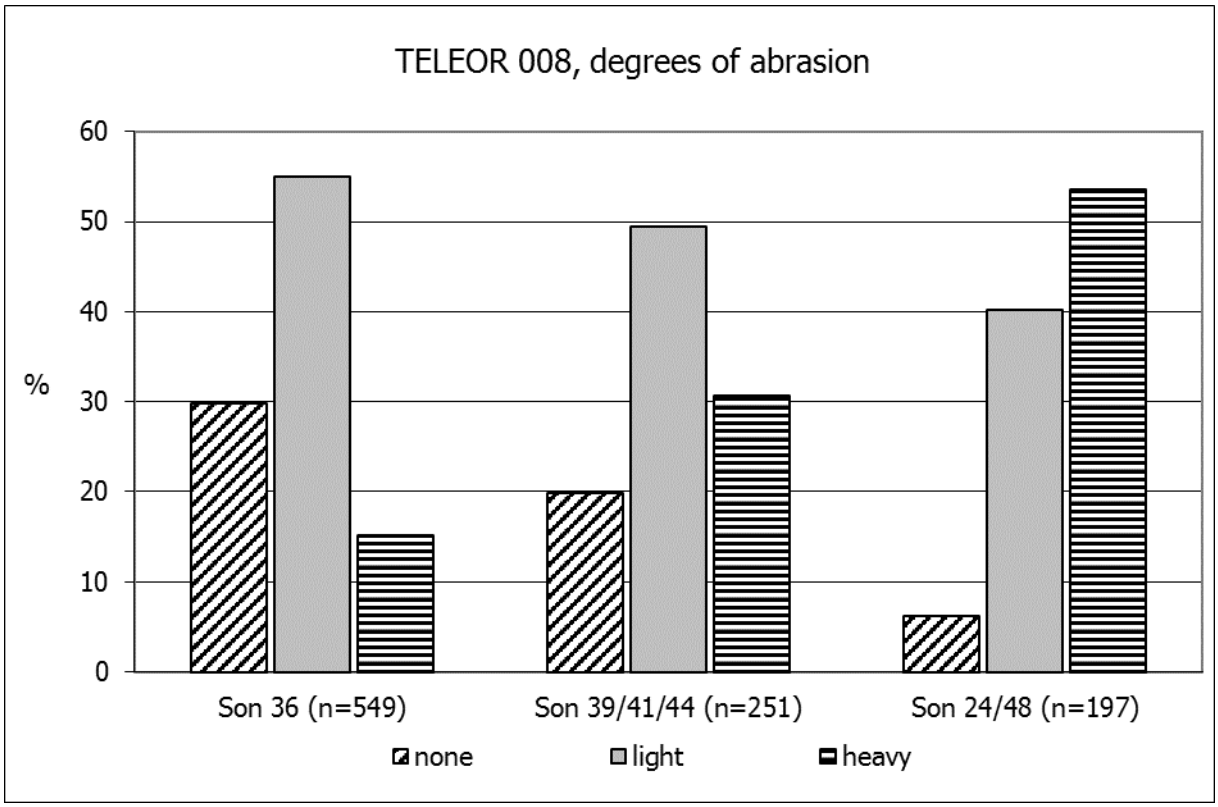

Fig. 5. Teleor 008. Abrasion per stage.
Teleor 008. Abraziunea în raport cu etapele.

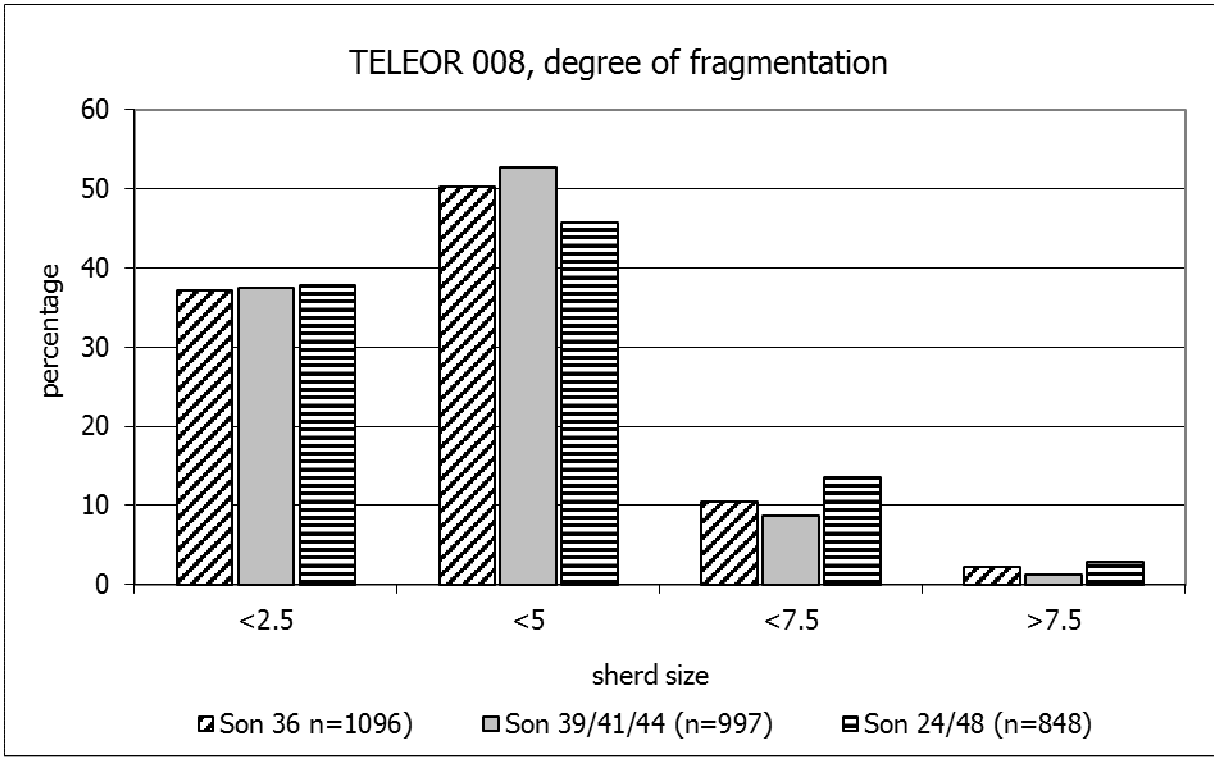

Fig. 6. Teleor 008. Fragmentation by sherd size.
Teleor 008. Fragmentarea în funcție de dimensiunea cioburilor.

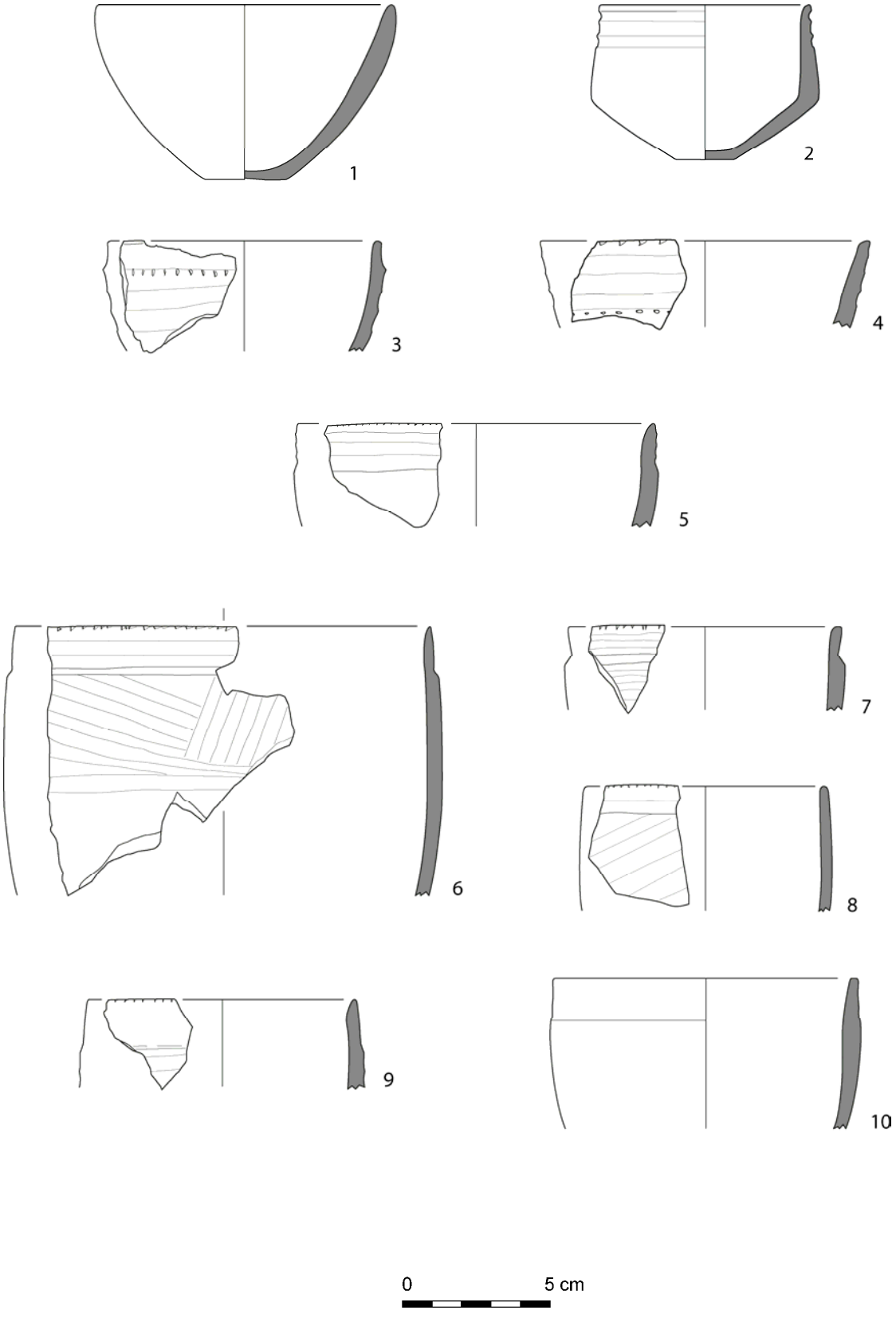

Fig. 7. Teleor 008. Sondages 36 and 39/41/44. Boian-Giulești phase. Cups (1–5), Beakers (6–10).
Teleor 008. Sondajele 36 și 39/41/44. Faza Boian-Giulești. Cupe (1-5), Pahare (6-10.)
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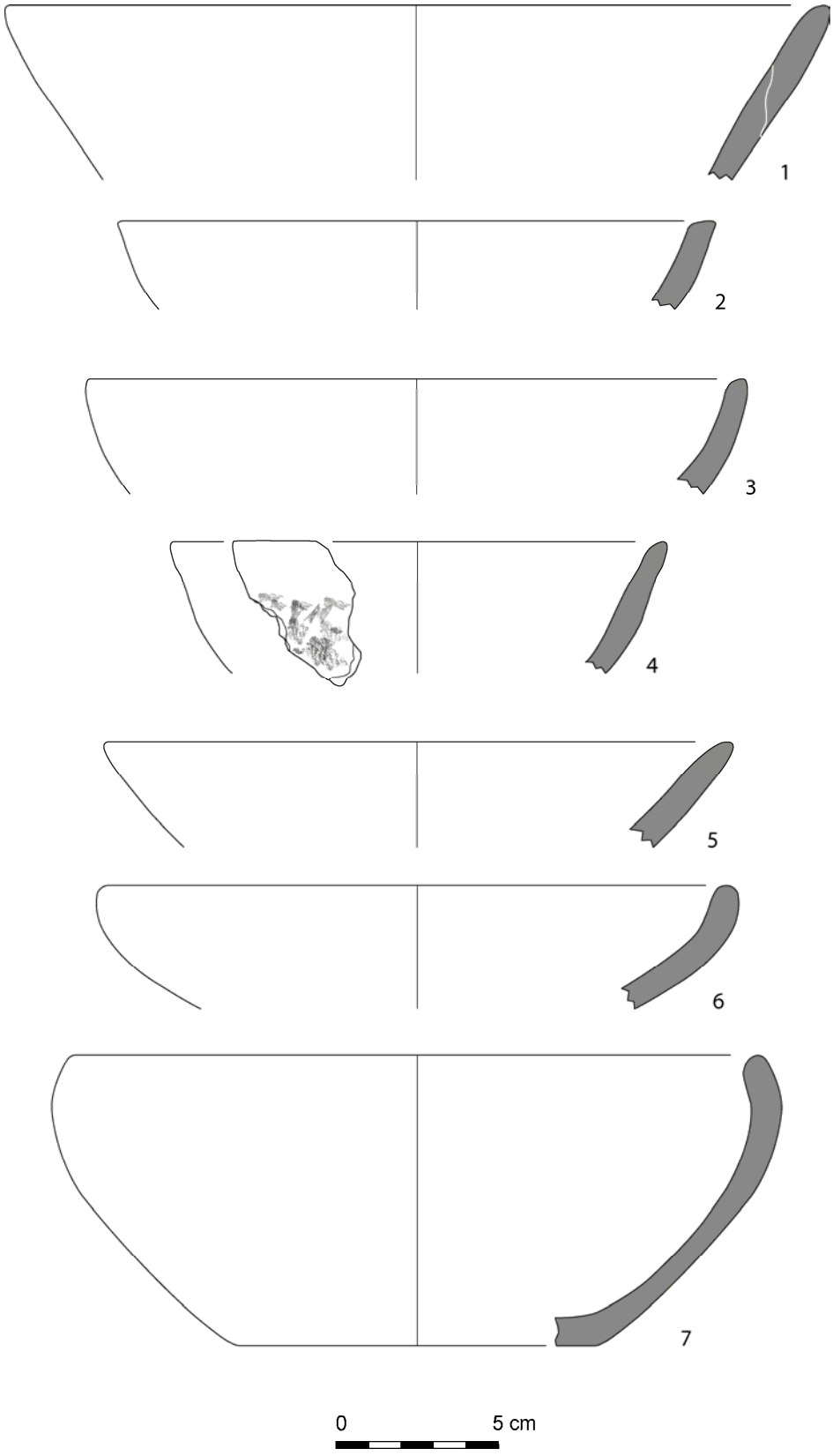

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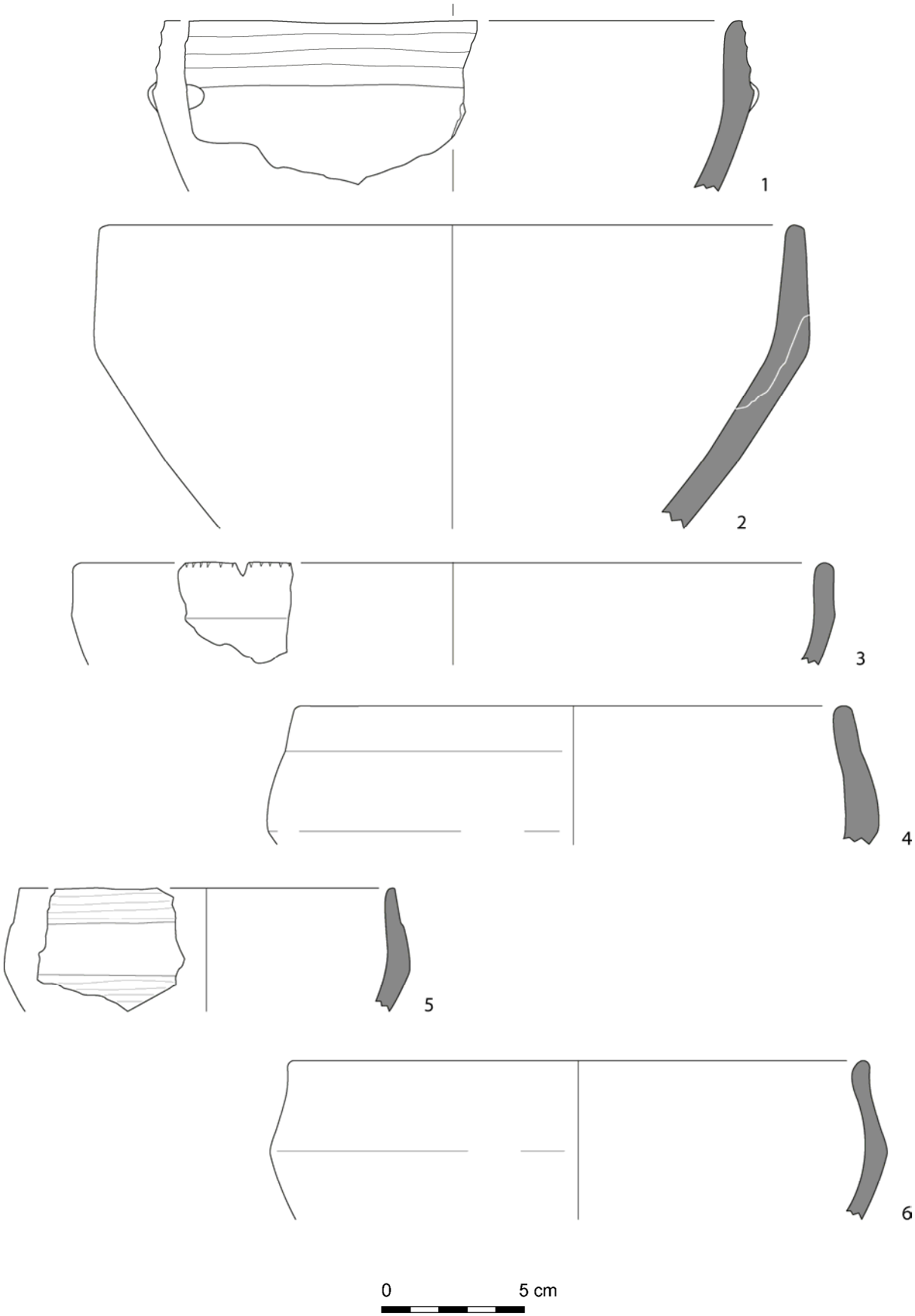
Teleor 008. Sondajele 36, 39/41/44 şi 24/48. Faza Boian-Giulești (1-4), faza Boian-Spanțov (5-7). Străchini.
1. S36-212, 2. S36-270, 3. S44-255, 4. S36-212, 5. S24/48-269, 6. S24/48-264, 7. S24/48-276.



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Teleor 008. Sondajele 36 şi 39/41/44. Faza Boian-Giulești. Castroane.
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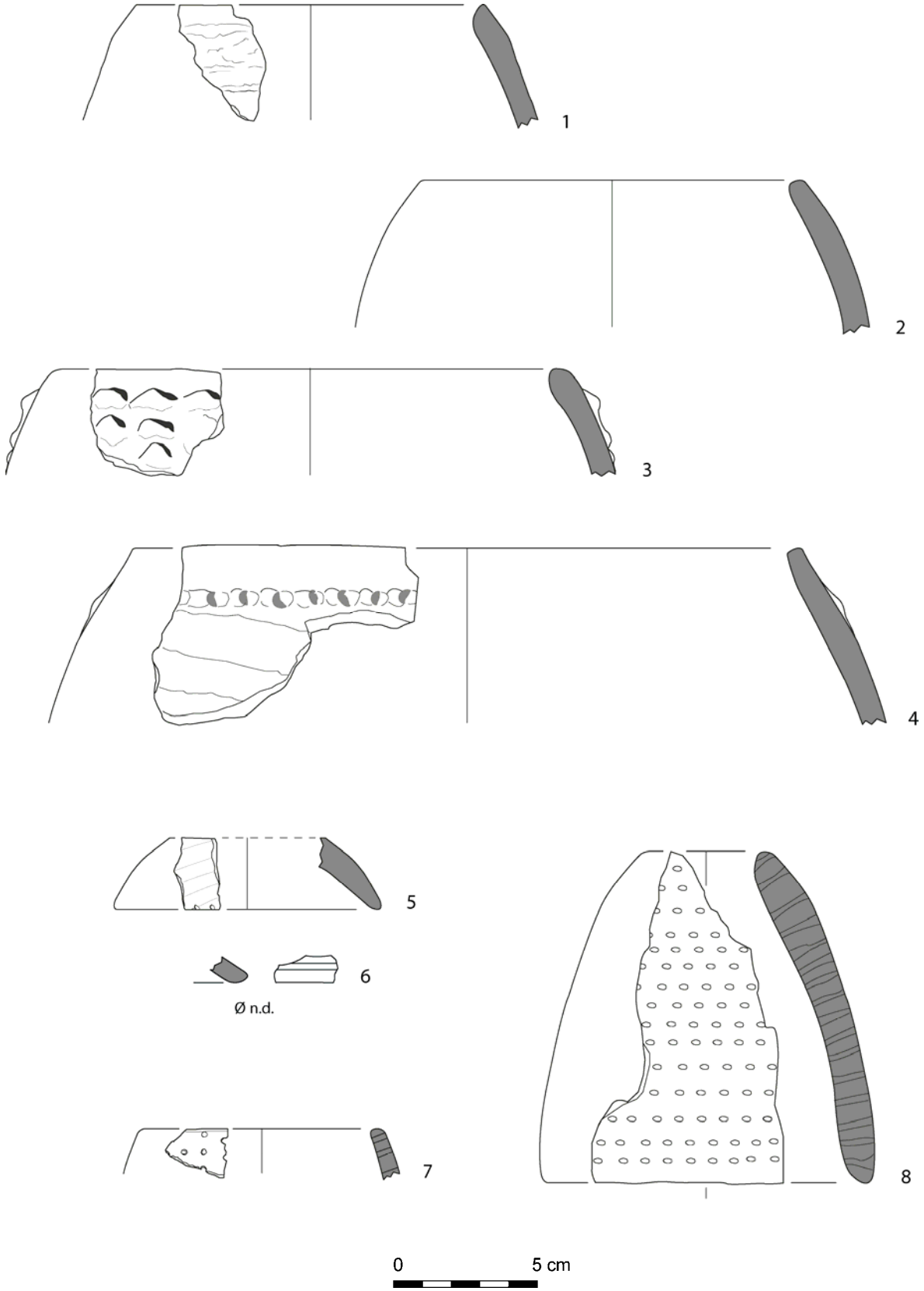

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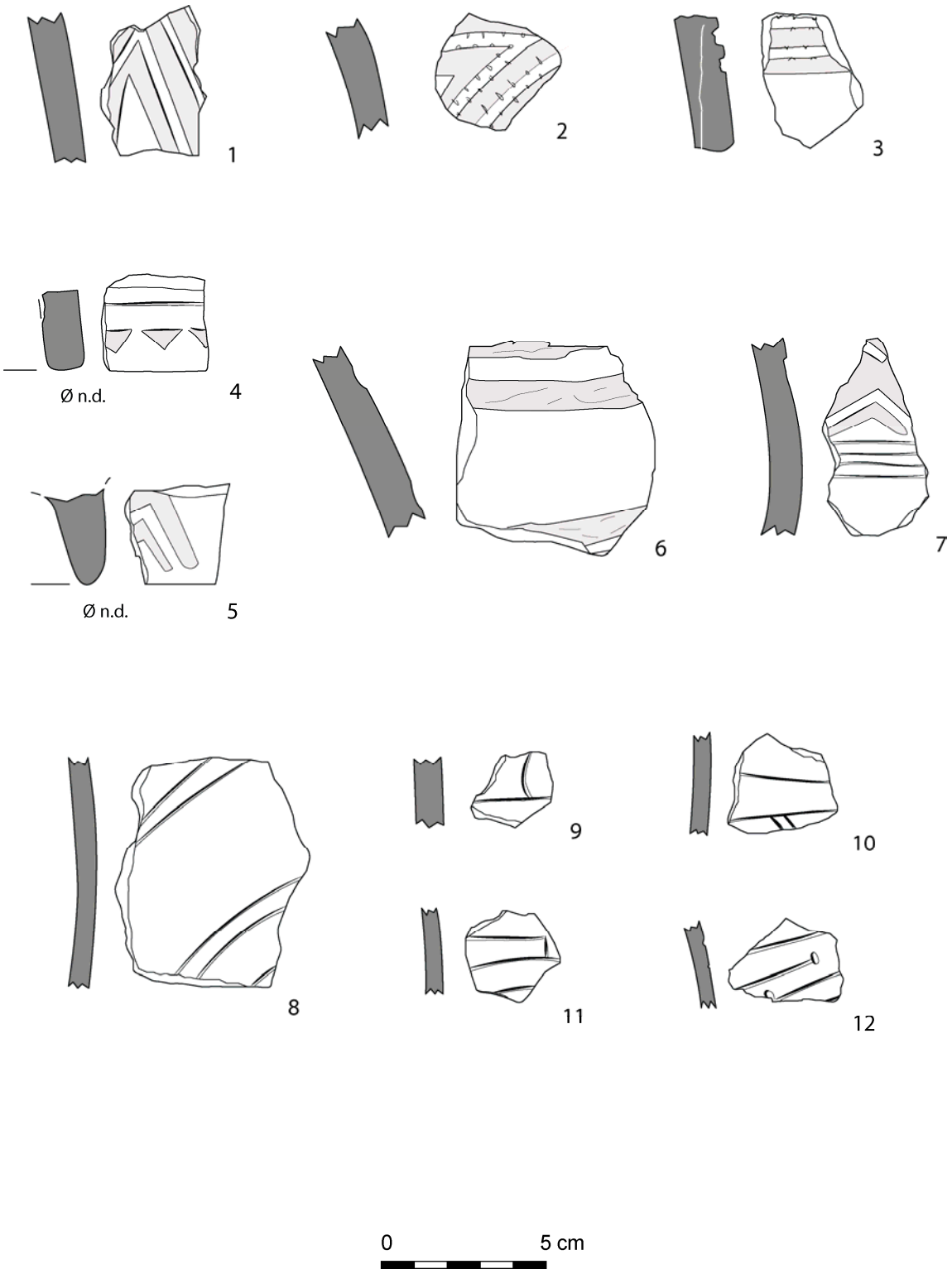
Teleor 008. Sondajele 36, 39/41/44 şi 24/48. Faza Boian-Giulești (1–7), faza Boian-Spanțov (8). Oale, Capace și Strecurători.
1–4. S36-233, 5. S36-270, 6. S44-255, 7. S36-212, 8. S24/48-269.



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1–6 S36-233, 7. S24/48-264, 8. S24/48-237, 9. S24/48-248, 10. S24/48-264, 11. S24/48-264, 12. S36-233.

Little Cucuteni pots of hope: a challenge to the divine nature of figurines

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Bisserka GAYDARSKA*

Abstract: *Discussion of figurines is one of the most popular topics in the prehistory of Eastern Europe. They have been perceived as goddesses and gods, toys, individuals, dividuals, comforting miniatures, embodying personhood and more recently as "teaching devices". Their relationship to fecundy and fertility is over-exploited but a safe haven for the majority of East European archaeologists. Here, we take on exactly the opposite view and try to build a case in which a set of figurines and a number of accompanying objects are interpreted as infertility aid-kits. The sets from Poduri-*Dealul Ghindaru *and Isaiia-*Balta Popii *are assessed in terms of recent tendencies in Western archaeological thought whereby representation and imposed meaning gives way to agency, action and performance.*

Rezumat: *Figurinele reprezintă unul dintre cele mai preferate subiecte din preistoria Europei de Est. Acestea au fost percepute ca zeițe și zei, jucării, indivizi, divizi, miniaturi aducătoare de confort – încorporând personalitatea, și mai recent ca "instrumente de învățare". Relația lor cu fecunditatea și fertilitatea este supralicitată, dar se constituie într-un rai sigur pentru majoritatea arheologilor est-europeni. În textul de față, adoptăm o perspectivă exact opusă și încercăm să construim un caz în care un set de figurine și un număr de obiecte asociate sunt interpretate drept seturi-de-ajutor împotriva infertilității. Seturile de la Poduri-*Dealul Ghindaru *și Isaiia-*Balta Popii *sunt evaluate în termenii tendințelor recente din gândirea arheologică Apuseană, în care reprezentarea și impunerea de sens lasă locul agenției, acțiunii și performării.*

Keywords: *figurines, Balkan prehistory, agency, infertility.*
Cuvinte cheie: *figurine, preistoria Balcanilor, agență, infertilitate.*

◈ Introduction

A typical find on most sites from what is known as Old Europe (M. Gimbutas 1974) is a small clay replica of a human body. Thousands of such miniatures – mostly of clay but also of stone and bone, mostly female but also male, unsexed and androgynous, some decorated, others not – are known so far from the Neolithic and Chalcolithic sites across the Balkans, Hungary and Ukraine. Called "figurines", "statuettes", "idols" or "plastic art", they are certainly not an uncommon find. And yet, such finds trigger unparalleled excitement when found on a hot sticky day and have the inexplicable power to motivate exhausted excavators, hoping that perhaps they may be lucky to find one. Sites are compared by the number of discovered figurines, the "uniqueness" of the finds context and the special meaning of certain assemblages in a tacit but nonetheless severe inter-site and inter-regional competition. In a word, figurines have been, still are and most probably will be a constant source of fascination for specialists and non-specialists alike.

Among the Neolithic communities preoccupied with the creation of figurines is the Cucuteni-Tripyllia group. The Cucuteni culture[1] comprises a dense network of predominantly settlement sites located in modern Romania, while its counterpart in neighbouring Ukraine is known as Tripyllia (Russian *Tripolye*) culture. The mid-fifth millennium BC saw the emergence of this Neolithic phenomenon, often described as the "last civilisation of Old Europe" (C.-M. Mantu *et alii* 1997), because its demise came more than 1000 years later[2]. Contrary to the tell-dominated landscape to the south and west, the Cucuteni people chose to live in villages and farmsteads on previously unoccupied places. There is only one exception to this pattern – the multilayer tell-like site of Poduri (D. Monah *et alii* 2003). The size of settlements is mostly small to medium but some large settlements – up to 80 ha – are also known. Promontories appeared as the preferred place to settle but, in general, a variety of landscapes were inhabited and used for dwelling. Mixed farming and animal breeding formed the subsistence practices of these communities and extensive groups, together with small-scale exchange networks which assured the flow of utilitarian and exotic raw materials, products and stock. Apart

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[1] "Culture", more or less following V.G. Childe's (1929) definition, remains the preferred term in Eastern Europe.
[2] The Tripillya culture lasted till cca. 2800 BC.

from figurines, the Cucuteni culture is famous for its elaborate pottery, often compared to artisan production and betokening specialised production, perhaps at the village level (L. Ellis 1984).

Cucuteni-Tripyllia figurines have captured the imagination of archaeologists, with a very clear gap between the interpretations of Eastern European specialists (D. Monah 2012; Gh. Lazarovici 2005; N. Burdo 2008) and their Western counterparts (D.W. Bailey 2005; B. Gaydarska 2012; D. Anthony 2010). In recent years, the expressive nature of two sets of figurines has inspired yet another and somewhat unconventional insight (R. Dumitrescu n.d.; 2008). In this paper, we intend to examine Dumitrescu's arguments, consider his reasoning and clarify our alternative viewpoint. By way of introduction, we offer a brief overview of past and current approaches to Balkan figurines.

◈ Influential views on figurines

By far the most famous commentator on figurines is the late Marija Gimbutas. Writing in the 1970s and early 1980s, she considered the huge amount of Neolithic and Chalcolithic Balkan figurines to be evidence of a matriarchal goddess religion, where the personification of the female form represented numerous female and animal deities, worshipped by polytheistic, gynocentric societies. M. Gimbutas believed that these figurines would have been ritual objects, required for the communal veneration of "super-natural powers" (1982, p. 11) controlling seasonal change and the lifecycles of plants, animals and humans. She introduced a fully developed pantheon, influenced by Lithuanian folklore and Ancient Greek Gods and Goddesses alike.

Marija Gimbutas certainly was not the first to recognize the significance of figurines (O. Höckmann 1968; P. Ucko 1968). Her approach, however, and more precisely the integration of these images of the human body into the grand narrative of the Neolithic and Cooper age societies, appealed to local Eastern European archaeologists and has been very influential ever since (M. Gimbutas 1974; 1982). A lot of ink has been spilt to criticize M. Gimbutas' views (R. Tringham, M. Conkey 1998; L. Meskell 1995), while the reasons for her unwavering legacy in Eastern Europe remain largely unaddressed. Paradoxically, she is rarely acknowledged by Eastern European archaeologists as the initial inspiration for the divine tales that have littered Eastern European archaeology. In countless accounts of both human and non-human imagery, the concept of a sacred world and its ritual paraphernalia appears as given, as something that was always there, rather than as an ontological construct in need of arguments suggested by a female archaeologist with a particular personal and professional background (J. Chapman 1998). Against the general East European atheoretical framework of poorly understood and mechanistically recited Marxist principles, M. Gimbutas' ideas struck a chord and endured with some modifications mainly dressed up as a discussion of ideology, in this case seen as religion. Gender issues were unknown in the culture-history approach and to see the Mother-Goddess as an objectification of women would give credentials to this approach that it certainly did not have. A patronizing and patriarchal attitude to women (N. Palincaş 2006) is more likely to have resulted in the creation of a female ideal but the embracing of those very same ideas by many women archaeologists still remains problematic. Detailed analysis of why Gimbutas' ideas enjoy such longevity is long overdue but it exceeds the scope of this article. The brief outline of her enduring legacy is meant to contextualize both the views of mainstream Romanian archaeologists as well as the views of amateur archaeologists, of the kind addressed critically below.

One of the most prolific Cucuteni scholar sees figurines exclusively intertwined with religious ideas, whereby the "duality of the Great Mother", "Great Mother.....life and death divinity", etc. is the normal rhetoric (D. Monah 2012). In the same vein is the interpretation of C.-M. Lazarovici (2005). These views are broadly shared by Tripillya scholars such as N. Burdo (2008). Discussing Gumeniţa figurines (found to the south-west of the Cucuteni area) R.-R. Andreescu is critical of the inconsistent imposition of religious concepts on prehistoric figurines (2002, p. 197) but his alternative viewpoint of figurines for worship and figurines for magical and initiation rites, remains broadly in the same framework. That the divine nature of the figurines is considered fundamentally unchallengeable till this very day is illustrated perfectly by a recent article. C. Pavel *et alii* (2013) claim that "post-processualist archaeology, [undermined] the importance of religion in the everyday life of prehistoric communities" (C. Pavel *et alii* 2013, p. 327), thus totally misunderstanding that, it is post-processualists who have brought these everyday practices to the fore. Ironically, the paper represents one of the worst legacies of post-processualism, that of "pick-n-mix" (J. Chapman n.d.), which, in this particular case, incorporates modern scientific method (x-ray tomography), selective quotes from M.

Eliade, Jung's views on transubstantiation, together with traditional Romanian figurine interpretations in an eclectic and unconvincing attempt to rehabilitate "the sacred" in prehistoric lifeways.

A relatively recent tendency in modern Western scholarship, most eloquently argued by A. Jones (2012), is to move away from the study of *representation*. In terms of figurines, it means that explanations of what figurines *were* and what their *meaning was* represents the imposition of yet another explanatory framework over mute and passive objects, a framework neither better nor worse than M. Gimbutas's… only more fashionable. Instead, a more helpful way to view figurines is to highlight what they *did*. A starting point in this approach is to consider these miniature human bodies made of bone, stone and clay as embodying the principles of personhood – the perception, creation and re-production of *self*. John Chapman and Bisserka Gaydarska have been the most vocal advocates of re-thinking Balkan figurines in terms of personhood (2006). Adopting a biographical (life of a figurine) instead of functional (use of a figurine) approach, J. Chapman and B. Gaydarska see the "birth" of the androgynous Hamangia figurines as containing both genders. Breakage causes the remnant fragments to have a "life" as either male or female. Androgyny is reinstated again in "death", since most known complete figurines are found in graves. Thus, figurines are perceived as means to negotiate gender relations and personhood. An alternative world view appears to be materialised in the figurines of the Late Chalcolithic community in Dolnoslav. There, gender – male or female and gender neuter – is retained through birth, life (even after up to 8 breaks) and death and the emphasis seems to be on age. In the Dolnoslav assemblage, the sidedness of deposited fragments attests to a priority given to the sense of belonging to wider communities or networks, broadly associated with (but not opposed to) left and right (B. Gaydarska 2012).

This short synopsis of figurine interpretations would not be complete without the post-modern take on human imagery (D.W. Bailey 2005; D.W. Bailey *et alii* 2010). For D.W. Bailey, the key to understand the enigma of figurines is their small size that evokes alternative realities through abstraction and compression. Thus, they constitute intimate and safe objects with a tactile representation to oneself; they also provoke us to think again about what it means to be human. Figurines are anchored in local knowledge, spaces and places and can be viewed as a measure of social coherence. Dwelling more on the visual power of images, D.W. Bailey argues that they help fashion identities by providing reflections of the Self and goes on to introduce the concept of "corporeality of being". Central to this concept is the human body – precarious, needing construction, maintenance, ordering and management. In a word, bodies are performative but also political, social and cultural objects. Thus, in D.W. Bailey's view, the elaborate decoration on Cucuteni/Tripyllia figurines and their changing forms through time can be explained in terms of the dynamics of Neolithic politics and changing concepts of representations of being.

In this paper we are inspired by the plea to go beyond *meaning* and *representation* (A. Jones 2012) and the possibility to experience different worlds through engagement with small comforting clay figures (D.W. Bailey 2005). Compelled by the extraordinary nature of the finds discussed below and their refreshing interpretation by an amateur archaeologist, we are trying to view the link between figurines and fertility from a different perspective and arguing that human agency and the performative qualities of the figurines resulted in the creation of these amazing sets.

◈ The Cucuteni sets

At four sites in the Balkans, unusual "sets" of anthropomorphic figurines and furniture have been discovered. This article will refer to two of the sets – those from Poduri-*Dealul Ghindaru* and Isaiia-*Balta Popii*, two villages approximately 200 km away from one another, both in North East Romania (figures 1 and 2). These "sets" comprise 21 miniature female figurines, twelve larger and nine smaller, along with thirteen small chairs. The Poduri set is dated to the Pre-Cucuteni II period, 4900-4750 BC and the Isaiia set to 4700-4500 BC (Pre-Cucuteni III).

Fig. 1. The Poduri-*Dealul Ghindaru* figurine set (courtesy of D.W. Bailey 2010, p. 114-115).
Setul de figurine de la Poduri-*Dealul Ghindaru* (cu permisiunea D.W. Bailey 2010, p. 114-115).

Fig. 2. The Isaiia-*Balta Popii* figurine set, at the Archaeology Museum Piatra Neamț (courtesy of ookaboo.com).
Setul de figurine de la Isaiila-*Balta Popii*, la Muzeul de Arheologie din Piatra Neamț (cu permisiunea ookaboo.com).

These sets were found by their excavators, Monah and Ursulescu/Merlan, respectively, inside clay vessels. At Isaiia, 42 tiny balls and 21 "cones" were also discovered.

The figurines are quite similar to one another and each has some sort of incision to denote facial characteristics. They all take the female form, with wide, large hips and thighs, narrow waists, very thin heads and necks, and few discernable arms. The bodies are bent slightly at the waist, as though lounging on a comfortable chair, some with their legs together and others with them noticeably apart. Ten of the Poduri figurines have breasts, whereas only seven have breasts in the Isaiia assemblage. At Isaiia, four of the figurines have their legs apart with spot- or dot-incisions on their thighs and three others have spots/dots on their stomachs (R. Dumitrescu n.d, slide 12).

At Poduri, each of the larger figurines is completely decorated with red paint and/or incisions. The schematic decorations take the shape of straight or curvilinear lines, in parallel, diagonal, triangular or circular form, with emphasis on the chest, stomach, hip and thigh areas on the torso. Yet, the smaller figurines have very little decoration at all.

The chairs appear to be more crudely fashioned than the figurines. At Isaiia, some, although not all, are decorated with red paint and/or incised lines and all are slightly different sizes. At Poduri, there are differences in chair shape but none of them are coloured or incised. However, one of the

chairs is two-pronged, which may account for the "Council of the Goddess" cult complex view of this set of figurines (C.-M. Mantu *et alii* 1997). As the chairs have rounded bases, Bailey considers them unsuitable for the smaller figurines to sit on (2010, p. 115) and therefore deliberately shaped for the larger figurines (D.W. Bailey 2005, p. 113).

Bailey has described the Poduri set as "one of the world's most extraordinary assemblages of prehistoric artefacts" (2010, p. 113). Yet, he is the first to admit the difficulties in interpreting the meanings of these figurines, while disputing the excavators' view that the set was part of a religious pantheon (D.W. Bailey 2010, p. 116), as well as the fertility cult and goddess view introduced by M. Gimbutas.

◈ R. Dumitrescu's viewpoint

Romeo Dumitrescu recently released a "meditative essay" on a new "para-archaeological" and "para-medical" way of looking at these "sets" of Cucuteni figurines (R. Dumitrescu n.d.; 2008). His presentation threw up some interesting concepts on the meaning of the unusual grouping of the 21 Cucuteni figurines, with their seats, acorns and balls, found grouped together in "boxes" during the Isaiia excavations, Romania.

In his presentation, he particularly considered as enlightening the Cucuteni Culture's focus on statuesque female representations, which far outweigh those of males (*i.e.* 50:1). Another very revealing feature is the schematic way the females were represented as figurines, that is, with a sole focus on their sexual features. R. Dumitrescu therefore reintroduced the concept of fertility, with the Cucuteni women experiencing a 21-day menstruation cycle in the past. Although he accepted that this much shorter menstruation cycle, which would normally be around 28 days, was unusual, he used his own gynaecological training as well as ethnographic parallels with Guyana in Central Africa to back up his arguments. As can be seen from figure 3, he attributed a figurine (with or without chairs) to each day of the 21-day menstrual cycle, suggesting groupings in the following order:

4 statuettes with open legs on chairs

9 simple statuettes on chairs

7 figurines with breasts

3 statues with incisions on the abdomen of which two belong to the seven with breasts.

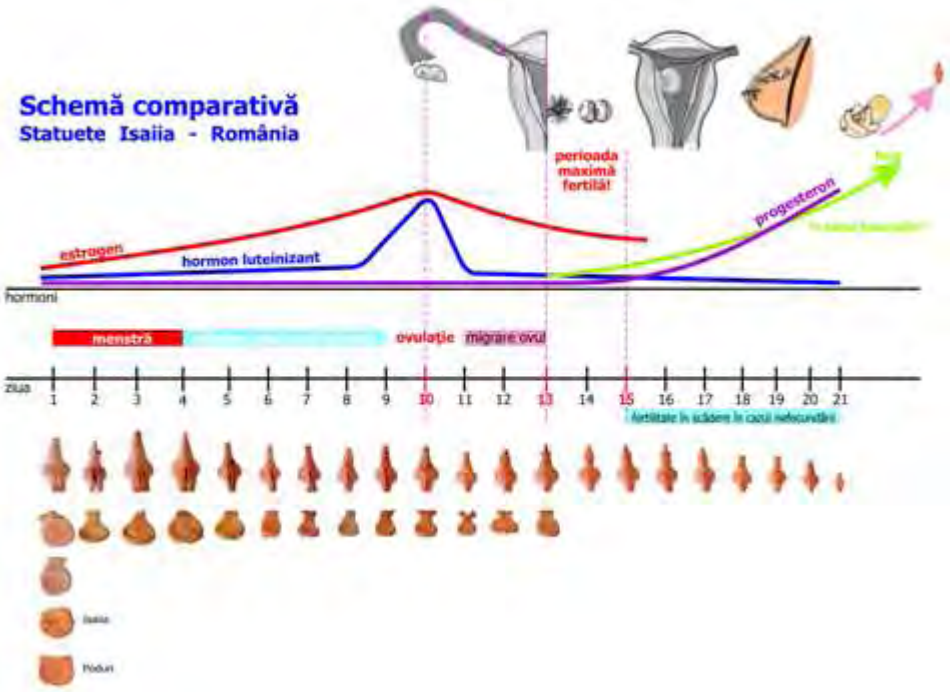

Fig. 3. R. Dumitrescu's figurine and female ovulation cycle association.
Asocierea între figurine și ciclul ovulației la femei, în opinia lui R. Dumitrescu.

◈ Our re-interpretation

While R. Dumitrescu's idea certainly holds merit, we believe that his fervent attempt to understand the complex association of these artefacts fails to take into account the obvious and undeniable common-sense fact that female menstruation is based on the 28-day lunar cycle, and most likely, this was the case in the past too. Therefore, although theoretically not impossible that Cucuteni women had a 21-day cycle, it would be much more likely that they all had normal menstrual cycles of roughly 28 days.

We propose a slightly different view of the figurines, still based on R. Dumitrescu's general concept, that is, that these figurines were linked to the female menstruation cycle. Whereas R. Dumitrescu saw them as prehistoric fertility aids, we would like, instead, to put forward the proposition that they were actually prehistoric infertility aids. Their rarity in the archaeological record would concur with the fact that they might only have been offered if the female had failed to fall pregnant naturally. Hence, as 95% of our current female population falls pregnant within 2 years of trying, only the minority would require extra help.

Reproduction is an instinctive part of nature, accomplished by every species, plants and animals alike. The natural joining together of man and woman and the creation of new life has been achieved since time immemorial. The long existence of the Cucuteni group suggests that procreation was a norm in Cucuteni life. Yet, for those precious few who had not conceived naturally and who failed to create new life, an element of doubt, uncertainty and even fear, might have started to pervade every aspect of their existence. At such a time, help and advice may have been sought from a medical guru, from older family or clan members. In 5th millennium BC Romania, a possible solution was provided by the little pots of hope found in Cucuteni domestic contexts. This might also explain why these sets are so rare, as most people would not have required them.

Our re-interpretation is shown in figure 4. The women would have their "period" as normal, usually 7 days, and their last day would equate to the first figurine, the tiny one. Each day thereafter, the figurines would increase in size, until, as R. Dumitrescu points out, the ovulation stage. Here would be placed the 4 open-legged figurines, indicating sexual intercourse on those days. From day 16 onwards, the female would need to rest and keep relaxed, so the seats would help her to do this, as it is clear from numerous studies that this can aid implantation and therefore more likely result in a

pregnancy. Obviously, certain chairs may have been demarcated for particular days, but we have used R. Dumitrescu's order for simplification.

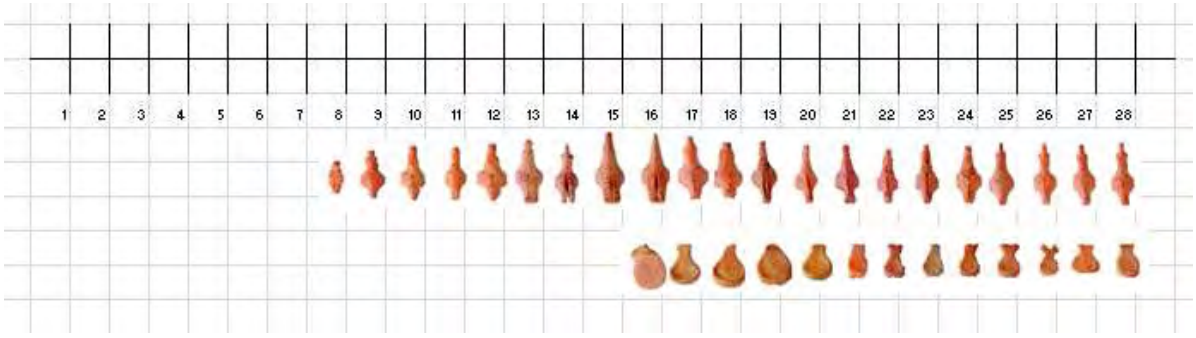

Fig. 4. Our re-interpretation of the 21 figurines and 13 seats.
Re-interpretarea noastră asupra celor 21 de figurine și 13 scăunele.

R. Dumitrescu was also puzzled by the high percentage of broken pieces of this set and wondered why they were found both inside and outside dwellings. Could it be that the people who required these "kits" were already feeling vulnerable and scared, as infertile couples do today? If they followed the routine of the "kits" for several months and yet remained infertile, it is clear that the "box" might have been thrown down or kicked out of the door in disgust.

We concur with R. Dumitrescu that these "sets" seem to refer to both "sexuality" and "conception" and are grateful to him for reintroducing the concept of fertility into the modern forum. He sees the sets as material vehicles for training young couples about their fertility, whereas we perceive them as infertility "kits".

◈ Discussion

One of the consequences of the unquestioned embracing of M. Gimbutas' ideas is that fertility is almost exclusively related to divine power in the majority of the Eastern European writings. This deprives humans of the agency and the ability to deal with their own life and destiny. To see this misplaced agency as a result of theologically and anthropologically informed discourse about the relationship between Goddesses and humans is to give the culture-history approach theoretical substance that it does not possess. The abundant claims in Eastern European archaeological literature relating figurines to gods and goddesses, which seek to make a case for prehistoric religion, consist of descriptions, vague or selective ethnographic parallels and unsubstantiated statements, rather than analytically presented arguments. If we strip figurines of their divine skin, then we are liberated and can see that important issues like birth, life and death *may* or *may not* be related to almighty power and that figurines *may* or *may not* take part in the negotiation of any of these issues. We believe that the Cucuteni figurine sets discussed above present a very strong case for statuettes being intended to aid a key moment in human life. Instead of seeing them as "divine" devices, we perceive these miniatures of female bodies as the product of human agency aimed at resolving a potentially devastating social and personal problem – the problem of infertility.

Infertility in the past has been largely overlooked in both gender archaeology and archaeology of personhood. Two are the main reasons for this disparity. The first relates to the Gimbutassian legacy, whereby the severe criticism of her literate equation of figurines, goddesses and fertility has seriously hampered modern scholarship of insightful discussions of figurines that *might* have been inspired by fertility issues. The second reason lies in the priorities dominating discourses in social archaeology where issues of power, ideology, status, prestige and indeed mundane practices crowd out issues such as infertility. This short article is an attempt to redress this imbalance.

Until very recently, women have been blamed for infertility (L.M. Brown n.d.). We have no evidence to suggest how far back in time such a claim was valid, although the issue was materialised through the pagan fertility symbols of "'green men" found in Medieval church stained-glass windows (M. Aston 1997, p. 52). It is perhaps safer to state that there were infertile couples in the past, as there are now (J. Walker 1797, p. 7). From the 1600s onwards, women would suffer suspicion and

stigma if they had not produced children (S. Smith 1999, Part 1), and it was not until the 1920s that scientists began to realise the responsibility of males in biological reproduction (S. Smith 1999, Part 5). It is difficult to assess the build-up of personal psychological tension deriving from the physical inability to achieve something that most contemporaries were capable of –an achievement widely recognised as personally and socially valuable. However, diminishing self-esteem and the feeling that the infertile woman is a lesser person do not perhaps constitutive overstatements. Today, couples are prepared to undergo costly, invasive and time-consuming medical treatments, in order to resolve their infertility issues. It is therefore not unreasonable to accept that infertile women in the past would have needed support.

Miniatures as comforting and pleasurable objects and creators of a different mind-set (D.W. Bailey 2005) would perfectly suit the intimate, yet very public, problem of infertility that required a response. Female figurines of different sizes and shapes and a less overtly obvious male presence were called upon to perform a mission. The two-pronged chair, mentioned in the Poduri excavation reports (D.W. Bailey 2010, p. 115) as the symbol of a bull and therefore of the cult of fertility, might instead have represented the male requirement to perform on the most fertile day in the female cycle – usually day 15, the ovulation day.

The creation of a set that would help the potential mother to go through the 28-day lunar cycle endorses the power of figurines to change biological perceptions and to ensure successful fertilization. One can speculate how the set was compiled, whether it was specially made for the occasion, or was already in possession of a shaman(?)/mid-wife(?) or whether it was assembled by members of the community in which each household contributed an item. The differences in style and execution of the figurines support the latter; however, the suggested choreography (see above) advocates design and forward planning more consistent with an *ad hoc* act. In the first instance, that would imply some sort of community mobilization, while the second relies on specialized knowledge. The evidence is too patchy to be able to support either claim; nonetheless, in both cases, the active role of the figurines remains the same.

◈ Conclusions

The inspiration for this short article has come from an unlikely source – the medical professional and amateur archaeologist Romeo Dumitrescu – who introduced the concept of fertility into discussions of figurines. His assessment of the "boxes" found at the Poduri and Isaiia excavations has reopened the debate into the reasons why such a group of figurines and associated paraphernalia should be found together. It is clear that these little pots of hope certainly provide a new insight into the lives of the Cucuteni people, hitherto unknown from excavations. They demonstrate an empathetic, considerate side to groups of people living in a much larger/wider, linked and bounded landscape than previously known. Yet, they also stimulate more questions: who made them?; why were "sets" found 200 km away from one another and why were there so few sets at all? Did these figurines carry their own biographies and have social identities? Instead of taking the comfortable and well-trodden path of answering these question (J. Chapman, B. Gaydarska 2006; B. Gaydarska *et alii* 2007), we have embarked on a more dangerous journey by introducing the problem of infertility in the past, expressed in this case though the creation of figurine sets. We concur with D. W. Bailey's viewpoint (2005, p. 122) that the miniaturistic concept of these figurines could have altered the mindset of the people who held them. Certainly, the mind-alteration needed when one is faced with an ongoing infertility issue, is the ability to forget oneself and enjoy living again. Maybe these little pots of hope supplied just that: a re-awakening of the inner child and a new focus for the couple. We would appreciate comments regarding our re-interpretation.

Judging by the amount and zeal of modern research they have inspired, anthropomorphic figurines were powerful beings. In this short article, we extend the agency of the figurines in the past by seeing them not only as a great motivator for modern research but also as active participants in the worldview of past societies. In times of hardship and despair, in times of joy and celebration, in everyday routine or in special ceremonies, figurines were part of the *making* of current events. They had diverse roles and, in the cases discussed above, they are seen as empowering women to take the destiny in their own hands and to break the deadlock of infertility.

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New data on the Stoicani-Aldeni cultural aspect. The archaeological excavations from the Eneolithic site at Bălăneşti (Buzău County)

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Abstract: *The present paper discusses and presents for the first time Hortensia Dumitrescu's archaeological excavations from Bălăneşti (Buzău County) in 1943. The only published information on the subject appeared in the Encyclopaedia of Archaeology and Ancient History of Romania, volume I (Vl. Dumitrescu 1994) and in the monograph of the Stoicani-Aldeni cultural aspect (I.T. Dragomir 1983). The site of Bălăneşti is also quoted in Romanian archaeology in connection to Eneolithic funerary practices, mentioning the human skull (lying on a vessel associated with red-ochre) found at the site. The paper presents a detailed account of the old excavations, followed by the analyses of pottery, faunal remains and lithics, ending with a brief discussion on the chronology of the area within the Stoicani-Aldeni cultural aspect and its links with the neighbouring sites and cultures.*

Rezumat: *În acest articol ne-am propus restituirea și în același timp valorificarea cercetărilor realizate de Hortensia Dumitrescu în anul 1943 în localitatea Bălăneşti (jud. Buzău). Materialul arheologic este inedit, singurele informaţii publicate regăsindu-se într-un raport de săpătură arheologică cu câteva alte referiri punctuale în Enciclopedia Arheologiei și Istoriei Vechi a României vol. I (Vl. Dumitrescu 1994) şi în monografia aspectului cultural Stoicani-Aldeni (I.T. Dragomir 1983). Bălăneşti este menționat și în contextul discuţiilor legate de descoperiri și practici funerare în eneolitic, datorită identificării în această aşezare a unui craniu uman aşezat pe un vas cu ocru roșu. Articolul de față prezintă detaliat cercetarea arheologică a Hortensiei Dumitrescu, urmată de o analiză a materialului arheologic rezultat (ceramică, resturi faunistice, material litic) și de o scurtă discuție privind încadrarea cronologică a acestui sit și a aspectului Stoicani-Aldeni și de legăturile cu alte situri și arii culturale din zonă.*

Keywords: *Eneolithic, Stoicani-Aldeni, pottery, stone industry, faunal and human remains.*
Cuvinte cheie: *eneolitic, Stoicani-Aldeni, ceramică, industria pietrei, resturi faunistice și umane.*

◈ Introduction

Northern Muntenia shows a series of cultural particularities, perhaps partly due to the diversity of its geography that favoured – during the Eneolithic at least – a certain line of locall evolution and triggering thus certain patterns of habitation, exploitation of space, resources and natural environment. As a peripheral cultural area it was exposed to various cultural contacts, assimilated then in a local synthesis.

The Eneolithic settlements in the Subcarpathian area of Muntenia or nearby it were archaeologically assigned to the Stoicani-Aldeni cultural aspect - defined either as a synthesis between the Gumelniţa and the Precucuteni-Cucuteni civilizations or as regional aspect of the Gumelniţa culture (Gh. Ştefan 1944; M. Petrescu-Dîmboviţa 1953; E. Comşa 1963; Vl. Dumitrescu 1963; A. Niţu 1971; 1973; I.T. Dragomir 1983; M. Şimon 1986; A. Frînculeasa 2007). Initially labelled as Gumelniţa – Ariujd (Gh. Ştefan 1944), later as Aldeni II (E. Comşa 1963), it established itself as the cultural aspect Stoicani-Aldeni after the publication of I.T. Dragomir's monographic work (I.T. Dragomir 1983).

First excavations in the northern area of Muntenia took place during the third decade of the last century at Aldeni, Sărata-Monteoru and Bălăneşti, with the results published in a few brief reports and papers (Gh. Ştefan 1938; 1944; I. Nestor 1944, p. 28; H. Dumitrescu 1944). During the following years the area and the subject were rarely paid any interest (Gh. Ștefan, E. Comșa 1957; E. Comșa 1987;

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M. Peneș, E. Paveleț 2001). It was only after the year 2000 that a series of sites attributed to this cultural aspect was again investigated (A. Frînculeasa 2008; 2010): Mălăieştii de Jos (R. Andreescu *et alii* 2006; A. Frînculeasa *et alii* 2012), Apostolache (A. Frînculeasa 2008), Seciu (A. Frînculeasa 2011), Boboci (A. Andreescu *et alii* 2012), Urlați (A. Frînculeasa *et alii* 2008) in Prahova county and Coţatcu in Buzău county (L. Grigoraş, E. Paveleţ 2007; R. Andreescu *et alii* 2009; E. Paveleț 2010).

Despite the fact that the archaeological literature makes references to various aspects of the archaeological excavations from Bălănești[1], very little was so far published, other than the very brief report published in 1944 by Hortensia Dumitrescu, the author of the 1943 excavation (H. Dumitrescu 1944, p. 48-50). Interesting discussions were triggered by the presence of the human skull found overlapping a pot covered with red ochre (E. Comșa 1960, p. 6; A. Ion 2008, p. 111-112; C. Lazăr 2012, p. 117-118). The site was assigned to the Stoican-Aldeni Eneolithic cultural aspect without much discussion of the pottery or other categories of artefacts (Vl. Dumitrescu 1994, p. 169, I.T. Dragomir 1983).

In Hortensia Dumitrescu's fieldnotes the Eneolithic site was said to be located on "Muchea Mare" ridge, overlooking Bălănești village, east of Sărățelului valley, on the western limit of "Poduri". Field surveys that took place in 2013 failed to identify the site. The "Muchea Mare" toponym is visible on a topographic map from the beginning of the 20th century (pl. 1). On a more recent map, the same location is marked much further north (pl. 1/3). The ridge was described as being "peculiarly shaped", with a maximum width at the northern edge of ca. 15 m, the southern one of ca. 40 m and an average length of 19 m. Access to the top – based on the sketch in the fieldnotes (pl. 1) - was most likely from the southwest where the slope was less abrupt (H. Dumitrescu, fieldnotes).

The digging was done by spade – probably in 20-25 cm deep spits and the working force employed were peasants from the Bălănești village. Depth was most likely measured from the walking level. The fieldnotes and the marking on the pottery indicate that finds were collected every two spits or so. Finds from the feature areas were not collected/marked separately but based on the higher depths reached it was possible to separate the material resulted from the deeper features. Throughout the excavated area there seems to have existed a *cultural* layer of variable thickness, layer that started at ca. 20-30 cm from the walking level (the 20-30 cm accounting for the so called *vegetal* soil). This cultural layer overlapped a yellow clayish soil - seen as archaeologically sterile. Some of the features (L1, L2) cut down into this latter geological layer. Nothing more can be speculated about the stratigraphy of the site.

The surviving field documentation includes Hortensia Dumitrescu' fieldnotes with daily entries and a few sketches, as listed below:

1. General plan of the excavations (pl. 2);
2. Trench SI with features L1, L2 and F3 (pl. 3);
3. Western section of trench SI with L1, L2, F3 (pl. 3);
4. Central part of (eastern?) section of trench SII;
5. Western section of trench SIII (pl. 4/1-2);
6. North-eastern section of trench SIV (pl. 4/3-4).

The sketches have different scales vertically and horizontally (pl. 2/1) – and the information they provide is only approximate (when redrawing them most measurements proved inaccurate).

The archaeological excavations took place between July 19 and July 29, 1943. Four main trenches (SI to SIV) and a few other sondages (SV to SVIII) were excavated, ca. 200 sqm in total (pl. 2). The maximum depth reached varied from trench to trench, function of their location and the various features identified. The maximum depth reached was 2.30 m (H. Dumitrescu 1944, p. 49).

Nowadays, the largest remaining[2] part of the resulted archaeological material is in the collections of "Vasile Pârvan" Institute of Archaeology in Bucharest, and a few vessels are either exhibited or curated in the Buzău County Museum.

The first part of the paper focuses on the 1943 excavation and is based on Hortensia Dumitrescu's fieldnotes, comprising detailed information on the trenches, followed by a discussion of

[1] We would like to thank dr. Silvia Marinescu-Bîlcu for kindly allowing us to study the archaeological collection and offering us full access at the field documentation.

[2] When the present authors started their work on the Bălănești material, all the finds were still wrapped in their initial package (brown coarse paper with notation of date, trench and depth). It was noted from the first a discrepancy between the description of the material in the fieldnotes and the packages/items identified, suggesting that part of the collection was lost and possibly, some of the finds were perhaps never collected. Among the obvious missing part of the collection are the faunal and human remains.

the identified features (extending at times in more than one trench). The second part of the article groups analyses of various types of finds (pottery, small finds, bone and antler industry, lithics). The final part of the paper is a discussion on various aspects of the Stoicani-Aldeni group and its connections with the neighbouring cultural areas.

Trench SI (21.70 m x 2.60 m, pl. 2) oriented NE-SW, was located right on top of the ridge, 2.60m north from its southern edge. Archaeological finds were said to be easily observed on the freshly ploughed soil. Close to the surface pottery fragments were rather small and of two different types: the first type was made of a fine paste, grey both on the surface and in the break, while the second was red in the fresh break. Four definite features were observed (F1/L1[3], F2/L2, F3, and F4) together with some human remains (M1). F1, F2, F3 were described as "dwellings" while F4 seems to have been a pit feature underlying L1 (see below).

The trench was excavated down to various depths, function of the appearance of the yellow (considered sterile) soil: at 1m excavation stopped on the south-western end of the trench (ca. 2 sqm), at 1.20 m excavations continued only on the north-western half of the trench, while at 1.50 m the yellow soil was noted everywhere but an area of ca. 5 x 2.60 m beneath the location of L1. At about 2m this area was reduced to 2m x 2.60m and the yellow sterile soil was reached at 2.30 m (pl. 2/2).

Trench SII (19 m x 2.20 m, pl. 2) was parallel to SI but slightly shorter and narrower. From the vegetal layer down finds clustered towards the centre of the trench (mainly in the area corresponding to F1/L1) and less towards the ends of the trench. At the extremities the excavation stopped at 0.80 m. At 1.50 m the digging area was further reduced to some 4 x 2.20 m located in the centre of the trench (in an area where daub fragments were observed in the profile, probably corresponding to F4). Despite the fact the soil was of the yellow type finds still occurred down to 1.80 m (both pottery and bone fragments). Pottery was mostly of the thick variety (the fieldnotes mention half a pot preserving its base, painted on the exterior with pale yellow on a dark greyish-black background) and less of the thin grey type. A horn/antler piece was also mentioned.

Trench SIII (16 m x 1.20 m, pl. 3/3-4) was located in the south-western part, almost perpendicular to SI and SII. Vertically, soil colour went gradually from brown to yellow and it became more compact as the depth increased. On the south-eastern corner of the trench, over an area of approx. 3 m in length, the excavation stopped at 0.50 m, while in the rest of the trench it went down to 1.10 m. The trench was described as "rather poor in finds".

Daub fragments were scattered over an area of 5-6m in length, appearing more concentrated towards the surface of the trench and more loosely scattered as they reached the depth of 0.70m, interpreted as perhaps another possible feature (F5).

Finds singled out in the fieldnotes for the first spit (0-0.50 m) were "a clay stamp with a spiral motif, a sandstone chisel, an oval stone grinder, pottery fragments with painted red lines on dark background" and a grey flint flake, a sandstone chisel and a painted pottery fragment for the second one (0.50-1 m).

Trench SIV (8 m x 3 m, pl. 4/1-2) was opened in the vicinity of feature F1/L1 observed in trench SI. The villagers had previously reported finding there "ash" and various types of items. During the excavations sherds were noted appearing from the very vegetal layer. On the eastern corner the yellow sterile soil was reached at 0.85 m while in the rest of the trench the excavation stopped at a depth of 1.50-2 m (corresponding to those of the bases of F1/L1 and F4).

In the south-eastern corner (0-0.50 m) a concentration of daub fragments was observed, probably part of L1. At this depth, the fieldnotes also mentioned pottery fragments (decorated with incised lines), two sandstone chisels, the leg of a figurine (with part of the torso and a laterall prominence), 2-3 halves of small vessels (perhaps from the same one), horns, bones, many snails, a very large antler, a possibly worked vertebra. Unfortunately it is not clear whether they all belonged to L1 or some had been found scattered in the cultural layer.

Further down, another pair of deer antler and small vessel were noted at 0.85 m.

From the next excavation spit (0.85-1 m) resulted two round stone punchers, a large grinder, two (four legged) small animal figurines, a spoon with a broken handle, a pot fragment painted with

[3] The "F"-numbers were given by the present authors when working with the notes and the archaeologicall material while the "L" numbers were given by Hortensia Dumitrescu during the excavations. To be noted that some of the features were never numbered/named in the fieldnotes, but they had been observed as features and at times they were assigned names in the present paper for a better understanding of the archaeologicall situation.

white lines on a red background, thick fragments of pottery, a small vessel with a prominence (the other one probably broken), a flat spindle, pierced in the centre, horns, bones, etc.

The lowest excavation spit (1-1.50 m) yielded quite a few pottery fragments (both of the red and the grey varieties, and some with white paint on red background): pedestalled cups, handles, buttons, a small round vessel, half of an anthropomorphic figurine.

Prior to the complete excavation of the trench both the north area and the one towards SI collapsed and the finds were collected (a small chisel and quite a few sherds – among them a robust base, the neck of a painted vessel- and a clay stamp with an angular pattern).

Trench SV (2 m x 16 m, pl. 2) connected trench SIV to trench SIII in a somehow oblique manner, probably in an attempt to expose more features. Finds collected from the first excavation spit included pottery fragments, a complete miniature vessel, horn shaped handles, pedestalled bases.
Many of ceramic fragments were also said to have occurred between 0.50-0.80 m (second spit). H. Dumitrescu noted that they were "difficult to classify". At ca. 0.80m the sterile yellow soil started to appear and at 1m the excavation stopped.

Trench SVI (6 m x 1.5 m, pl.2) was cut parallel to SV and located further to the east. Very little is mentioned about the finds resulting from it: an almost complete miniature vessel at 0-0.25 m, a chisel, a figurine (armchair?), pottery sherds and various vessel fragments at 0.25-0.50 m. At 0.50 m the yellow soil appeared and the excavation stopped.

Two other small trenches were also opened (SVII and SVIII) but there are no fieldnotes referring to them. From the general sketch, **trench SVII** (probably 2m x 2m) was located towards the northern corner of SIV (probably in an attempt to uncover the entire area of L1).

Trench SVIII (2 m x 2 m? – also from the general sketch, pl.2) was located at the edge of the mound, in an area where the villagers reported having found animal horns, bones and pottery fragments in the fresh collapsed section of the mound).

◈ Discussion: the dwellings and pit-features

F1/L1 (pl. 2/1-2) appeared to be a large feature: first identified in SI, it stretched to the north (also appearing in SII) and to the south-west (it was noted in the south-western corner of SIV and probably in SVII).

In all the above mentioned trenches L1 was observed rather close to the surface, at only 0.15m. The depth of its base was not clearly mentioned but fewer pottery fragments occurred between 1.20-1.50m – suggesting perhaps the end of it (rather plausible considering that the depths the bases of F2/L2 and F3 occurred at similar depths).

Calculated from the profile of SI (pl. 2/1-2), L1 had an approx. a length of 4.5 m and a depth of ca. 1 m. Its width and shape remained unknown. In the infill of L1 were many pottery fragments of a large variety: from fragments made of a coarse paste red-painted on the exterior to fragments of bright pink or grey. There were also fragments painted red on white, surrounded by a darker background. The patterns comprised meanders and circle fragments, perhaps spirals. Small vessels with thin walls of greyish colour were also mentioned, some with *impresso* decoration ("tiefverziert" - in the fieldnotes).

At a lower depth, there were some large stone fragments (later interpreted as grinder fragments), a large amount of pottery fragments, "a round stamp decorated with concentric circles, two spoons (or vessel handles), a few cup pedestals, many handles and prominences" (H. Dumitrescu Fieldnotes, leaf 5, verso), a flat whorl spindle, another "stamp with an angular pattern".

The faunal remains comprised a large deer antler, horns, various fragments of bones and maxillae, a possibly worked vertebra, many snail shells. Among the lithics were mentioned grey and black flint implements, a trapeze sandstone adze (polished and broken at the distal end and worked at the proximal one), two round stone punchers, a large grinder, a small sandstone chisel.

Fragments of three clay female figurines occurred also (one headless with the arms and legs broken, the second was a part of a torso and hip, the third was described just as 'half of an anthropomorphic figurine") together with two animal ones.

Underneath F1/L1 (below 1.30/1.50 m), a new agglomeration of pottery fragments and bones (**F4**) was noted (see the original profile of SI pl. 2/1-2) so that this area of the trench was excavated down to 2.30 m.

From F4 resulted pottery fragments of a large variety and among them a few miniature vessels made of grey paste. Coarse pottery was noted and also some fragments painted in red and

grey. There were also snails, bones, maxillae, a large tooth, large stones (grinders?), daub, calcareous concretions, pot fragments with incised decorations on the body and painting at the base, sherds painted with red and grey, a small deep spoon/ladle, sherds with vertical grooves and grey patina, others with two rows of incisions in a spiral pattern.

At 2 m of depth, on an area of ca. 0.50 x 0.50 m there was a layer of charcoal, ashes and burnt soil – identified on the sketch-plan as a **hearth**. At this depth there were fewer sherds but the same above mentioned varieties remained. There were also snails and large bones.

Thus, it is apparent that L1 overlapped and probably cut into an earlier feature – F4 – also a possible dwelling (of the sunken-hut type), as indicated by the presence of the hearth. Whether the two features belonged both to the same "phase" of the Stoicani-Aldeni aspect is impossible to tell, since the finds were not sorted separately when collected.

Feature **F2/L2** (Pl. 2/1-2) – identified by Hortensia Dumitrescu as a second "dwelling"- started at ca. 0.25 m and according to the general sketch and the fieldnotes ended more or less at the same level as F1/L1 (and F3), at ca. 1.20-1.50 m. As shown below, its infill suggests – as in the majority of cases – that after it was no longer used for habitation – ended up as a refuse pit.

On its upper part the infill of L2 yielded fewer daub fragments than L1. Among them some were "grooved", some had "tiefverziert" decorations while two fragments had white paint on red background decorations – suggesting that in the settlement some houses might have had decorated/painted walls. Also from the infill of L2 came some grinder fragments, a piece of large pedestalled vessel and black flint flakes. Lower down in the infill, at 0.50-1.00 m, were many fragments of coarse pottery (some with impresso decoration), handles (perforated or mere prominences), fragments of painted pottery (some thinner painted with red and black, some thicker – painted only with red), applique bands, rim fragments from small vessels, some conjoining fragments possibly from a complete pot, three grey flint punchers (cores), half a „mattock", many animal bones and horns. There were again many daub fragments some with posthole imprints.

F3 (pl. 3/2) was located 3.20 m south of the northern limit of the trench. From the sketch it must have ended at the same depth as L1 and L2. There was no other additional information.

The remains of two other features – also described as concentrations of daub fragments, but smaller in size than L1 - were identified further to the west of SI but no further details are available.

◈ Archaeological collection

1. Pottery

The pottery constitutes a representative lot for the evolution of this Eneolithic settlement, with features specific to the north of Muntenia. The sherds were well preserved but only a small number of them were conjoining – possibly a consequence of the selective collection of finds and the spade-digging. Given the fact the pottery was collected from rather thick layers (as explained above) and over large surfaces a more detailed and complex pottery analysis was impossible. We chose to give a synthetic presentation of its main characteristics, focusing on the elements that would help us pin this particular site within the larger context of the Eneolithic communities at the Lower Danube. Thus, the Bălăneşti pottery can be easily assimilated to that of the Stoicani-Aldeni cultural aspect.

Morphologically this ceramic collection exhibits the three well known categories: coarse, semi-fine and fine. It was fired both in an oxidizing and a reducing environment, with surface colours ranging from yellowish to brick-colour and reddish, and from grey to black. In most cases the paste is compact and homogenous, with fine (at times coarser) grained sand used as temper, and more rarely crushed pottery or pebbles.

The **shapes** include both life-sized pots and miniature ones, with the same typology. The most frequent types are dishes, goblets, cups, mugs, bowls, lids, storage pots, jars, vessels stands, ladles and spoons (pl. 11/1-5), rectangular vessels.

Dishes and goblets are the best represented types. The former shows various subtypes and sizes – from the large size tronconic and bi-tronconic (pl. 8/1,3,5-6, pl. 10/6, 8-10) with a diameter of ca. 32-34 cm to bowls of miniature, small and medium sizes (pl. 9/7-12). Dishes were generally made of all types of paste – coarse, semi-fine and fine (pl. 6; 8). A separate category seems to be represented by the dishes made from a semi-fine paste, with curved walls, while the base and the mouth have similar diameters.

Goblets are made of fine paste while the surface exhibits different colours (yellowish, brownish, blackish or greyish). Some of the shapes are similar to the dishes (pl. 5). The predominant

shape is bi-tronconic, more seldom spherical. Decoration includes fluting associated with thin painted bands, grooved ellipses or circles. Goblet sizes are almost standardized – height and diameter at the mouth of ca. 9-11 cm with a narrow base of 2.5-3.5 cm (pl. 5; 12/1-10).

Two types of **lids** (pl. 9/1-6, pl.12/7) – the "bread-baking cover"[4] and the *calotte* were mainly identified (pl. 9/1-5). The latter is made of fine or semi-fine paste, with conical handles. A third type is the "hat-shaped" lid (pl. 14/10-11). One lid was painted bright red (pl. 13/9). In another case a lid made of coarse paste has a house shaped handle (pl.14/10). Such plastic representations of house models are well-known within the Gumelniţa cultural area (including some Stoicani-Aldeni sites – K. Moldoveanu 2008). In another case a small prominence was noted inside the lid – until now a unique presence in the area (pl. 12/7; 14/11). Such lids do appear both in the tell-settlements along the Black Sea and also in Dobrudja and northern Thrace (V. Voinea 2005, p. 44). They also appear in the Sălcuţa-Krivodol cultural area (D. Berciu 1961, fig. 84/6, 149/1; C. Ştefan 2011, p. 352).

Worth mentioning among **jars** (pl. 7/7-8, 11-14, pl. 8/8) is a distinct category (with one jar painted in bright red and chocolate-brown – pl. 7/12) remarkable through its small size (less than 10 cm in height), with slightly curved walls, a carinated shoulder, two symmetrical small handles (vertically perforated) attached to the exterior of the carination and a narrow mouth (pl. 7/7, 8, 12, 13). This shape is also to be found at la Mălăieştii de Jos (A. Frînculeasa 2012, p. 137, pl. 7), Coţatcu (E. Paveleţ 2010, fig. 87/7), Poduri (the Cucuteni A2 layer – but that jar is not painted - D. Monah *et al.* 2003: 121/no. 187). The same type, but of a different size was observed at Mălăieştii de Jos and Bonţeşti (A. Frînculeasa 2012, pl. 153) and Bălănești. Within the Gumelniţa cultural area it was found at Căscioarele *Ostrovel – level A2* (V. Voinea 2005, pl. 88/9). It was also noted at Ariuşd (Fr. Laszlo 1924, pl. XI/4).

To be mentioned at Bălănești is the presence of tronconic vessels (Pl. 9/13-21) with short and oblique walls, at times perforated, made of coarse paste, with a tinge of barbotine on the surface (Pl. 9/17, 19-21). Other examples are known from Mălăieştii de Jos where they are quite well represented (A. Frînculeasa 2012, pl. 6), Seciu (A. Frînculeasa, O. Negrea 2010, pl. 4/5, 6/3), Aldeni (L. Grigoraş, E. Paveleţ 2013, fig. 11/22). They seem to originate in the Precucuteni cultural area (S. Marinescu-Bîlcu 1981, fig. 92/70-72; N. Ursulescu *et alii* 2005, fig. 13/2). They appear equally in other Stoicani-Aldeni sites (I. T. Dragomir 1983, p. 64), in the Bolgrad area (V. Subbotin 1983, fig. 30/1-4; Skakun 1996, pl. 2/14; V. Sorokin 2001, p. 82) but they also have analogies in the Gumelniţa area (V. Voinea 2005). Similar vessels but without the wall perforation are known at Mălăieştii de Jos, Seciu (A. Frînculeasa 2013, pl. VII), Ariuşd (F. Laszlo 1924, pl. I/3; XI/1) and Mărgineni, in the Cucuteni A2 settlement (I. Mareş 2008, p. 54, cat. 34) or in the Gumelniţa site from Tangâru (D. Berciu 1961, p. 435, fig. 212/1-3).

A special category is represented by the vessels stands – present in this site in two variants: coil-like (pl.10/4) or cylindrical (pl. 10/4/1-3). The coil-like ones are known in the Gumelniţa sites from Muntenia or Dobrudja (V. Voinea 2005, pl. 42). In the northern part of Muntenia they appeared at Brăiliţa (N. Harţuche, F. Anastasiu 1968, fig. 31), Lişcoteanca *Movila Olarului* (N. Harţuche, F. Anastasiu 1976, cat. 197), Coţatcu (E. Paveleţ 2010, fig. 124), Aldeni (L. Grigoraş, E. Paveleţ 2013, fig. 11/9; 19/9, 10) with an impressive lot being found at Mălăieştii de Jos (A. Frînculeasa 2012, pl. 10; 2013, p. 175, pl. VIII). This vessel type is specific to the southern Romania but a few examples are known in the Cucuteni area at Ariuşd (F. Laszlo 1924, pl. VII/1, 2), Frumuşica (C. Matasă 1946, p. 124, pl. XXX/258), Preuţeşti *Cetate* (D. Boghian, E. Ursu 2004, p. 19, fig. 1), Scânteia (C. Mantu, S. Ţurcanu 1999, p. 116-117, no. 235, 237, 240), Ruginoasa (C.M. Lazarovici, Gh. Lazarovici 2012, p. 184, fig. VIIB), all within the Cucuteni A2-A3 cultural horizon.

Contrary to the coil-like stands, the cylindrical ones were not mentioned in the Gumelniţa or the Stoicani-Aldeni pottery typologies until recently (Pl. 10/1-3). It was not mentioned in the Stoicani-Aldeni monograph (I.T. Dragomir 1983) and the same fact is to be noted for the Gumelniţa – Karanovo VI pottery monograph (V. Voinea 2005). It is only recently that artefacts of this type were found at Mălăieştii de Jos, Seciu (A. Frînculeasa 2012; 2013) and Coţatcu (E. Paveleţ 2010, fig. 90). In Muntenia one item was found at Sultana *Malu Roşu* and a few fragments at Sudiţi *Movila Bălaia*, both in the Gumelniţa area. In the northern part of Muntenia this vessel type appears with a certain frequency suggesting a shape well known to the local communities. At Mălăieştii de Jos and Seciu such vessels were found in all levels. The paste is similar to that of the rest of the pottery, suggesting a local production.

[4] "țest" in Romanian.

It is worth mentioning for the northern Muntenia that some of the stands have curved walls while others look tubular, but they all lack the delicate appearance of the Cucuteni stands. Although they are not specific to the Gumelniţa culture, the firing and the paste are no different from those of the local pottery. A miniature stand was uncovered at Bălănești (pl. 12/24), and another one at Mălăieștii de Jos (A. Frînculeasa 2013, pl. III).

This type is frequent during the Cucuteni A phase (C. Matasă 1946; R. Vulpe 1957; S. Marinescu-Bîlcu 1981; C.M. Mantu 1998; M. Petrescu-Dîmboviţa *et alii* 1999; D. Popovici 2000; D. Monah *et alli* 2003; R. Alaiba 2007; G. Bodi 2010; Gh. Lazarovici, C.M. Lazarovici 2012) but is also found on Ariuşd sites (A. Laszlo 1924; Gh. Lazarovici, C.M. Lazarovici 2010), Foeni (M. Gligor 2009, p 78) and Petreşti (I. Paul 1992; Z. Maxim 1999). Given the fact the type does not exist either in Muntenia or Oltenia at a previous cultural horizon – the Boian culture) and the Precucucuteni typology does not have it either, it can be regarded as the reflexion of some early contacts with the Petreşti cultural area, followed by some later contacts with the Ariuşd and finally with Cucuteni. No pedestalled stands were found in the southern Romania, despite the fact they are well known in the Cucuteni area and the Transylvanian Eneolithic (Z. Maxim 1999). There are examples though in the Precucuteni pottery (S. Marinescu-Bîlcu 1974).

Pedestalled pots were not found in the southern part of Romania either– although they were well known in the Precucuteni and Cucuteni areas and in the Transylvanian Eneolithic. There are a few examples at Bălănești, though (pl.12/20-21). One should also remember that the pedestalled vessel found in the Vidra-tell (D.V. Rosetti 1934, p. 17-18, fig. 25) generated the initial discussions on the cultural relationship between the Gumelniţa and the Precucuteni/Cucuteni cultures.

The **storage vessels** (pl. 7/9-10; pl.8/7; 10-11) are large or medium in size, made of coarse paste. They are all in a very fragmented state (pl. 7/9; 8/7, 11).

We also note the presence of numerous *miniature* vessels (pl. 12/13-24), made of fine or semi-fine paste. Generally their shapes are the same as those of the normal sized vessels (pl. 12). An exception is made by a few pedestalled cups and some rectangular pots similar to small clay boxes (pl. 12/25). The latter are well known in the Gumelniţa cultural area.

The decoration is made in various techniques: painting (pl. 6/3,7,9,10,14; pl. 7/12; pl. 8/4; pl.13/9, pl. 13/8,10), incision (pl. 5/16, pl. 6/1; pl. 7/6;), carination (pl. 6/11,13), impresso, burnishing, etc. In the case of the coarse ware the exterior was barbotine decorated. The painting was done after the firing in the case of the graphite and the white (pl. 7/8, 10; 8/2, 10), yellowish or bright red paint (in the last case the paint covers large areas both on the inside and the outside of the pot). The presence of red ochre in the interior might be connected to the preparation and storage of ochre rather than to decoration proper. On the exterior, the red paint covers at times almost the entire surface of the vessel, as it is the case of the coarse-ware cylindrical stands (pl. 10/1-2). The graphite was used in thin bands forming registers and linear decoration both on the exterior (pl. 10/5, 7; 11/7) and the interior (pl. 13/11) of the pots (pl. 10/5, 7; 11/7; 13/11). White thin bands appear vertically, horizontally, oblique and in a semi-circular shape mostly on small fine paste ware, but also on a few pots larger in size (pl. 7/9,10), made of the semi-fine paste. White was used on the exterior of the vessels to make rows of circular dots. The yellowish paint covers more extensive areas on some coarser ware. Carination is present on the surface of fine pottery, creating horizontal registers, more seldom oblique or vertical ones (pl. 6/11, 13). Incision was employed in the shape of hachure filled areas forming various patterns (pl. 5). At times, vertical incisions cover a large part of the pot or are grouped in series. The *impresso* is represented by small circular or ellipse-shaped impressions, occurring on fine ware. Many times these techniques and motifs are associated together on the surface of the same vessel.

A special category is represented by the Cucuteni A2 pottery (pl. 12/8-12; 13/1-7). There are several fragments painted with white-yellowish colour, delimited by chocolate-coloured thin lines (pl. 11/8-12). The ware was fired in an oxidizing environment, with reddish or orange as the background for painted geometric patterns (angular, wavy or more seldom, semi-circular). Sometimes the temper used was finely crushed ware, giving the impression of a rather badly mixed paste. Some of the pots have thin walls, some thicker, up to 0.8 cm. A fragment of a ladle is also painted in Cucuteni manner (pl. 11/5) but a few other similar fragments were un-decorated (pl. 11/1-4). We would also like to mention a fragment of a dish that appears to be Precucuteni (pl. 11/6). It was made of brownish semi fine paste, with a burnished surface and a series of incisions as decoration.

2. Figurines and miscellaneous small finds

A list of the small finds mentioned in the fieldnotes and their contexts is presented in table 1, below. Unfortunately, at the time the present paper was prepared only a few of them were available for study: a clay stamp, two anthropomorphic figurines, a small "chair" and several spindles. It was observed though that some of the identified small items were not listed in the fieldnotes.

According to H. Dumitrescu, the decoration of the clay stamps consisted of "spiral, concentric circles and angular ornaments" (H. Dumitrescu 1944, p. 50). The only presently available clay spindle has a diameter of 41 mm and a height of 21 mm. The handle, broken in antiquity, was perforated and has a conical shape. The active side displays a grooved spiral decoration, in slight relief (pl. 14/3). This type of small finds are known in the Stoicani-Aldeni settlements from the northern Muntenia – Aldeni, Mălăieştii de Jos, Seciu, Coţatcu, Moisica, Sudiţi (E. Paveleţ, L. Grigoraş 2006; A. Frînculeasa 2010, pl. 17/7, 8; 2010a, pl. 184/11; 2011, p. 50, pl. 61/6; 2012, p. 139, pl. 13; A. Frînculeasa *et alii* 2012, p. 19, pl. XXIII) – or Moldavia – Igeşti and Bursuci (G. Coman 1980, p. 316, fig. 106/1, 2). They are equally common in Gumelniţa A1 sites – Cireşu, Insurăţei, Brăiliţa (E. Paveleţ, L. Grigoraş 2006, p. 38), in Gumelniţa A2 (E. Paveleţ, L. Grigoraş 2006, p. 38; C. Ştefan 2009, p. 153-154), in Cucuteni A2 and A3 settlements in Moldavia (D.N. Popovici 2006; L. Istina 2010) and in Ariuşd sites in Transylvania (D. Buzea, A. Kovacs 2010).

No.	Trench	Depth (m)	Description from fieldnotes	Observations
1	SI	surface	clay spindle	
2	S I	0.5-1	perforated flat anthropomorphic figurine	complete "idol"
3	S I	0-0.5	clay stamp with perforated handle	complete
4	S II	0.5-0.8	female figurine	only breast area preserved
5	S II	0.5-0.8	perforated flat anthropomorphic figurine	fragment of "idol"
6	S II	1-1.2	clay stamp with perforated handle	complete
7	S IV	0.85-1.00	flat perforated clay spindle	complete
8	S IV	0.85-1.00	animal figurine	complete
9	S IV	0.85-1.00	animal figurine	fragment
10	S IV	0-1	decorated clay stamp with perforated handle	found together with animal figurines and "idols?
11	S IV	1.50-1	female figurine	fragment
12	S VI	0-0.5	human figurine	fragment
13	S VI	0-0.5	female torso	unclear if fragment or complete item
14	S VI	0-0.5	"furniture" figurine	fragment
15	S VI	0-0.65	small "chair"	fragment
16	*passim*		human legs on a pedestal	fragment

Tab. 1. Small finds mentioned in the fieldnotes.
Lista pieselor miniaturale menționate în carnetul de săpătură.

Overall, there are at least 21 clay stamps found throughout the Stoicani-Aldeni settlements, other 52 come from 22 sites in the Gumelniţa-Karanovo VI cultural area, while 61, recently catalogued (D. Buzea, A. Kovacs 2010, p. 130), originated from Cucuteni and Ariuşd cultural areas. Another recent publication quotes 14 clay stamps from the Poduri *Dealul-Ghindaru* (D. Nicola 2012). Apparently this type of finds were present during the late Early Neolithic, disappeared during the Late Neolithic (no such items were found in Boian or Precucuteni areas – D.N. Popovici 2006) and re-emerged during the Eneolithic (C. Ştefan 2009, p. 150-151).

Two figurines were available for study, both made of clay, none complete. They were manufactured in the traditional technique of putting together two vertical halves (pl. 14), later covered with another thin layer of clay to unify the surface. The first is a female figurine (lacking the head and the

arms) of 102 mm preserved height. The silhouette is rather shapely, with the breasts represented by two small circular "protuberances" (pl. 14/1, 2). The second figurine preserves only the lower right half, showing the ankle-bone as a small protuberance (pl. 14/4).

Among the small finds is also worth mentioning a bi-tronconic clay spindle whorl (with a diameter of 39 mm and a height of 21 mm, Pl. 14/8). Two other spindle whorls, made probably from broken fragments of pottery show a perforation in the middle (Pl. 14/7, 9). Also interesting is the handle of a lid – in the shape of a pointed house-roof (Pl. 14/10). Such handles appear quite frequently in the Gumelniţa area, with similar finds at Gumelnița, Căscioarele, Vidra, Măgura Jilavei, Tangâru, Vitănești, Alexandria, Pietrele, Lișcoteanca, Măriuța, Urlați (E. Comșa 1980; M. Șimon, E. Paveleț 2000, p. 186, fig. 12/2; R. Andreescu *et alii* 2007, p. 17; K. Moldoveanu 2008, p. 53).

3. Human remains

Not far from feature F3 (pl. 3/3) was noted an isolated human skull, occurring near a few (conjoining?) fragments from a large pot, with red ochre in the interior (H. Dumitrescu 1943, p. 49). When going to the original source - H. Dumitrescu fieldnotes. – one reads "…in an area located 3.20 m from the northern edge of the trench, beyond the few traces of burning in feature 3 there is an isolated human skull and nearby it a few fragments of a pot with red ochre on the inside". A few pages on, the field-log also mentions: „In line with the skull – at a depth of 1 m – advancing towards the eastern wall of the trench (thus oriented NE-SW) there are some small bones (ribs) and a fragment of a long bone (the note "animal?" was added later on by H. Dumitrescu…) with a lot of ochre. They overlap some thick pottery fragments (from a large storage vessel) with Kamm[5] ornaments, also reddened by ochre". It is thus possible that the postulated "human skull" was in fact either a badly preserved human burial or a group of disarticulated human remains. It is also unclear if the bones were nearby or overlapped the pottery fragments.

The presence of human remains in so-called non-funerary contexts is not unusual for the Gumelniţa (A. Ion 2008, p. 109-110), Aldeni (E. Comşa 1960, p. 6) and even Cucuteni areas (A. Frînculeasa 2006). The suggested interpretations for such finds point to rather specific funerary practices (A. Ion 2008, p. 123-124) and even cannibalism (C. Lazăr, A.D. Soficaru 2005). Unfortunately, only speculations are possible until the mentioned human remains would be found and analysed.

4. Faunal remains and bone/antler industry

Despite the relative abundance of animal bones mentioned in the fieldnotes, only 21 specimens were available for the present study (see footnote 2).

Two types of material were present – antler and bone. The state of preservation of the artefacts was good, making it possible to observe human and animal modifications left on their surface.

The existing animal remains came from three different trenches, but no other details regarding their archaeological contexts were available:

- **In SI** – a distal left humerus epiphysis from an adult domestic pig (*Sus domesticus*).
- **In SIII** – a red deer tine fragment.
- **In SIV** – 19 items: 12 red deer remains (11 antler fragments and a metatarsal), six bovid remains (three astragals, one proximal femur, a horn core and a rib) and one pig atlas.

Species	**SI**	**SIII**	**SIV**	**Total**
Cervus elaphus		1	12	**13**
Bos primigenius/Bos taurus			6	**6**
Sus domesticus	1		1	**2**
Total	**1**	**1**	**19**	**21**

Tab. 2. Antler and bone remains by species and context.
Resturile faunistice după context și specie.

[5] Comb ware decoration.

The majority of the artefacts suggest antler and bone crafting activities. No finished tool was identified, all preserved artefacts were in the intermediate stages of the *chaîne opératoire.* Waste products were also present.

Only three items did not seem directly connected with bone working: a pig atlas, a bovid proximal femur and a bovid horn core did not display any specific signs of human modifications for tool making. The horn core was simply broken off the skull; the proximal bovid femur and the pig vertebra were gnawed by carnivores (most likely dogs).

Raw material procurement

Two of the antler fragments preserved their coronet, indicating they were cast antlers and had not been chopped of the skull. Cast antlers were most probably gathered from the woods, not long after their shedding, as they had not been damaged by rodents, boars, deer or other animals that usually gnaw or chew antlers to extract particular minerals. The shedding time for red deer is the period between the second half of February and the first half of March. Nevertheless, red deer hunting was suggested by the presence of a metatarsal fragment, also used for bone crafting.

Hunting was also indicated, judging by the presence of three big bovid astragals. They were too large to belong to the Chalcolithic domestic cattle but they fit in the aurochs (*Bos primigenius*) dimensions range (tab. 3). Beside polished surfaces, these bovid astragals exhibit cut marks caused by disarticulation, so they may derive from the initial alimentary use of the animals. The same alimentary purpose is suggested for the other bovid and pig bones.

GLl	GLm	Dl	Dm
80.31	76.94	43.70	43.04
81.09	74.42	45.43	43.35
83.84	77.85	46.87	46.03

Tab. 3. Measurements of the three modified Bovid astragali (using A. von den Driesch, 1976).
Dimensiunile celor trei astragale de bovideu prelucrate (după A. von den Driesch, 1976).

Tool manufacturing and use

SI – The distal pig humerus shows signs of breakage with a stone hammer. The fractures differ from the usual marrow extraction breaks – small flakes were removed by knapping resulting in a sharp edge. Also, the bone has a slightly polished surface possibly caused by recurring handling, maybe as some sort of scraping tool.

SIII – Only an antler tine fragment was recovered from this context; seemingly a waste product resulted from antler working.

SIV – This is the richest assemblage, consisting of 19 bone and antler fragments from three species: red deer, bovid and pig.

Red deer *(Cervus elaphus)*

Studying the 11 antler fragments and the one metatarsal fragment, it looks like the antler working identified in this trench was directed towards the production of mattocks (*hache marteau*), hammers or mattock heads that could be used as hafts for flint or antler axes.

One such object, made from the base of a shed antler, was almost finished (pl. 15/4) lacking only the perforation. Its place was however marked by a notch made with a sharp tool. Two antler tines in the process of perforation were also present, exhibiting the same notch (pl. 15/4-6).

Another shed antler appeared to be worked for the purpose of mattock preparation (pl. 15/7). It was possible to refit three deliberately broken fragments: the beam (separated into two fragments) and the trez tine. The brow tine and the bez tine were also detached but are missing. The trez tine was also detached. The main beam was separated between the trez tine and the crown. The terminal tines were detached and missing (see fig. 1 for terminology).

Apart from these above described fragments, the rest of antler fragments appear to be waste products – tine fragments with nicking and cutting traces at the level of the separation from the beam.

A distinct artefact is a red deer left metatarsal (pl. 15/8). It was split longitudinally through grooving, and then, the medial half was modified suggesting a possible use as a barbed point.

Bovid (*Bos primigenius/Bos taurus*) – three astragali (two from the right side, one from the left side) (pl. 15/1-3), a horn core and a proximal femur. Only the astragali show human modifications. Two of them were more intensely polished on the medial facet and the third one was slightly polished on all four facets.

The bovid rib seemed to have been fractured at both extremities with a hammer on an anvil. Even though it displayed no other modifications, it may very well be a blank material prepared for future use: *e.g.* by grooving the edges two flat pieces could be obtained easily transformed into sharp, flat tools (knives, spatulas etc.) by grinding/polishing them on a coarse surface.

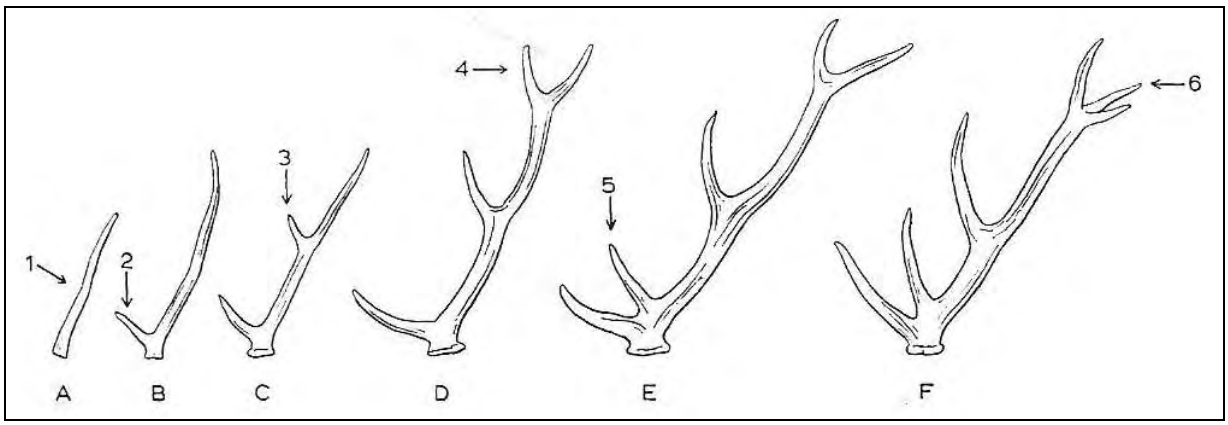

Fig. 1. Red deer (*Cervus elaphus*). Stages of development of the antler and the names of different elements. (after T. Haltenorth, W. Trense 1956, fig. 20). A. procket; B. stage of 2 points; C. stage of 6 points; D. stage of 8 points; E. stage of 10 points; F. stage of 12 points. 1=beam; 2=brow tine; 3=trez tine; 4=terminal tines; 5=bez tine; 6 crown (E. Schmid 1972).
Stadiile dezvoltării coarnelor de cerb (*Cervus elaphus*) și numele diferitelor elemente (după T. Haltenorth, W. Trense 1956, fig. 20). A. mascul tânăr; B. stadiul de 2 puncte; C. stadiul de 6 puncte; D. stadiul de 8 puncte; E. Stadiul de 10 puncte; F. stadiul de 12 puncte. 1=prăjina; 2=ramura ochiului; 3=ramura mijlocie; 4=ramuri terminale; 5=ramura de gheață; 6=coroana (E. Schmid 1972).

5. Lithics

Compared to the quantity of pottery unearthed, the stone industry is rather modest, a consequence of various combined factors: the excavation technique, a possible selection of the archaeological material during the excavation and curation issues.

The fieldnotes mention several fragments of grinding stones (and possibly an oval complete one in trench SIV) in the infill of the "dwellings", hammer stones and punchers made of grey flint cores/stones, half a grey mattock, a few fragmented blades and complete flakes of grey or yellow flint, several chisels, a few axes.

The list of the retrieved items is given in the three tables at the end of the paper (tab. 4-6) and is in many ways more substantial than what was mentioned in the fieldnotes. No grinding stones fragments were preserved in the archaeological collection.

The present paper aims to give a preliminary account of the lithic industry and thus only a macroscopic study was performed, while a forthcoming paper will offer a more detailed analysis.

The lithic industry was divided in three main categories: "Polished stone", "Chipped stone" and "Other", but a few remarks need to be made. Given the raw material used for the "polished" artefacts – mainly volcanic tuff, the term "polished" was used here for lack of a better one. In fact, the artefacts were "flattened" in order to create smooth horizontal surfaces, rather than aiming at a real polishing. The category of the chipped stone is incredibly poor and this must be a reflection of the excavation technique. The third category comprises all the items (artefacts and unworked items) that were collected by H. Dumitrescu but would not fit in any of the other two categories.

The "polished" stone (19 items in total – see tab. 4) comprises axes (6), adzes (8), chisels (3) and two artefacts that could not be typologically identified due to their fragmentation status. The predominant raw material employed was a light greenish volcanic tuff (16 items), two artefacts (an axe and a chisel) were made of dark grey chert and one axe was made of sandstone.

Id	Trench	Depth (m)	Tool type	Length (cm)	Breadth (cm)	Thickness (cm)	Weight (g)	Raw material	Modifications for re-use	Type of modification	Preservation status	Comments
3	SI	0-0,50	?	5,6	4,8	1,4	32	volcanic tuff	No		complete	
1	SI	0-0,50	?	6,5	5,4	1,5	37	volcanic tuff	No		distal part	
30	SIV	0-0,50	adze	5,7	3,1	1	28	volcanic tuff	No		complete	
35	SIV	1-1,50	adze	5,8	2,8	1,5	25	volcanic tuff	No		almost complete	
36	SIV - section	0-1	adze	7,3	1,12	1,8/3,5	38	volcanic tuff	Yes		complete	Active edge resharpened on dorsal side
29	SIII	0,50-1	adze	8,4	1,18	2,87/3,34	52	volcanic tuff	No		complete	marks on ventral side
9	SII	0-0,5	adze	9	4,4	1,9	84	volcanic tuff	No		complete	unfinished ? - not polished
7	SII	0-0,5	adze	9,05	3,9	1,4	33	volcanic tuff	No		almost complete	
17	passim		adze	13,5	2,2	2,4	114	volcanic tuff	No		complete	
8	SII	0-0,5	adze	102	33	32	75	volcanic tuff	No		almost complete, broken at proximal ends	
16	SII	0,50-0,80	axe	6,3	4,5	1,6	44	volcanic tuff	No		distal half	
2	SI	0-0,50	axe	8,1	3,4	1,9	51	volcanic tuff	No		fragment	
5	SIV	0-0,5	axe	11,2	4,15	1,4	93	volcanic tuff	No		almost complete	
4	SI	0-0,5	axe	11,6	2,74	4/6,72	250	sandstone	Yes	two resharpened edges	complete	
15	passim		axe	13	6	3,4	73	chert	No		fragment	
6	passim		axe?	11	4	2,4	83	volcanic tuff	Yes	three sides resharpened, butt modified	complete	
38	passim		chisel	4,3	1,9	0,8	9	chert	No		almost complete - part of butt missing, fresh break	
27	SIII	0-0,50	chisel	6,05	3	1	25	volcanic tuff	No		complete	
37	SIV	0-0,50m	chisel	7,9	4,3	1,5	52	volcanic tuff	Yes	resharpened on ventral right side	complete	

Tab.4. Polished stone artifacts.
Artefacte de piatră şlefuită.

Id	Trench	Depth (m)	Tool type	Support	Fragment part	Cortex	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Raw material	Colour	Re-use modification	Modification type
34	passim		sidescraper/ endscraper	blade	proximal end	No	9,84	7,62	2,33	4	flint	dark gray	Yes	abrupt side retouches, later proximal end semi-abruptly retouched and turned into an endscraper
19	SI	1,00-1,20	sidescraper	blade	distal end	No	15,25	6,81	2,6	7	flint	brown	Yes	left side completely retouched-abrupt,invasive, used; right side retouched only on the distal half, not used
24	SII	0,50-0,80	blade	blade	proximal end	No	15,98	3,81	1,33	3	flint	spotted gray	No	use wear retouches on right side
25	SII	0,50-0,80	sidescraper	blade	proximal end	No	13,65	7,19	2,1	5	flint	light gray	Yes	retouched on all sides
26	SII	0,50-0,80	sidescraper	blade	complete	No	11,68	6,26	2,12	3	flint	spotted gray	Yes	retouched on lateral sides
18	SIV	0,85-1,00	sidescraper	blade	proximal end	No	20,88	6,98	2,41	9	flint	spotted gray	Yes	lateral abrupt retouches
28	SV	0,50-0,80	sidescraper	blade	proximal end/broken blade	No	14,27	6,42	1,38	3	flint	light gray	Yes	fine retouches on sides
33	passim		thin blade core	core	median	Yes	17,81	8,99	6,96	19	flint	gray	No	
12	passim		core fragment ?	core	complete	No	10,5	8,6	4,2	389	chert	dark gray	No	
32	passim			flake	complete	Yes	18,05	3,82	4,36	6	flint	gray	No	
20	SI	0-0,50		flake	complete	No	10,13	8,42	4,24	8	flint	gray-beige		
22	SI	0,50-1,00		flake	complete	Yes	18,11	12,65	3,99	10	gritstone	gray	No	
15	SI	0,50-1,00	flake	flake	complete	No	6,1	5,1	2,3	74	chert	gray	No	
10	SII	0-0,50	sidescraper	flake	complete	No	15,16	7,18	15,19	7	flint	beige	Yes	retouched on all sides, traces of shine on the left dorsal retouched area
11	SII	0-0,50		flake	complete	No	22,15	13,15	6,14	46	flint	black	No	

Tab. 5. Chipped stone artifacts.
Industria litică cioplită.

Id	Trench	Depth (m)	Tool type	Length (cm)	Width (cm)	Thickness (cm)	Weight (g)	Raw material	Re-use modification	Comments
14	SI	0,50-1,00	puncher	7	7		468	chert	No	complete
21	SI	0,50-1,20	puncher/ core	8,5	8,2	5	238	chert	Yes	used as core for intended blade debitage
23	SI	0,50-1,00	mattock	6,5/2,2		4,2	136	gritstone	No	one half only
31	SIV	0-0,50	spatula	6	1,68	0,62	7	shale	No	distal end
39	passim		polisher	8,2	7,4	2,5	286	gritstone	No	complete
40	SII	0,80-1,30	?	14,3	7,5	1,8	198	shale	No	unmodified

Tab. 6. Other stone artifacts.
Alte tipuri de descoperiri din piatră.

The raw material did not come from a very long distance (a possible source - Slănic Prahova is less than 100 km away), as in other sites that are chronologically contemporaneous. The artefacts are generally well preserved and complete, or almost complete. Context wise they appear to have been evenly scattered over the excavated area, with many clustering in the area of the identified features – but no attribution can be securely made.

The axes (pl. 16/1)[6] are mostly medium sized (their lengths range from 6.3 to 13 cm) and two of them show traces of resharpening at the lateral edges, suggesting a possible change in their function. The adzes (pl.16/2) fit more or less in the same size range (with lengths varying from 5.7 to 13.5 cm). Only one adze was resharpened, while another one was abandoned before "polishing". The chisels (pl. 16/3) are much smaller (4.3 to 7.9 cm in length) and one of them was also resharpened on the lateral side, suggesting a change in function. The choice of the raw material is rather difficult to interpret, since volcanic tuff is not a very hard raw material.

The chipped stone (tab. 5) is represented by 15 items: 7 blades and blade fragments, 6 flakes, one core and one core fragment. The used raw material is predominantly flint, of at least four varieties: dark grey, spotted light grey, brown and beige. Given the small number of implements and the selection of the material, no refits were possible. Very few complete pieces were found. Cortex was present in only three cases – one blade core and two flakes, suggesting that some debitage was taking place on the site. All blades and one flake were resharpened, at times with a change in the typology of the implement. Most of the items had been retouched, suggesting again a selection was operated when collecting the artefacts during the excavation. One flake might have been possibly used in a composite tool, given the polish noticed on the active part.

The category "Other" (tab. 6) is represented by six items: two punchers, half of a mattock, a polisher and two stones that show no traces of human modifications. One of the punchers is a chert blade core, abandoned probably due to the poor quality of chert. The polisher might have been used for pottery, since it is made of a rather soft gritstone.

Given the small number of implements and the lack of secure data regarding their stratigraphic positions it is difficult to draw final conclusions on the use of stone tools by the Stoicani-Aldeni communities at Bălănești.

◈ Discussion and final remarks

The Stoicani-Aldeni settlements were located on high terraces or hillsides, thus dominating the area. The thickness of the deposits does not go beyond 3 m (Coţatcu, Boboci, Seciu, Mălăiești de Jos or Aldeni, Bălăneşti) but most sites have well represented habitation layers, with stratigraphies similar to those of the tells, even though at a different scale. The resulted finds are substantial in number, including pottery, flint and stone implements, human and zoomorphic figurines and not very often, copper items. The walls of the dwellings were solid and allegedly made of wood and clay, with floors of battered soil or at times wooden platforms.

Although this cultural area may be defined as a "periphery", the local Eneolithic communities had access and employed many of the materials seen as "typical" for the Gumelniţa culture. The particularity of the area is given by the contacts with the cultural area north-east of it, as showed by the archaeological finds with analogies in Precucuteni, Cucuteni and Ariuşd cultures. Bălănești settlement yielded a few (possibly) Precucuteni pottery fragments and a few more Cucuteni, and the anthropomorphic figurines are also more similar to the east-Carpathian area examples.

Over the years, the problem of the Precucuteni-Cucuteni/Boian-Gumelniţa relations was given due attention (P. Roman 1963; Vl. Dumitrescu 1964; 1968; S. Marinescu-Bîlcu 1976; 1978; C.M. Mantu 1995; 1998; 1999-2000; C. Bem 2000; 2001; S. Pandrea, M. Vernescu 2005; A. Frînculeasa 2007; 2010; C.E. Ștefan 2011a). Not so much is known about the Stoicani-Aldeni – Precucuteni connections, a fact explained mainly by the small percentage of the Stoicani-Aldeni pottery fragments in the context of a huge mass of decorated Precucuteni, and mainly Cucuteni ceramics. But examples do exist: at Târgu Frumos (Precucuteni III phase) pots decorated with graphite (of Gumelniţa influence) were mentioned but "together with other influences… originating in the Stoicani-Aldeni cultural area" (C.M. Mantu 1998, p. 116). The clay altar from Târgu-Frumos displays geometric patterns with analogies in the rhomb-shaped clay items discovered in the Stoicani-Aldeni area (N.

[6] The Id number next to artefact indicates the identification number in the respective table.

Ursulescu *et alii* 2005, fig. 5/2-3). Another similar example is the Poduri site (A. Frînculeasa 2010, p. 180). At Tangâru, in the Gumelniţa A1 settlement, Precucuteni pottery (D. Berciu 1961, p. 66, 413-414) appears together with Stoicani-Aldeni fragments (A. Niţu 1973, p. 79), a situation also occurring in the Gumelniţa A1 site from Măgurele (A. Niţu 1973). In a similar way, at the Gumelniţa A2 settlement from Cuneşti the Stoicani-Aldeni materials (N. Anghelescu 1955, p. 311) appear together with the Precucuteni (C. Bem 2001, p. 44). At Stoicani, in the lower habitation levels Precucuteni pottery was found (S. Pandrea, M. Vernescu 2005, p. 269), while the upper level yielded tri-coloured Cucuteni pottery (M. Petrescu-Dîmboviţa 1953, p. 184). At Ghinoaica (Prahova County) the Stoicani-Aldeni pottery appeared associated with Precucuteni III fragments (A. Frînculeasa, D. Garvăn 2011).

Precucuteni II imports were discovered in the Gumelniţa A1 sites from Tangâru (S. Marinescu-Bîlcu 1974, p. 135) and Însurăţei (S. Pandrea, M. Vernescu 2005, p. 265), indicating the earliest Gumelniţa-Precucuteni contacts. A Precucuteni II pot fragment was also found in the Gumelniţa site from Jilavele (D. Garvăn 2013, p. 44). Also speaking about the Stoicani-Aldeni/Precucuteni links we should mention the clay sanctuary models discovered at Aldeni (Gh. Ştefan 1941) and Poduri (Precucuteni III level - D. Monah *et alii* 2003, p. 114, nr. 76, 153-154). Also of Precucuteni affiliation are certain vessel shapes, figurines etc., associated with Cucuteni painted pottery sherds at Stoicani, Aldeni, Suceveni, Dodeşti and Coţatcu.

One should note the appearance of Stoicani-Aldeni materials in Gumelniţa sites. The best example is that of Măriuţa site in the Gumelniţa A2 final-B1 phases (M. Şimon 1986, p. 28; 1995, p. 33) but also on the Gumelniţa A1 levels at Glina (M. Petrescu-Dîmboviţa 1945, p. 211), Măgurele (P. Roman 1963, p. 41 and on), Tangâru (A. Niţu 1973, p. 79), Gumelniţa A2 la Cuneşti (N. Anghelescu 1955, p. 311), Însurăţei (S. Pandrea *et alii* 1997, p. 33), Urlaţi (A. Frînculeasa *et alii* 2008, pl. 2), Ploieşti (A. Frînculeasa 2010, p. 127/3-5), Moara din Groapă (A. Frînculeasa 2010, pl. 127/6-8) or B1 at Vităneşti (A. Frînculeasa 2010, pl. 127/1-2). Recently Cucuteni A3 pot sherds were also noted (C. Bem 1998-2000, p. 344; 2001, p. 45) in the same habitation levels that yielded fragments from a Stoicani-Aldeni vessel. Stoicani-Aldeni pottery also occurred in the Gumelniţa sites from Căscioarele and Gumelniţa (I.T. Dragomir 1983, p. 15).

In what concerns the presence of Cucuteni pottery in Stoicani-Aldeni settlements, it was found at Aldeni (L. Grigoraş, E. Paveleţ 2013, fig. 23/2-5), Coţatcu (L. Grigoraş, E. Paveleţ 2007, pl. 8/1, 9; pl. 10/2; R. Andreescu *et alii* 2009). A Cucuteni pedestalled cup was found at Băneasa (Galaţi County) (I.T. Dragomir 1969), while Cucuteni A2 pottery painted (after firing) white on a red background was found in the Stoicani-Aldeni at Dodeşti, Suceveni, Smulţi, Tămăşani (I.T. Dragomir 1983, p. 11).

Coming to the Precucuteni III/Cucuteni A3 – Gumelniţa A1-A2 connections we must mention the finds from Lişcoteanca *Moş Filon*. Thus, in the Gumelniţa A1 level was noted a Precucuteni III sherd (N. Harţuche, O. Bounegru 1997, p. 98, fig. 61/1), while in the A2 level tri-coloured pottery was found, assigned to the Cucuteni A3 horizon (N. Harţuche, O. Bounegru 1997, fig. 59/4).

Also, at Însurăţei in the Gumelniţa A1 level were found Precucuteni II-III sherds (S. Pandrea, M. Vernescu 2005), and in the Gumelniţa A2, Stoicani-Aldeni pottery appeared (S. Pandrea *et alii* 1997, p. 33). The Gumelniţa site from Brăiliţa also yielded Cucuteni A3 pottery (N. Harţuche, F. Anastasiu 1968, pl. 37-38; V. Voinea 2005, pl. 100).

In what the chronology of the three cultural areas (Petreşti, Cucuteni, Gumelniţa) is concerned, the time frame for the settlements in the northern Muntenia seems to indicate a chronological horizon anterior to Cucuteni A2 (suggested by the Ariuşd-type finds from Ariuşd, Păuleni-Ciuc, Bod, Ciucsângeorgiu, Leţ) while the upper limit stops at Cucuteni A3, thus indicating a contemporaneity with Precucuteni III - Ariuşd - Cucuteni A2 - Gumelniţa A1 - A2. Also within the Gumelniţa A1-A2 horizon would partly fit the evolution of the sites at Mălăieştii de Jos, Coţatcu, Seciu și Bălănești, as indicated by a ^{14}C date from Seciu (A. Frînculeasa 2012, p. 140, fig. 1, 2).

Within the general framework of the above mentioned cultural relations an important part occupies the genesis and evolution of the Stoicani-Aldeni cultural aspect. It was suggested that Stoicani-Aldeni aspect originated in the Precucuteni and Gumelniţa cultures, fitting between Precucuteni III phase and the initial Bonţeşti sequence of Cucuteni A2 (A. Niţu 1971, p. 89; 1973, p. 77), being contemporaneous with the proto-Precucuteni developing in the central and northern parts of Moldavia (A. Niţu 1973). It was underlined the importance of the Stoicani-Aldeni pottery for the origins of the painted Cucuteni ware (A. Niţu 1971, p. 87; 1973, p. 75-89). It was suggested that the white thin-band painted pottery seen by Vl. Dumitrescu of Gumelniţa origin (Vl. Dumitrescu 1963) would actually belong to the Stoicani-Aldeni *facies* (A. Niţu 1973, p. 81-82). The same author indicated a more important expansion of the Gumelniţa communities towards the centre of Moldavia, to the detriment of the Precucuteni ones, and a more pronounced cultural influence of the Gumelniţa

over the Precucuteni (Vl. Dumitrescu 1964, p. 54; S. Pandrea, M. Vernescu 2005, p. 277). During the second phase of the Stoican-Aldeni cultural aspect, the respective communities advanced in the southern Moldavia at least "up to the Călmăţui river" (E. Comşa 1963, p. 23-24).

No discussion took place so far on the relevance of the Cucuteni A2, A3 imports found at the sites of Aldeni or Coţatcu. In what the sites from Lişcoteanca, Brăiliţa, Însurăţei were concerned, such finds were explained through the inclusion of the sites within the classical Gumelniţa area (S. Pandrea *et alii* 1997). Keeping this debatable opinion in mind, we would suggest a further reduction of the Stoicani-Aldeni area towards the west, and postulate the existence of a "communication channel" going along the foothills of the Sub Carpathians, while the settlements closer to the mouth of the Danube would still be anchored to the classical Gumelniţa area. In many sites on Călmăţui valley Stoicani-Aldeni elements do exist, including the sites of Brăiliţa, Lişcoteanca sau Însurăţei. Such elements are perhaps more visible towards the west-northwest, including the settlements from Sudiţi, Gherăseni, Moisica, Luciu, Largu, Udați (A. Frînculeasa 2008, 2010, 2010a).

The more recent excavations at Seciu, Urlaţi, Coțatcu and also Mălăieştii de Jos offered useful materials for comparative studies. At Urlaţi, a site situated at the foothills of the Subcarpathians the pottery is more Gumelniţa in manner, with fewer Stoicani-Aldeni elements. It is to be noted that this site is closer to the Stoican-Aldeni area than Seciu and Mălăieştii de Jos, located further to the west.
When analysing the pottery we note the presence of Gumelniţa ware, as well as some Precucuteni and Early Cucuteni pots. If the Cucuteni imports are a certitude, the Precucuteni presence on the Stoicani Aldeni sites can only be inferred, although it is also certain on the Gumelniţa sites, and they were considered as imports at Vidra (D.V. Rosetti 1934, p. 17-18, fig. 25) or Măgurele (P. Roman 1962; 1963). The presence of cylindrical stands at Bălănești and other sites on northern Muntenia can be correlated with other finds defining the link between the Ariușd and the Cucuteni-Gumelniţa cultures: clay stamps (found predominantly in the Ariuşd or Cucuteni A2 sites and more seldom in the Cucuteni A3 or beyond this stage (A. Frînculeasa 2012, p. 139), bone anthropomorphic figurines (D. Monah 1997, p. 136 and further pages., pl. 258, 259), Cucuteni vessels in Gumelniţa B1 sites (C. Bem 2001), or even clay anthropomorphic figurines (Frînculeasa *et alii* 2012). The latter seem to indicate the moment of maximum intensity of contacts between the two civilizations.

As noticed for the sites at Mălăieştii de Jos, Seciu, Coţatcu and also Bălănești, the pottery shapes are similar to those from Cucuteni and Ariuşd cultures but the modelling and technology appear to be local. The shapes at least were imitated, and at times, decoration also. This might be connected to certain *taboos* and cultural traditions, dictated by certain conservative practices. The elements connected to the pottery technology (paste, firing, quality and decoration) are indicatives of local production.

If considering the settlements as units defining certain social groups, one sees that the Stoicani-Aldeni sites in northern Muntenia have more in common with the Gumelniţa ones. The settlements are small, with only a few dwellings in an area constrained by natural elements. The stratigraphies are mostly simple ones, but tells with substantial cultural layers were also found. All these suggest a human behaviour close to the Gumelniţa one, when the same living area was re-used in successive phases, generating thick stratigraphic sequences, although at a different scale from the ones on the Danube. A distinct element is the location of the sites on the edge of higher terraces or near the hills, different from the Gumelniţa sites found usually on river meadows or at the base of terraces. This trait is more similar to that of the Cucuteni communities.

Studying the main characteristics of such communities tends to indicate the conservation of certain southern elements – mainly concerning the structure and the habitat, while the east and north Carpathian area is represented at a more symbolical level. All the cultural elements discussed above point towards the existence of dynamic communities, with contacts in Transylvania, southern Moldavia and the Danube.

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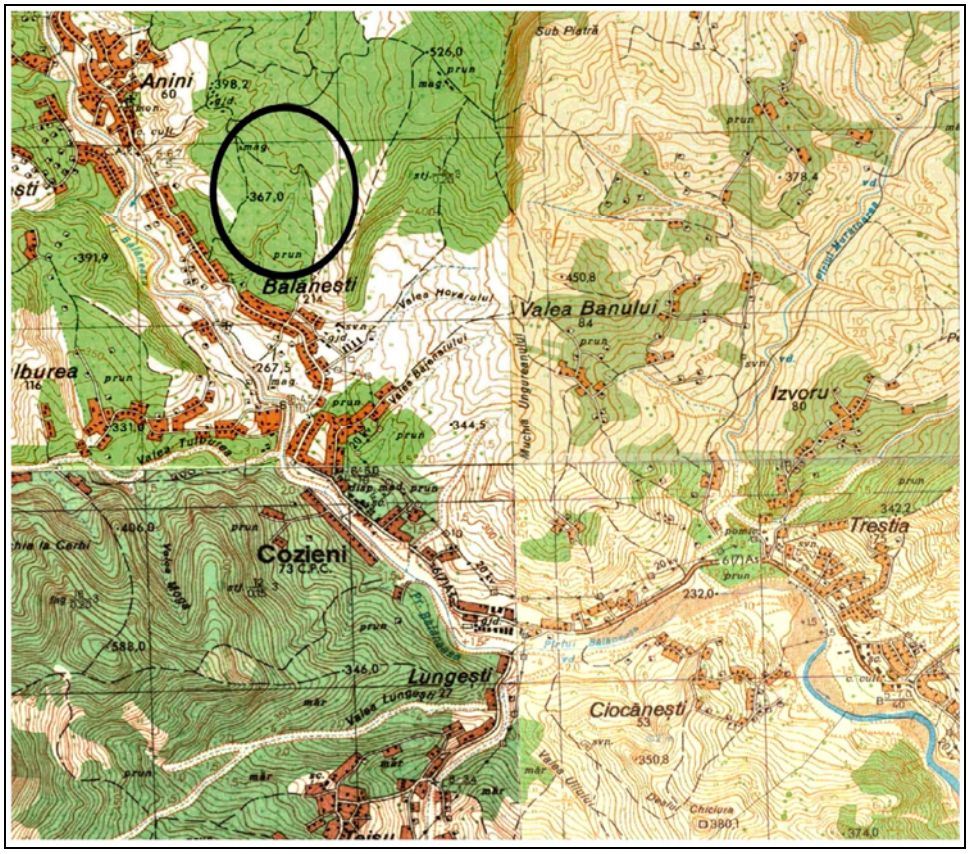
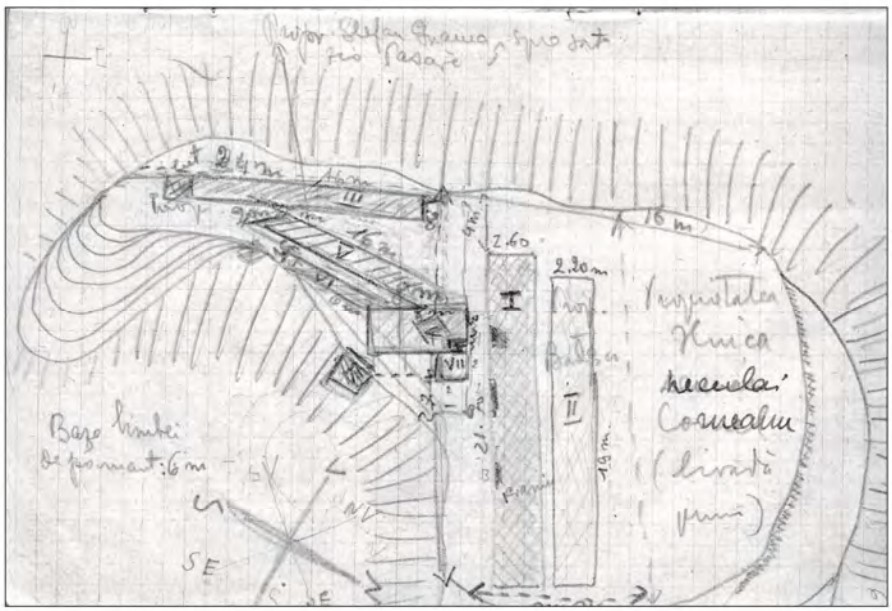


Pl. 1. Location of the Eneolithic site of Bălănești (up) and a few other Stoicani-Aldeni sites in the Sub-Carpathian area of Muntenia (down).
Poziționarea sitului eneolitic de la Bălănești (sus) și a altor situri Stoicani-Aldeni din arealul subcarpaților Munteniei (jos).

1



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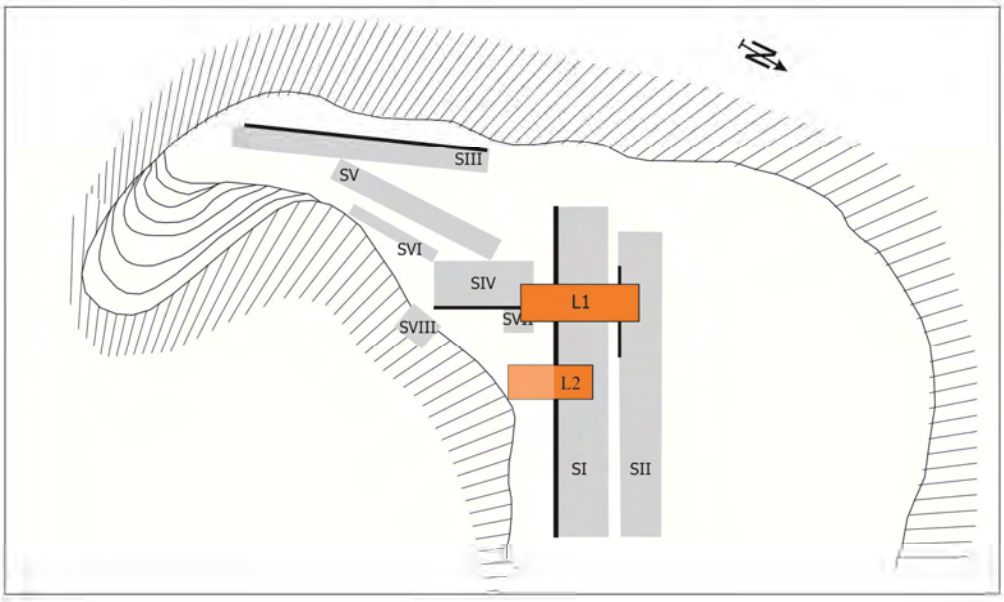
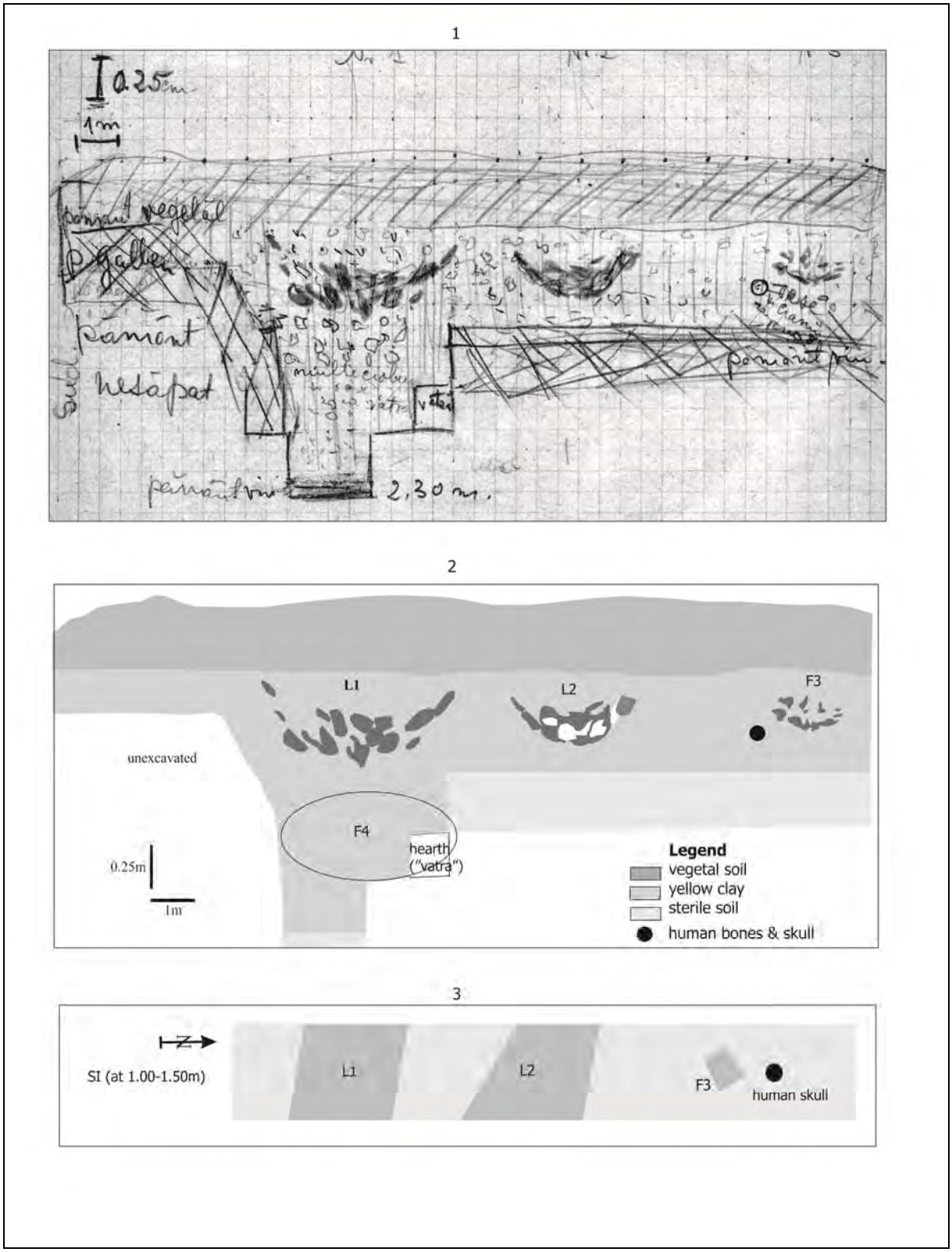
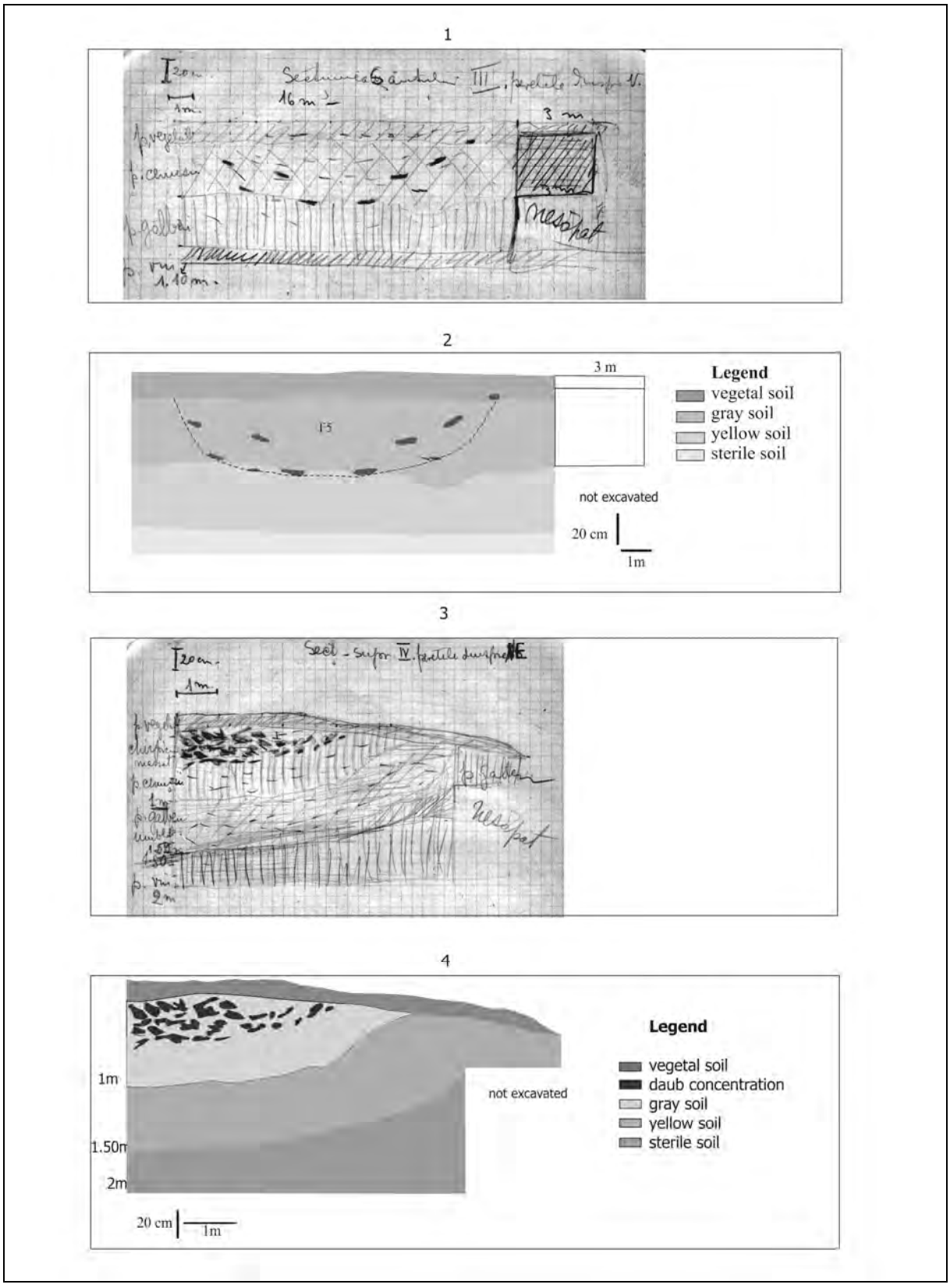


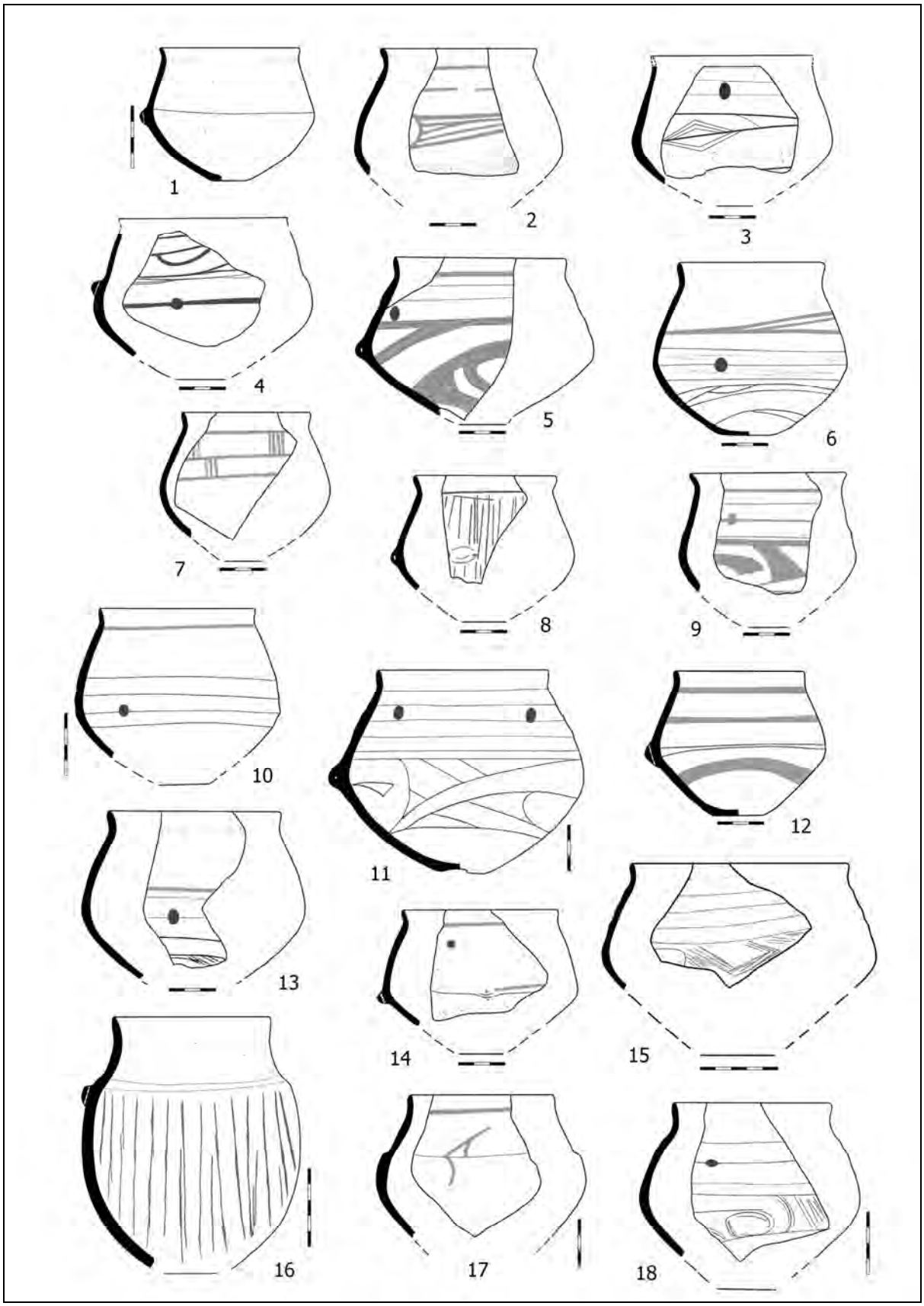
Pl. 2. Bălănești – general plan of the trenches. 1. Sketch from the fieldnotes of Hortensia Dumitrescu; 2. approximate location of the trenches (redrawn) and of "dwellings" L1 and L2 (using the information in the fieldnotes). 1-2 – not at scale. The thick lines along the trenches represent the existing section-plans.
Bălănești, planul general al secțiunilor. 1. schiță din notele de săpătură ale Hortensiei Dumitrescu; 2. localizarea aproximativă a locuințelor L1 și L2 în secțiunile redesenate, folosind informații din notele de săpătură. 1-2 – fără scară; liniile îngroșate reprezintă secțiunile desenate.



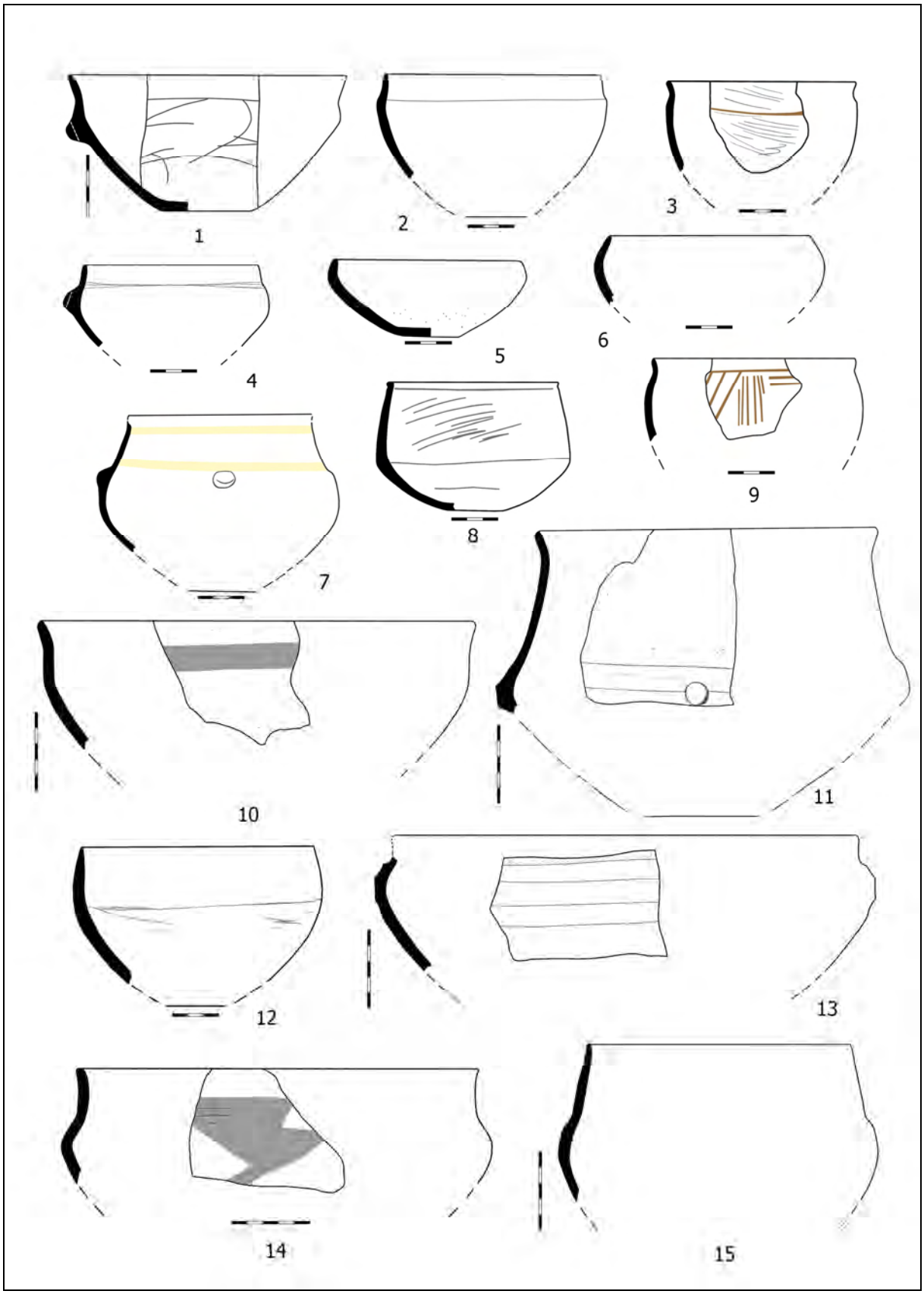
Pl. 3. Trench SI – Western profile (1. Sketch from the fieldnotes of Hortensia Dumitrescu; 2. Profile (redrawn) and ground plan of features L1, L2 and F3 at ca. 1.00-1.50 m (after the sketch in the fieldnotes of Hortensia Dumitrescu, 1-3 not at scale).
Profilul de vest al lui SI (1. Schiță din notele de săpătură ale Hortensiei Dumitrescu); 2. Profilul redesenat și planul complexelor L1, L2, F3 la cca. 1-1,5 m (după schița din notele de săpătură ale Hortensiei Dumitrescu, 1-3 fără scară).



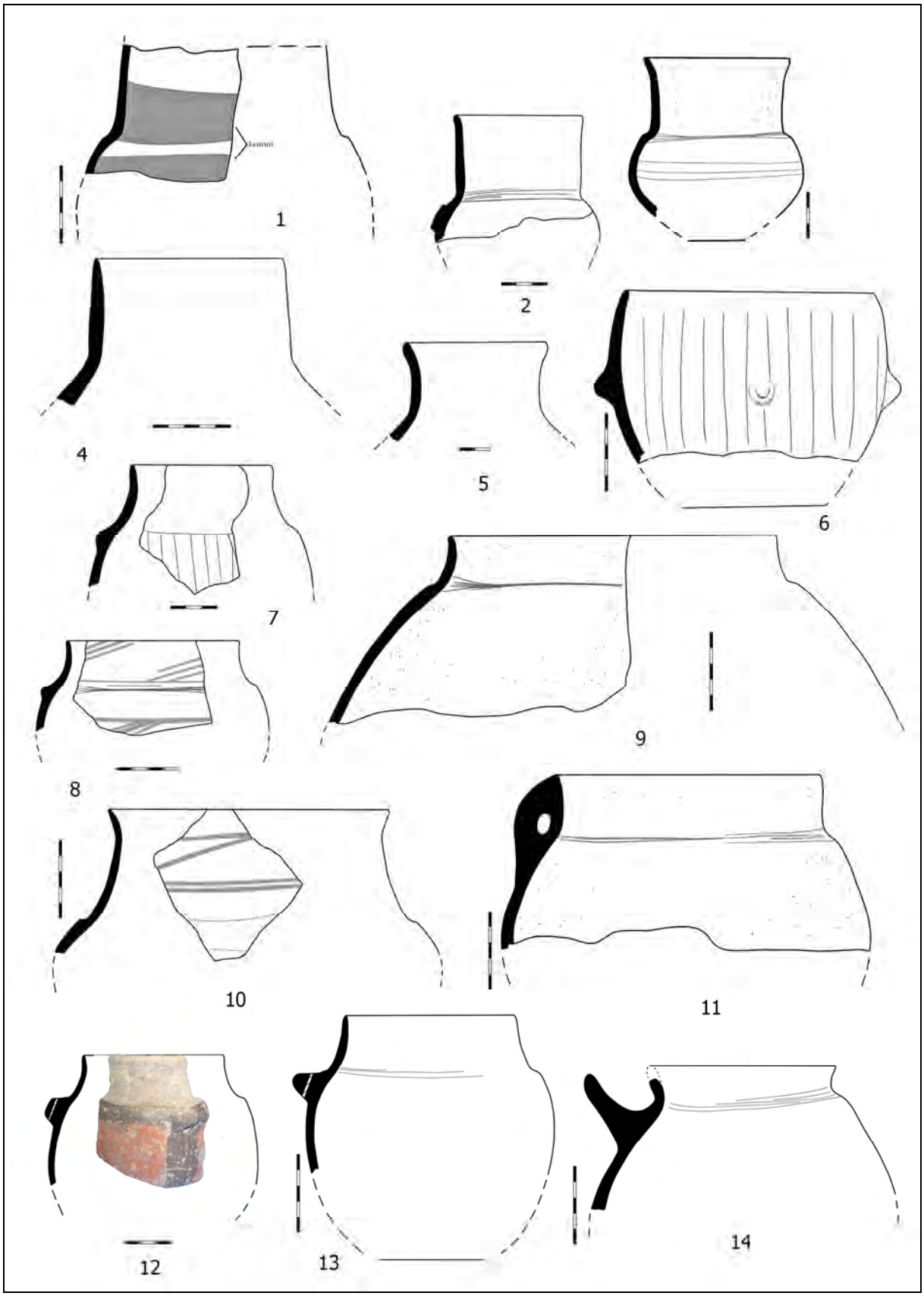
Pl. 4. 1. Western profile of trench SIII – sketch from the fieldnotes of Hortensia Dumitrescu; 2. The same profile redrawn and adapted, 3. North-eastern profile of trench SIV – sketch from the fieldnotes of Hortensia Dumitrescu; 4. The same profile redrawn and adapted.
1. Profilul de vest al lui SIII – după o schiță din notele de săpătură ale H. Dumitrescu; 2. Același profil redesenat și adaptat; 3. Profilul de nord-est al lui SIV – schiță din notele de săpătură ale Hortensiei Dumitrescu; 4. Același profil redesenat.



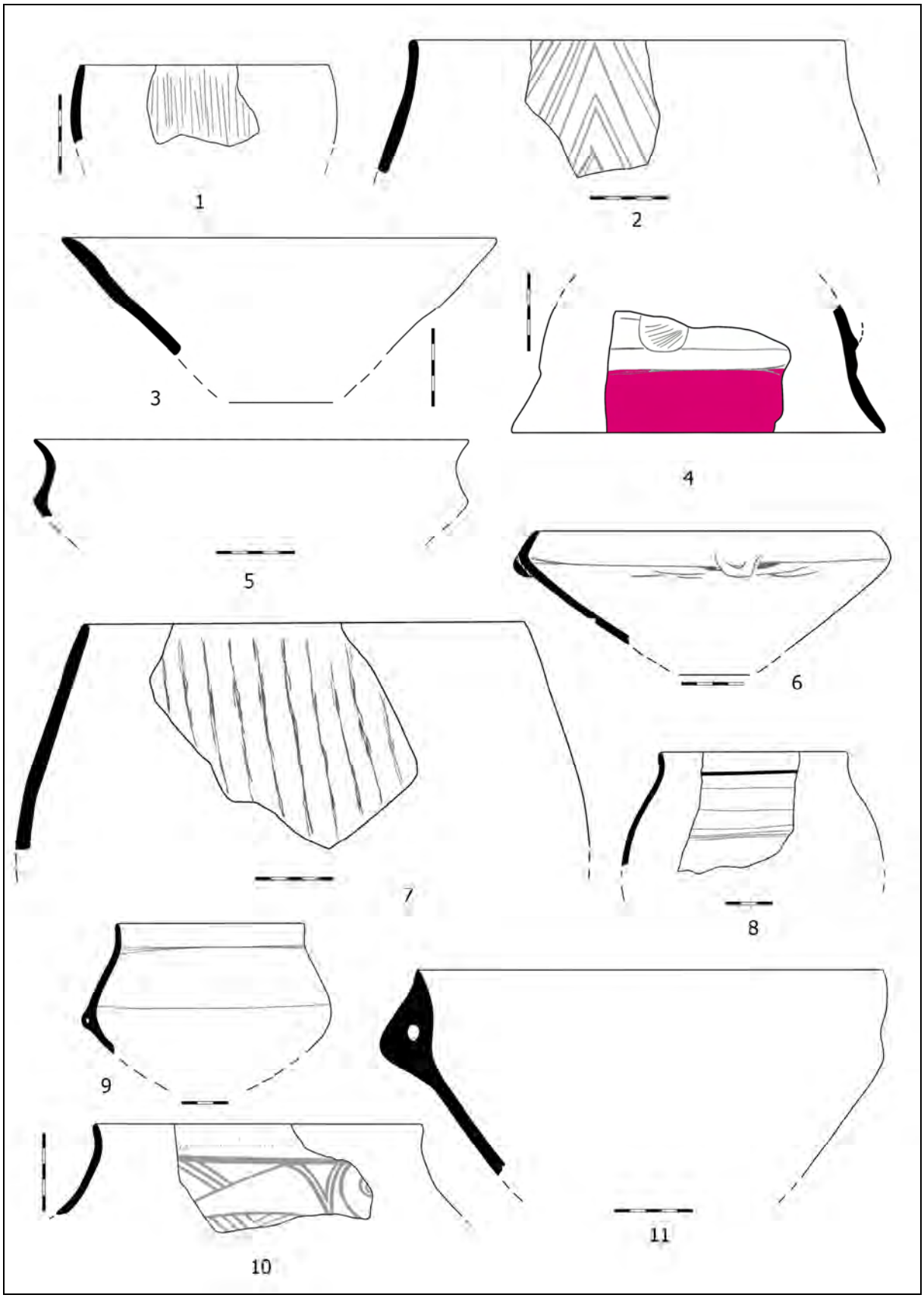
Pl. 5. Cups, goblets and small bi-tronconical dishes with incisions or painting decoration or undecorated (1-15, 17-18); cup decorated with vertical incisions (16).
Pahare, cupe și castronașe bitronconice decorate prin pictare și incizare sau nedecorate (1-15, 17-18), pahar decorat cu incizii verticale (16).



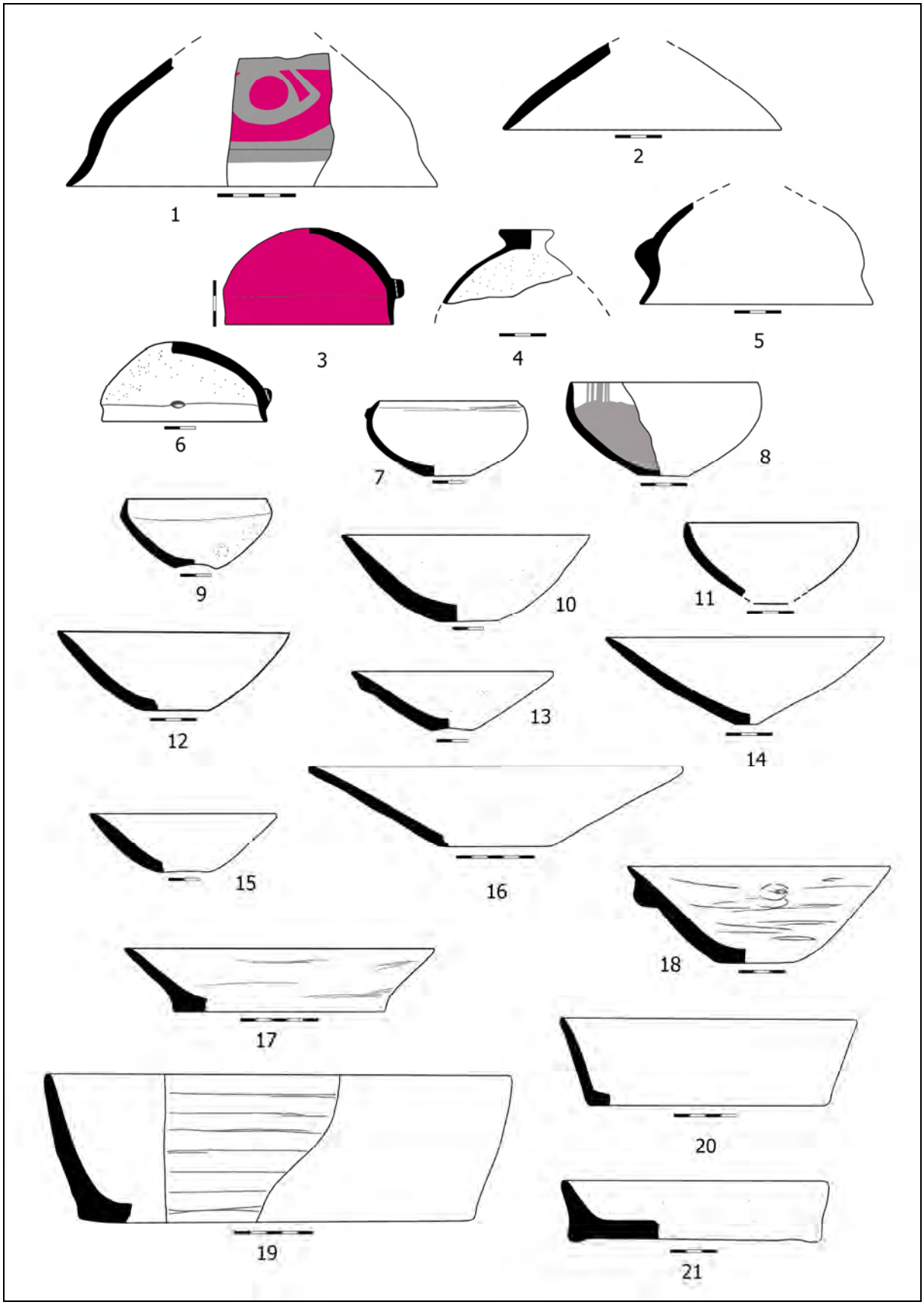
Pl. 6. Decorated dishes and bitronconical storage vesssels (1-15): painting (3, 7, 9, 10, 14), incision (1), fluting (11, 13).
Castroane și vase de provizii bitronconice (1-15) decorate prin pictare (3, 7, 9, 10, 14), incizie (1), canelare (11, 13).



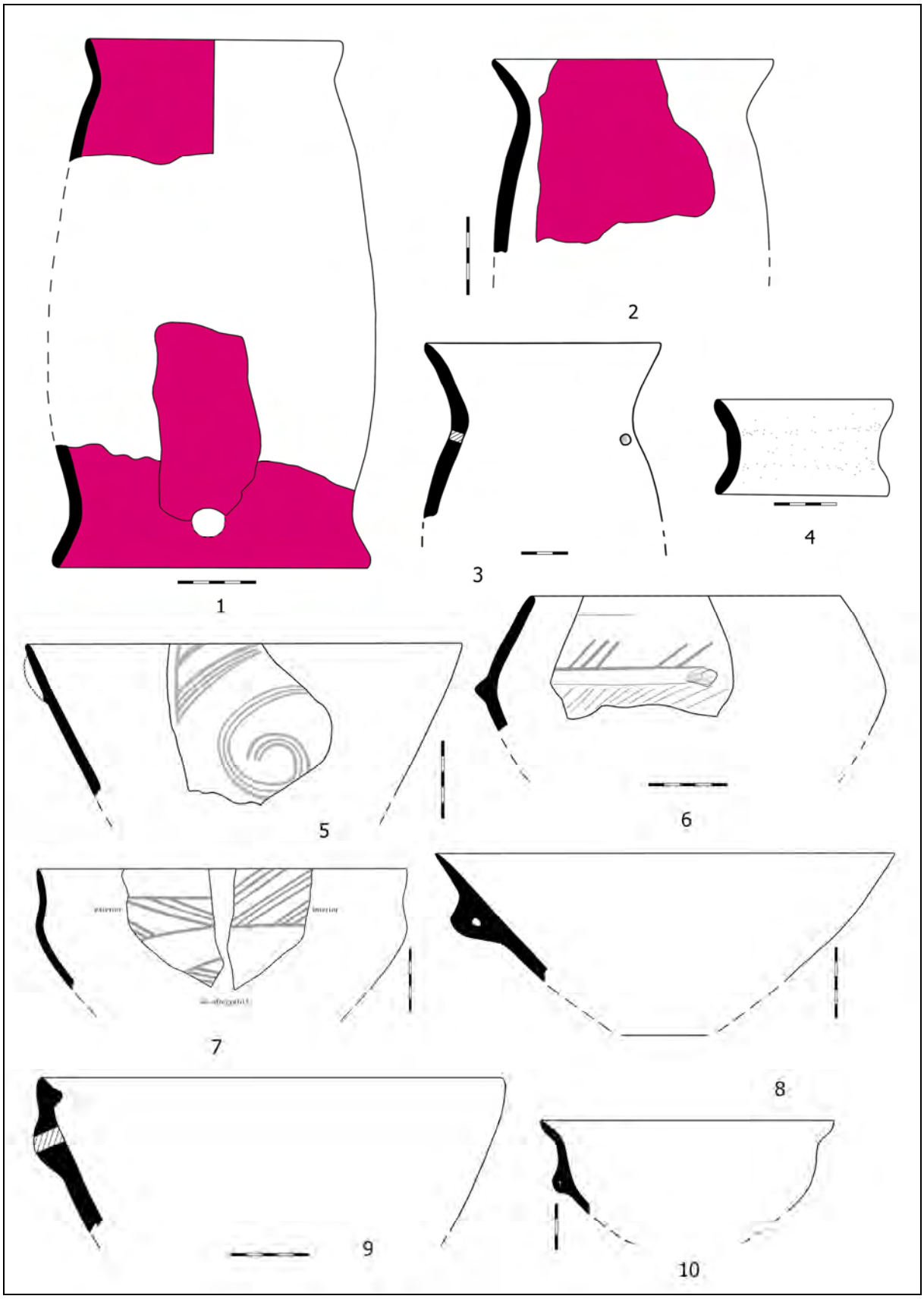
Pl. 7. Pottery: amphora-shaped vessels (1-5), jars (7-8, 11-14), storage vessels (9-10, 10 with white painting), incised dish (6), jar painted with red and chocolate-brown colour (12).
Ceramică: vase amforoidale (1-5), vase borcan (7-8, 11-14), vase de provizii (9-10) pictat cu alb (10), castron incizat (6); vas borcan pictat cu roșu și brun-ciocolatiu (12).



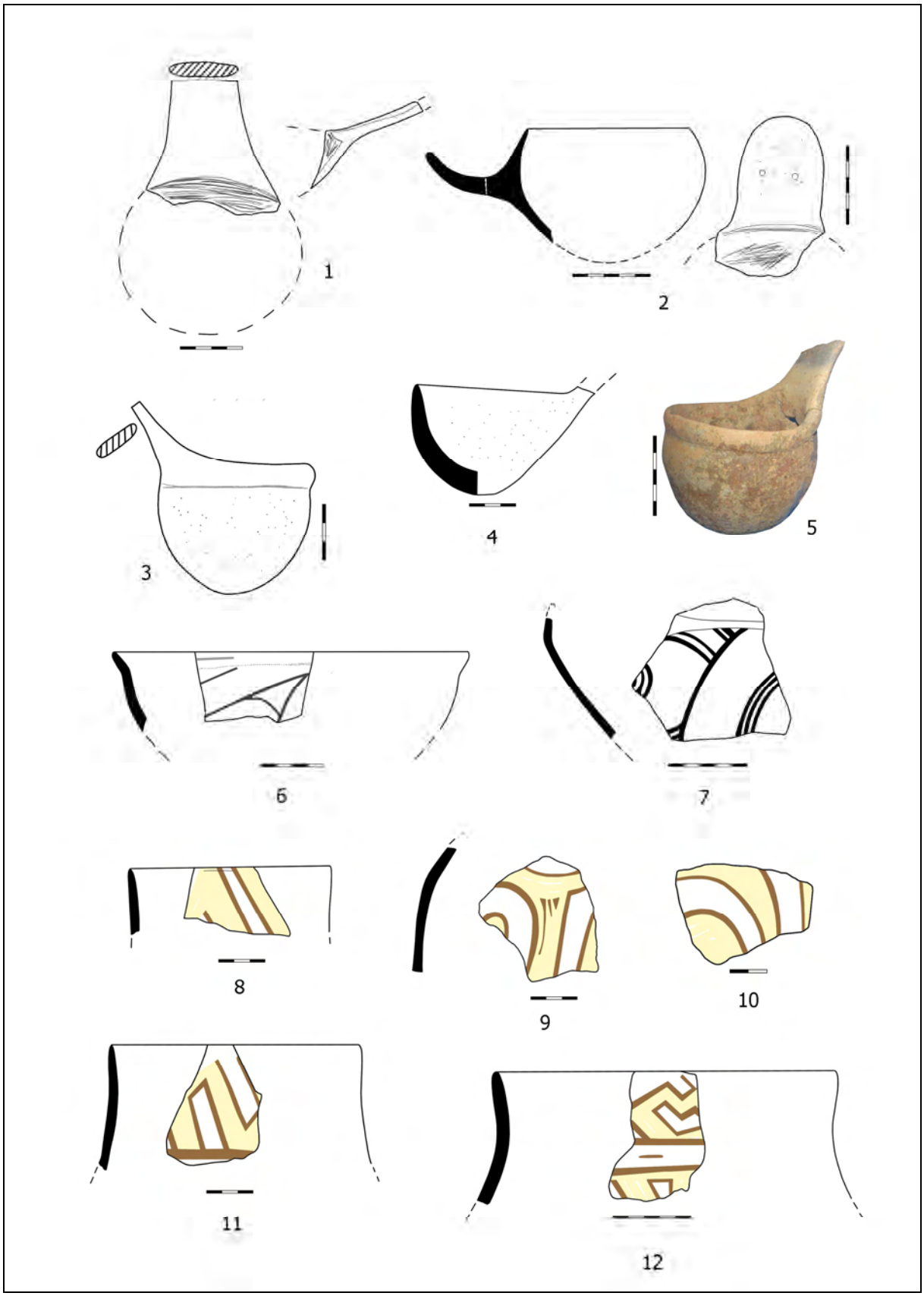
Pl. 8. Tronconical and bi-tronconical dishes (1, 3, 5-6), storage vessels (7, 10-11), lid painted in bright red (4), jar (8).
Castroane tronconice și bitronconice (1, 3, 5-6), vase de provizii (7, 10-11), capac pictat cu roșu crud (4), vas borcan (8).



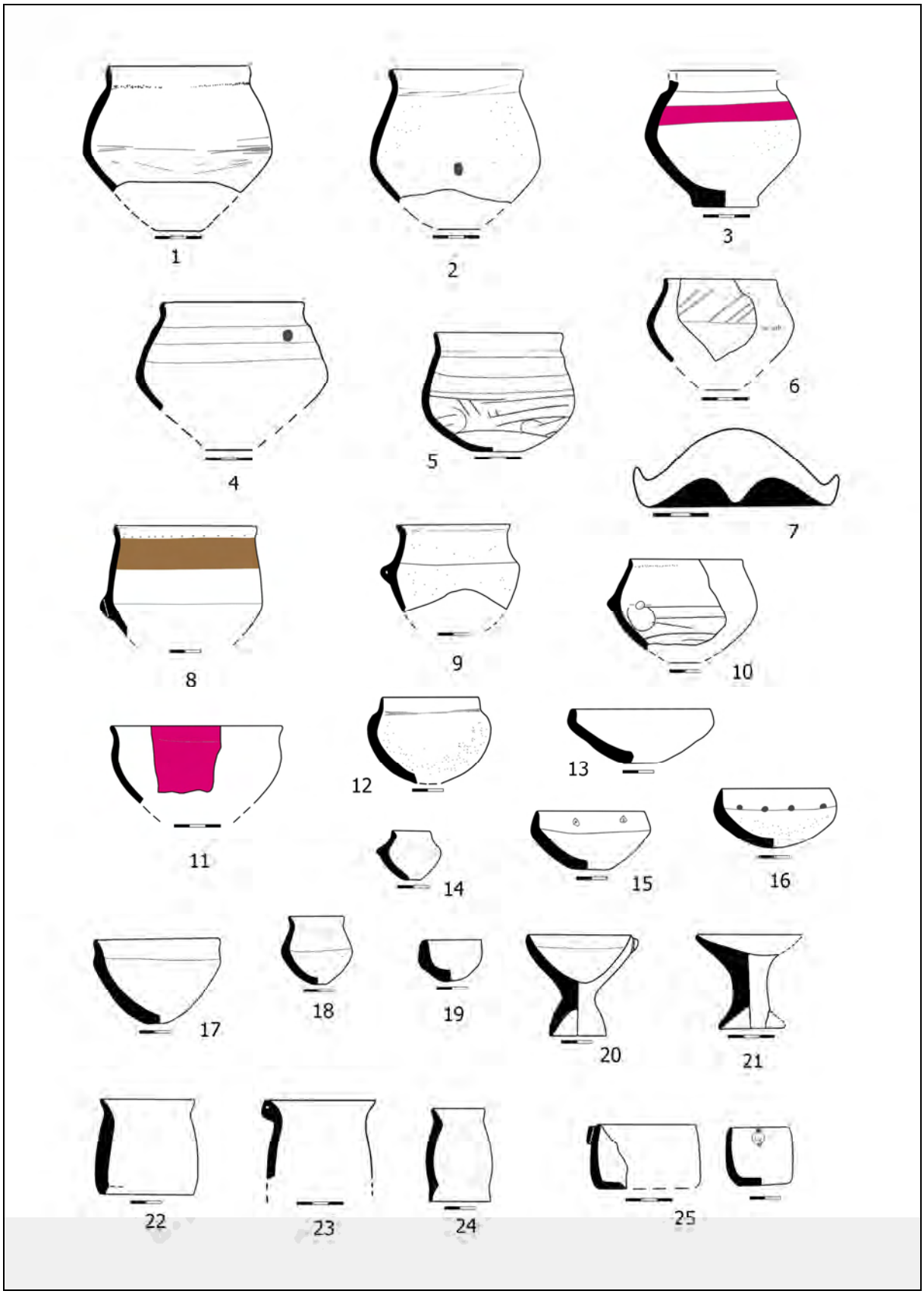
Pl. 9. Lids (1-6), bowls (7-12) and tronconical pots/pans (13-21).
Capace (1-6), boluri (7-12) și vase tronconice/tigăi (13-21).



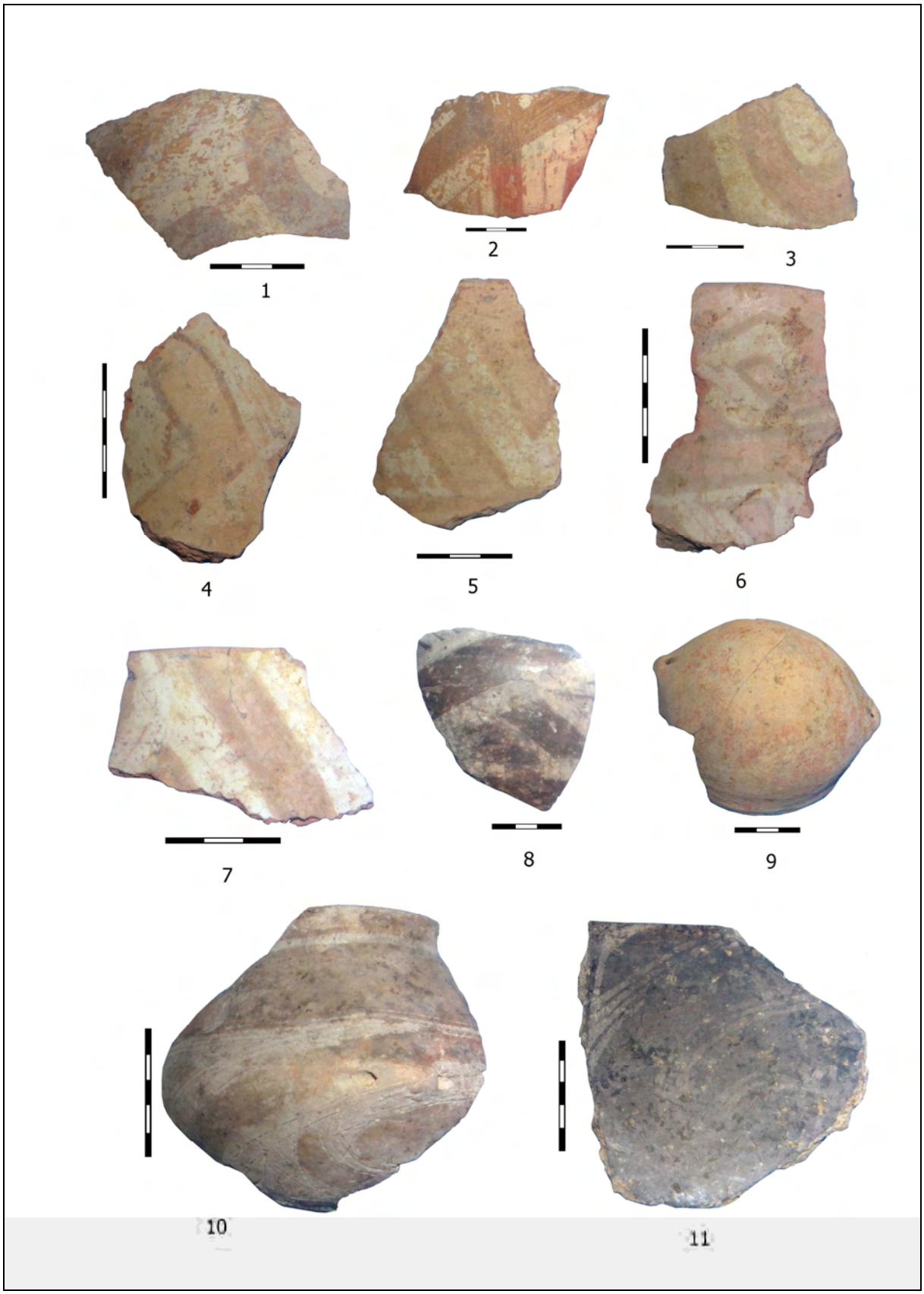
Pl. 10. Cyllindrical stands (1-3), coil-like stands (4), tronconical pot decorated with graphite (5), graphite decorate dish (4), various dishes (6, 8-10).
Vase suport cilindrice (1-3), vas suport colac (4), vas tronconic grafitat (5), castron grafitat (7), castroane (6, 8-10).



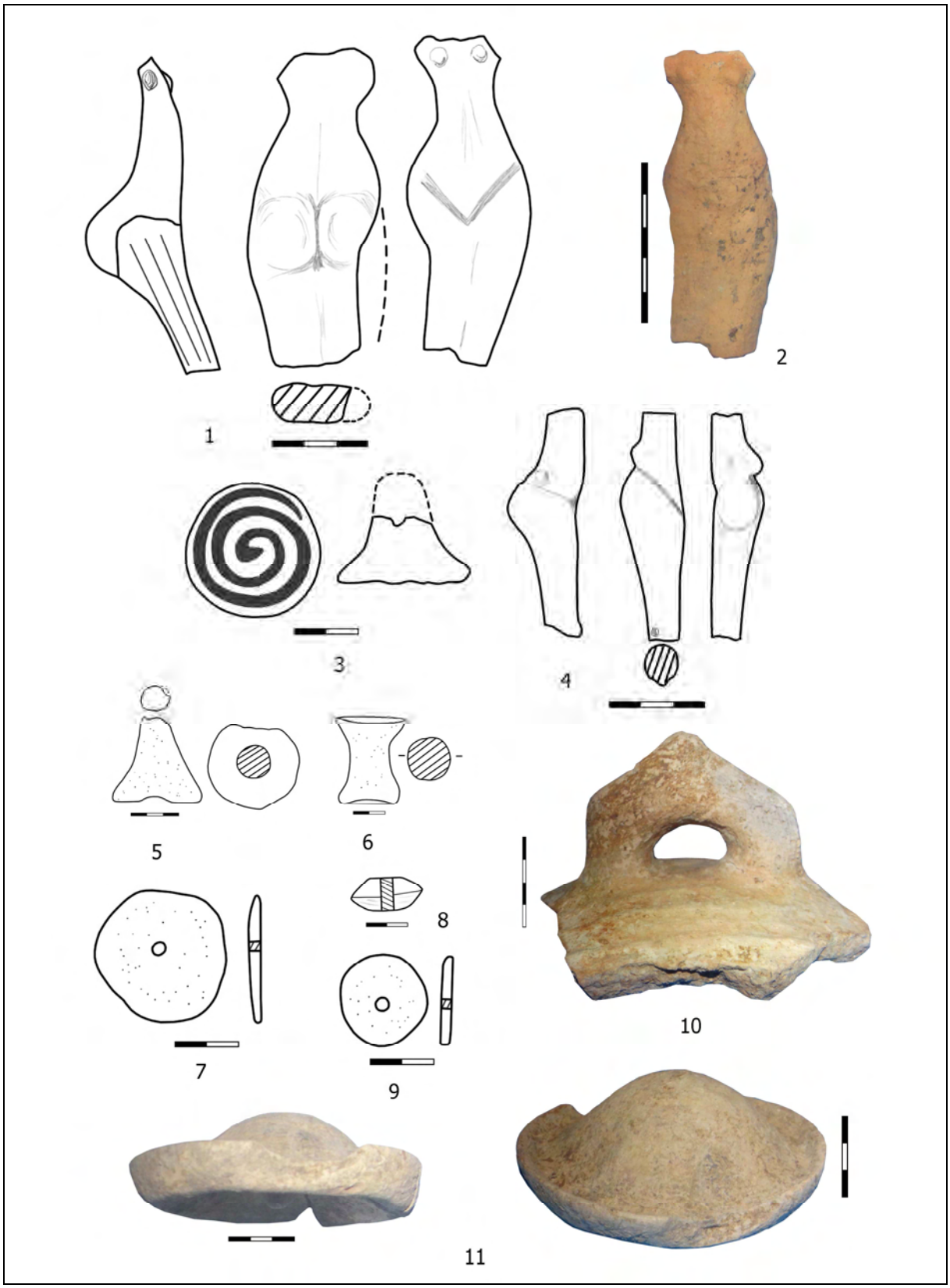
Pl. 11. Ladles (1-5), Precucuteni dish (6), fragment of a graphite decorated vessel (7), painted Cucuteni sherds (8-12).
Polonice (1-5), castron precucutenian (6), fragment de vas decorat cu grafit (7), fragmente ceramice cucuteniene pictate (8-12).



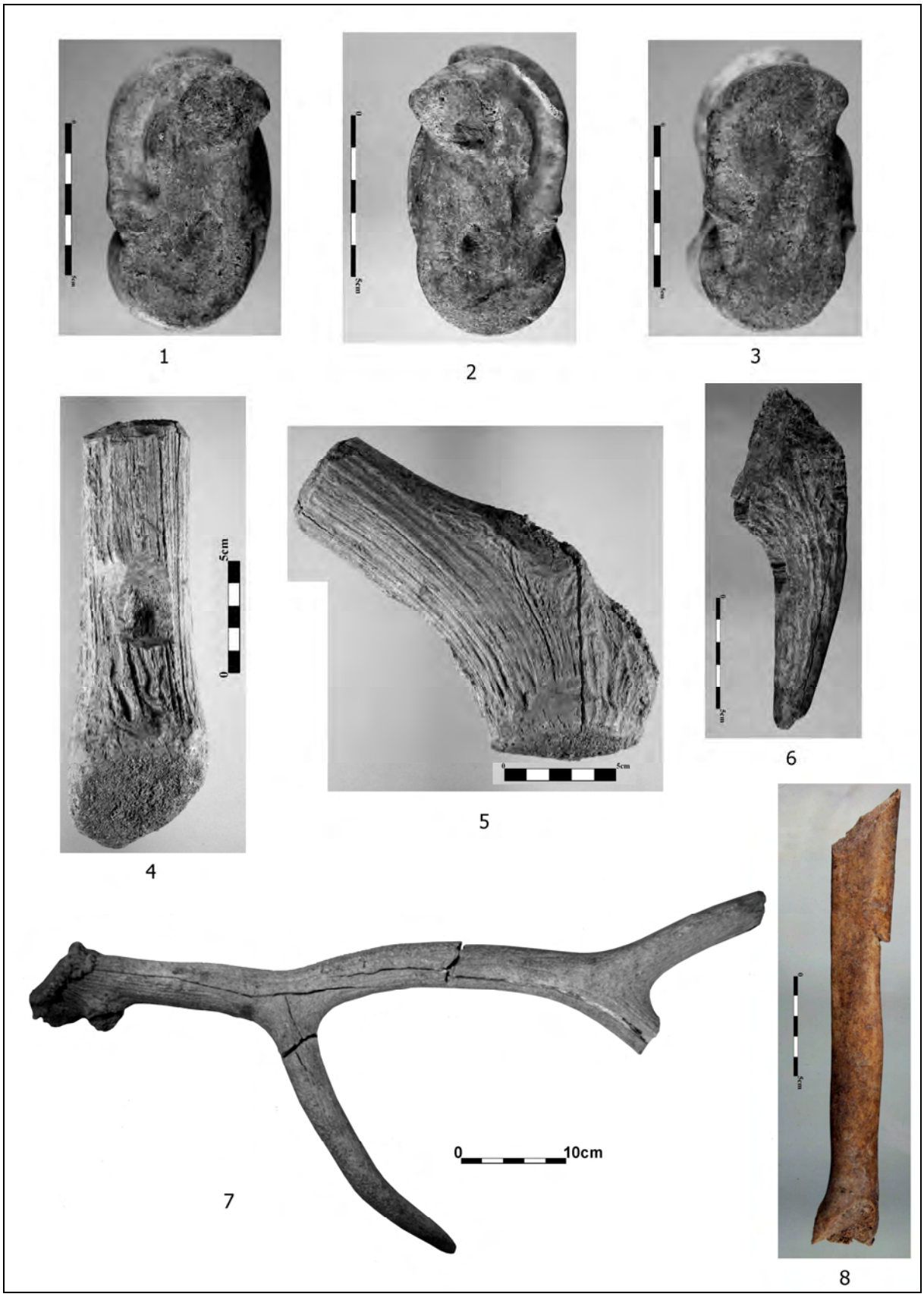
Pl. 12. Small dishes and goblets (1-6, 8-11), lid (7), miniature vessels (13-24), pedestalled pots (20-21), miniature vessel (24), clay box (25).
Castronașe și cupe de mici dimensiuni (1-6, 8-11), capac (7), vase miniaturale (13-24), vase cu picior (20-21), vas suport miniatural (24); cutiuță din lut (25).



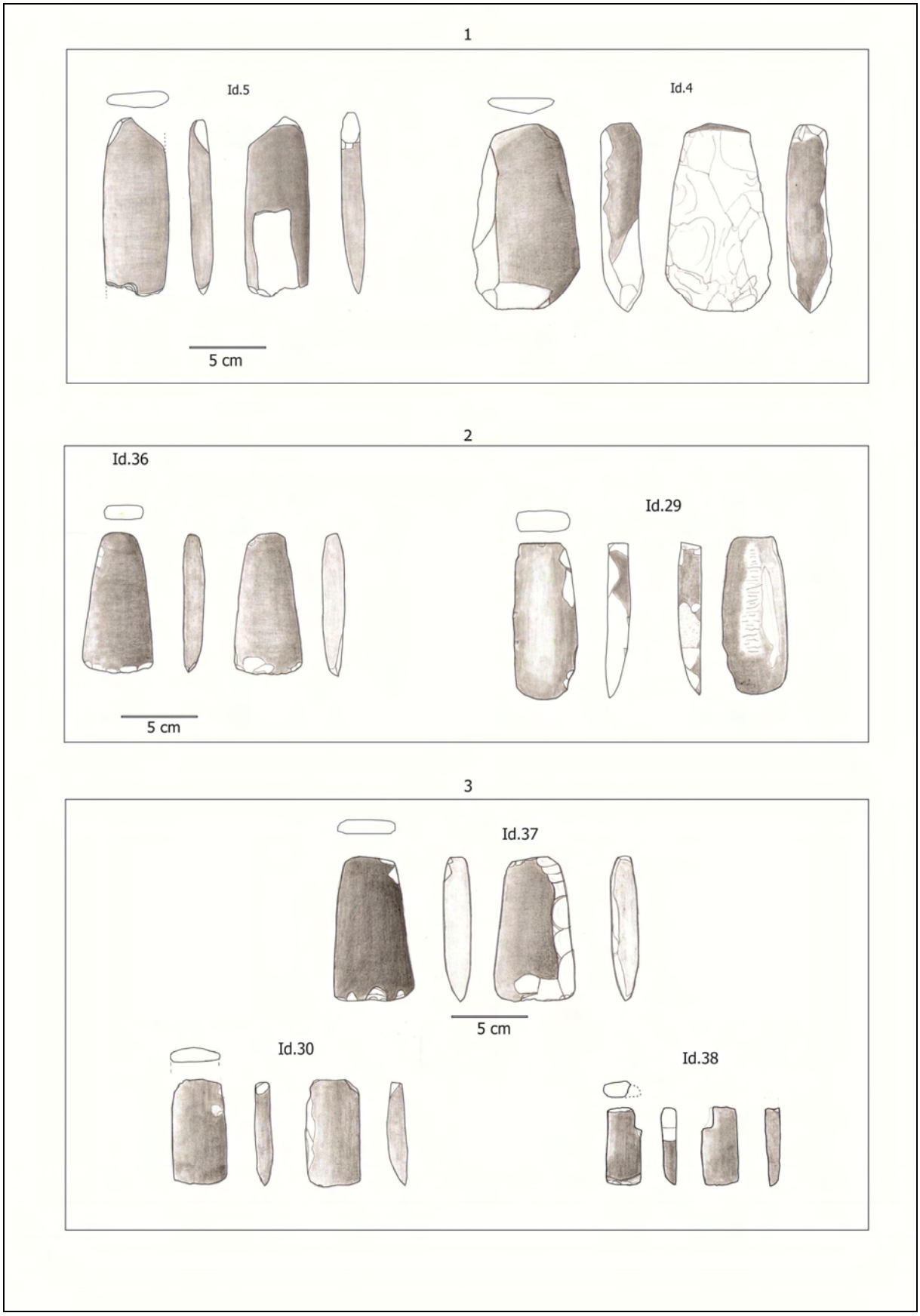
Pl. 13. Cucuteni painted sherds (1-7), white painted ware (8-10), lid painted with bright red on the exterior (9), vessel decorated with graphite on the interior (11).
Ceramică Cucuteni (1-7); ceramică pictată cu alb (8, 10); capac pictat cu roșu crud la exterior (9); vas pictat cu grafit la interior (11).



Pl. 14. Clay anthropomorphic figurines (1-2, 4); clay stamp decorated with a fluted spiral (3); clay item (5); clay spindle (6), bi-tronconical spindle (8), spindles made of pottery sherds (7,9); house-shaped handles (10); hat-like lid (10-11).
Statuete antropomorfe din lut (1-2, 4); pintaderă din lut cu decor volută canelat (3); piesă din lut (5), mosorele din lut (6), fusaiolă bitronconică (8); fusaiole din fragmente de vase (7, 9); toartă de vas în formă de căsuță (10); capac de tip căciulă (10-11).



Pl. 15. Bone and antler finds: worked bovine astragali (1-3); worked deer antler (4-6); deer antler fragment with traces of working (7); worked deer metatarsal.
Piese IMDA: astragale de bovină prelucrate (1-3); corn de cerb prelucrat (4-6); corn de cerb cu urme de prelucrare (7); metatarsian de cerb prelucrat (8).



Pl. 16. 1. axes; 2. adzes; 3. chisels (drawings A. Boroneanț).
Topoare (1), tesle (2) și dălțițe 3) (desene A. Boroneanț).

Macroresturile vegetale descoperite în situl arheologic Sultana-*Malu Roşu*, judeţul Călăraşi: studiu preliminar

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Cătălin LAZĂR[*]

Abstract: *The new discoveries from the Eneolithic site of Sultana-Malu Roșu made possible to obtaining new data about vegetal species used by prehistoric communities from here, but also to understand the paleoenvironment. By using and studying the plant remains from House no. 2 and House no. 5, we could identified the species as Chenopodium album (fat hen), Lithospermum arvense (field gromwell), Polygonum lapathifolium (pale persicaria), Corylus avellana (hazelnut) or Rosa sp. (dog-rose). A part of these species can demonstrate that this group of people knew and were able to farm. For instance, at some species like Triticum monococcum (wheat) or Hordeum sativum (green barley), althought with not so many descovered seeds, the findings of spikelet forks or base glumes may suggest processing the cereals before their consumption. Nevertheless, we mentioned the Vitis vinifera (grape vine) seeds for the first time in Sultana-Malu Roşu site.*

Rezumat: *Noile descoperiri arheobotanice în situl eneolitic Sultana-Malu Roșu au permis obținerea de noi date despre speciile vegetale utilizate de către comunitățile preistorice de aici, dar și o imagine de ansamblu a mediului vegetal. Folosind macroresturile vegetale din locuințele L2 și L5 din tell-ul în discuție s-au putut identifica prezența speciilor de Chenopodium album (spanac sălbatic), Lithospermum arvense (mărgeluşe), Polygonum lapathifolium (iarbă roșie), Corylus avellana (alun) sau Rosa sp. (măceș). O parte din aceste specii pot dovedi că aceste populații eneolitice cunoșteau și practicau agricultura. În ceea ce privește descoperirile de cereale precum Triticum monococcum (grâu) sau Hordeum sativum (orz verde), deși slab repezentate prin cariopse, au fost identificate părți din spicul acestora precum spiculețul sau rahisul, ce pot sugera o pregătire în prealabil a cerealelor, înainte de a fi procesate. Nu în ultimul rând, au fost descoperite, pentru prima oară în acest sit, semințe de Vitis vinifera (viță de vie).*

Keywords: *Eneolithic, Gumelnița culture, vegetation, paleoenvironment, carpology, seeds.*
Cuvinte cheie: *Eneolitic, cultura Gumelnița, vegetație, paleomediu, carpologie, semințe.*

◈ Introducere

Studiile arheobotanice reprezintă un instrument important în cadrul demersului arheologic, ce ajută la dezvoltarea unor ipoteze de lucru privind comunitățile umane din vechime și interacțiunea acestora cu mediul înconjurător.

Resturile vegetale provenite din situri arheologice preistorice de pe teritorul României au fost analizate în diverse lucrări de specialitate (M. Cârciumaru 1996; B. Ciută 2008), fără însă ca acestea să fie suficiente. De asemenea, precizăm că respectivele abordări s-au realizat mai ales din punct de vedere taxonomic, fără a se prezenta explicit legătura dintre mediu și societățile umane.

Acest articol își propune o prezentare exhaustivă a principalelor resturi arheobotanice descoperite în așezarea de tip *tell* de la Sultana-*Malu Roșu*, jud. Călărași (R. Andreescu, C. Lazăr 2008), prin integrarea datelor carpologice în cadrul mai larg al mediului specific perioadei eneolitice.

◈ Geografia și istoricul sitului

Situl de la Sultana-*Malu Roșu* este unul dintre cele mai importante situri aparținând culturii Gumelnița, ce a fost cercetat și studiat de peste 80 de ani (I. Andriesescu 1924; C. Isăcescu 1984; R. Andreescu, C. Lazăr 2008).

Situat în partea de sud-est a Câmpiei Române, nu departe de Dunăre (7 km) și de granița cu Bulgaria, situl de la Sultana-*Malu Roșu* este amplasat pe valea Mostiștei, râu amenajat funciar în anii

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'80 ai secolului trecut (fig. 1). Actualmente această vale constă într-o serie de lacuri artificiale, separte de baraje artificiale, ce nu mai corespunde din punct de vedere al mediului și ecologiei cu ceea ce există în preistorie (C. Ghiță 2008; C. Lazăr *et alii* 2012).

Din punct de vedere arheologic situl este alcătuit dintr-o așezare de tip *tell* și o necropolă (R. Andreescu, C. Lazăr 2008; C. Lazăr *et alii* 2008, 2009, 2012; C. Lazăr 2014). Acest sit impresionează prin descoperirile importante, atât din perspectiva obiectelor arheologice (vase ceramice, obiecte de aur, podoabe, plastică etc.), majoritatea acestora cu caracter unic în tot arealul complexului cultural Kodjadermen-Gumelnița-Karanovo VI, dar și prin situațiile arheologice și contextuale deosebite. Din nefericire, așezarea este supusă unui permanent proces de degradare, din cauza fenomenelor de eroziune (R. Andreescu 2001; R. Andreescu, C. Lazăr 2008; T. Ignat *et alii* 2012; K. Moldoveanu, R. Andreescu 2012; C. Lazăr 2014).

Stratigrafia așezării de tip *tell* cuprinde toate cele trei faze ale culturii Gumelnița (A1, A2 și B1), precum și urme de locuire posterioare cronologic (cultura Cernavoda I, cultura Tei, perioada La Tène și morminte din perioada migrațiilor) (C. Isăcescu 1984; R. Andreescu, C. Lazăr 2008; Ignat *et alii* 2012). Stratigrafia necropolei este oarecum diferită, după cum ne indică datele radiocarbon obținute, precum și artefactele recuperate din morminte. Astfel, aceasta cuprinde doar primele două faze ale culturii Gumelnița (A1 și A2), precum și morminte datate în timpul fazelor Vidra și Spanțov ale culturii Boian (C. Lazăr *et alii* 2012; C. Lazăr 2014).

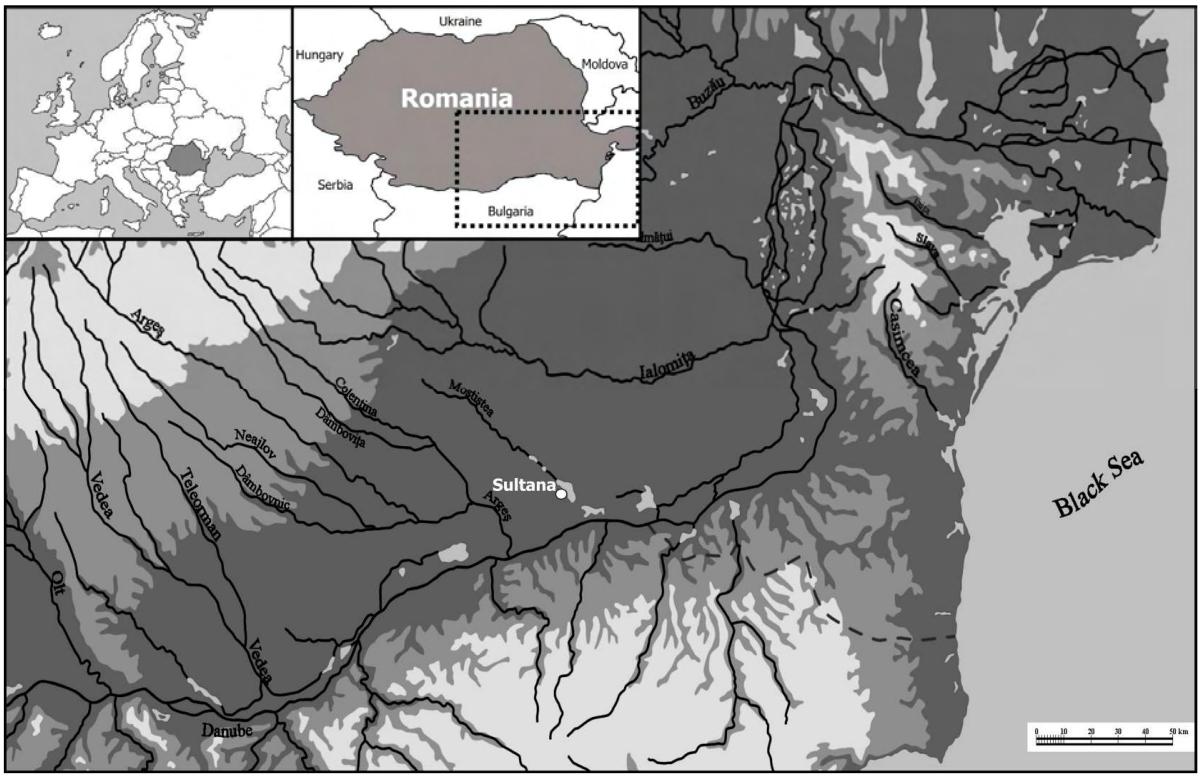

Fig. 1. Localizarea sitului arheologic Sultana-*Malu Roșu*.
Location of Sultana-*Malu Roșu* site.

◈ Contextul arheologic al descoperirilor

Macroresturile vegetale analizate în prezentul studiu au fost descoperite în locuințele L2 și L5 din așezarea de la Sultana-*Malu Roșu*. Cantitatea de macroresturi vegetale recuperată din aceste contexte, deși relativ mică, permite atât stabilirea speciilor vegetale preferate de către comunitățile eneolitice, cât și creionarea unor concluzii privind paleomediul și, indirect, condițiile climatice (pe baza valorilor optime de creștere a anumitor specii de plante) pentru perioada cronologică în care se dezvoltă cultura Gumelnița.

Locuința L2 a fost descoperită în anul 2003 și cercetată detaliat timp de 5 ani. Aceasta reprezintă o locuință incendiată, tipică culturii Gumelnița, cu plan rectangular, cu două camere,

orientată nord-sud. Din punct de vedere constructiv, locuința a fost realizată în sistem paiantă, cu podeaua construită direct pe pământ și cu o vatră în a doua cameră. Diferența altimetrică dintre cele două camere este de 35-40 cm, ceea ce constituie un element constructiv deosebit (R. Andreescu, C. Lazăr 2008; R. Andreescu *et alii* 2010). Materialul arheobotanic a fost descoperit în principal în colțul de nord-est al locuinței, în apropierea vetrei, pe podea, în asociere cu vase și capace ceramice. Acestea erau grupate într-un perimetru relativ mic, fapt ce a permis colectare lor directă *in situ* (fig. 2).

Locuința L5 a fost descoperită în 2005 și cercetată detaliat până în anul 2010. Locuința incendiată are formă rectangulară, orientată nord-sud. La fel ca și locuința L2, avea două camere (una dintre ele cu o diferenţa altimetrică de 20-30 cm a podelei). Sistemul constructiv este oarecum diferit, în sensul că baza pereților a fost realizată în sistem ceamur, iar partea superioară în tip paiantă. Podeaua a fost construită direct pe distrugerile unei locuințe anterioare, iar o vatră a fost descoperită doar în prima cameră (R. Andreescu, C. Lazăr 2008; T. Ignat *et alii* 2012). Macroresturile vegetale din această locuință au fost descoperite cu precădere pe podea, dar și în nivelul de distrugere.

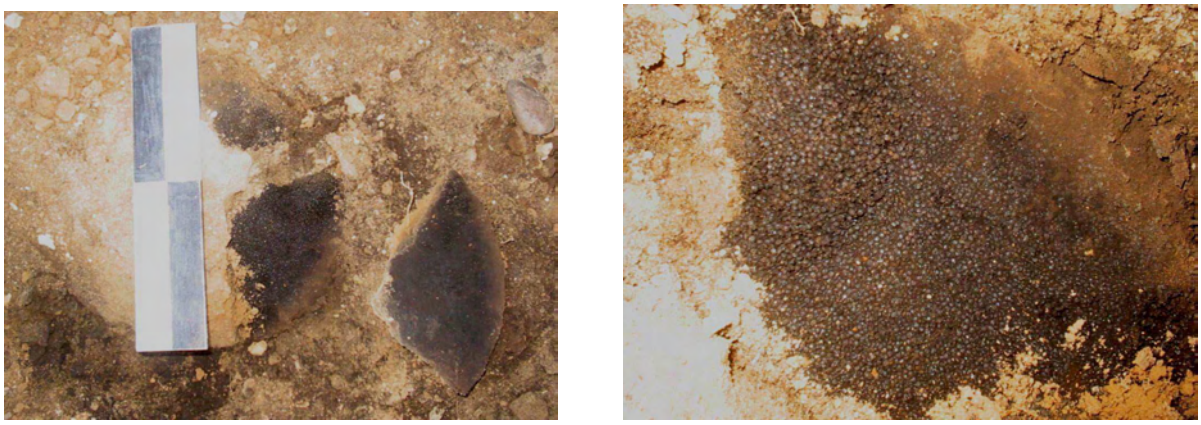

Fig. 2. Semințe *in situ* asociate vasului nr. 29 din locuința L2 de la Sultana-*Malu Roșu*.
In situ seeds found in association with pot no. 29 from house L2 at Sultana-*Malu Roșu*.

Pe baza probelor ^{14}C realizate și a rezultatelor (tab. 1), coroborate de datele obținute pe analiza materialului ceramic întreg și fragmentar (T. Ignat *et alii* 2012, 2013), ambele locuințe aparțineau culturii Gumelnița, mai precis, L5 este încadrabilă în faza A2, iar locuința L2 în faza B1.

◈ Materiale și metode

Macroresturile vegetale din așezarea Sultana-*Malu Roșu* au fost recoltate direct din săpătura arheologică, dar și în urma operațiunilor de cernere și flotare a sedimentului arheologic. Recoltarea directă (mai ales în cazul locuinței L2) a fost posibilă datorită faptul că semințele erau grupate pe un perimetru relativ mic (30 x 30 cm). Cele mai multe semințe au fost recuperate din vasele nr. 18, 29 și 54 din L2 (fig. 2). De asemenea, o parte considerabilă din macroresturile vegetale din L2 a fost recuperată în urma operațiunilor de cernere a peste 500 l de sediment arheologic provenit din cele două locuințe, iar ulterior prin trierea materialelor rezultate.

Context	Cod Lab.	Data ^{14}C (BP)	Calibrat 1 σ (68.2%)	Calibrat 2 σ (95.4%)	Data mediană
			cal. BC		
L2	Poz-52550	5250 ± 40	4223-3985	4230-3973	4061
L2	Poz-52551	5140 ± 35	3986-3819	4039-3804	3955
L5	Poz-52547	5630 ± 40	4503-4374	4538-4365	4460
L 5	Poz-52445	5640 ± 40	4529-4403	4546-4366	4472

Tab. 1. Datele radiocarbon obținute pentru locuințele L2 și L5 de la Sultana-*Malu Roșu*.
Radiocarbon dates obtained for houses L2 and L5 from Sultana-*Malu Roșu*.

O parte din materialul carpologic din locuința L2 a fost analizat preliminar în anul 2003 (A. Bogaard, M. Stavrescu-Bedivan 2004; A. Bogaard 2004), dar nu a fost publicat complet. Marea majoritate a respectivelor probe reprezintă concentrări de macroresturi vegetale (cărbune și semințe carbonizate), prelevate împreună cu materialul din două vase întregi (vasele nr. 18 și nr. 54) situate pe podeaua locuinței. Fragmentele de cărbune descoperite împreună cu aceste semințe nu au fost cercetate.

Metodologia de determinare taxonomică a macroresturilor vegetale s-a bazat pe analize microscopice și macroscopice a semințelor, prin utilizarea metodelor consacrate în domeniul carpologiei (M. Cârciumaru 1996; M. Cârciumaru *et alii 2005*; M. Philippe 1989). De asemenea, s-a apelat și la determinatoare și atlase botanice (W.H. Schoch *et alii* 1988) pentru identificarea materialului. Astfel, probele studiate au fost triate la stereomicroscop și evaluate calitativ prin identificarea speciei, a genului, a grupului sau a variantei căreia îi aparțin resturile botanice. Utilizând tabelul cu determinările carpologice, special conceput pentru completarea bazelor de date dedicate sitului arheologic Sultana-*Malu Roșu*, am putut cuantifica și compara rezultatele obținute (tab. 2). Totodată, cercetarea arheobotanică a implicat și o analiză cantitativă, ce presupune o reprezentare procentuală a prezenței plantelor pe un anumit sit arheologic (M. Cârciumaru *et alii* 2005). Din cele două locuințe au fost analizate 574 de semințe (fragmentare sau întregi), din care doar 480 au fost atribuite perioadei eneolitice (L2 = 417 și L5 = 63), restul macroresturilor vegetale fiind atribuite altor secvențe cronologice (tab. 2).

◈ Rezultate și discuții

Pe lângă datele obținute inițial din analiza lotului de macroresturi vegetale de la Sultana-*Malu Roșu* (A. Bogaard, M. Stavrescu-Bedivan 2004), noile determinări realizate pe eșantioanele din locuințele L2 și L5 s-au bazat pe analiza a 31 de probe, dintre care patru aparțin locuinței L2 (probele nr. 22, 23, 24 și 25), iar celelalte locuinței L5.

Din perspectivă cantitativă, datele rezultate sunt prezentate sintetic în tabelul nr. 2

La nivel taxonomic, cea mai mare parte din resturile vegetale aparțin speciei *Chenopodium album* (spanac sălbatic) – 62,71%*,* descoperite mai ales în nivelul de distrugere al locuinței L2, dar și depozitate în vasele de pe podea (tab. 2), în asociere cu capsule de *Rosa* sp. (măceş) – 7,29%, fragmente ale achenei (coji) de *Corylus avellana* (alun) – 0,21%. Acestora li se adaugă resturi de plante ruderale sau segetale (*Solanum nigrum* – 0,21% și *Fallopia convolvulus* –1,43%) și câteva semințe de cereale, printre care orz (*Hordeum sativum* – 0,42%) și alac (*Triticum monococcum* – 1,88%). Celelalte macroresturi vegetale descoperite în vasele de pe podeaua locuinței L2 aparțin genului *Lithospermum arvense* (mărgeluşe – 13,96%) *Lens* sp. (linte – 0,21%), respectiv *Fallopia convolvulus* (hrișcă urcătoare – 1,43%) (tab. 2).

Așadar, majoritatea macroresturilor vegetale descoperite în cele două locuințe din așezarea de la Sultana-*Malu Roșu* aparţin unor plante ruderale sau segetale (80%), precum *Fallopia covolvulus* (hrişca urcătoare), *Lithospermum arvense* (mărgeluşe) și *Chenopodium album* (spanac sălbatic). De asemenea, mai trebuie menționat că în premieră pentru acest sit au fost descoperite semințe de *Vitis vinifera* (viță de vie – 1,25%) în eșantioanele provenite din locuința L5. Resturile de cereale constau mai ales în rămășițe de spiculeţ și rahis de *Triticum monococcum* (alac – 1,88%), cu o cariopsă fragmentată și trei resturi de fragmente de spiculeț, respectiv *Triticum dicoccum* (grâu – 0,83%). Acesta din urmă este reprezentat de trei semințe (fig. 3) și o impresiune într-un fragment de chirpici din proba nr. 18 (fig. 5). Acestora li se adaugă cinci macroresturi indeterminabile ca gen, din ambele locuințe (tab. 2), ce pot fi atribuite speciei *Triticum* (1,04%).

Specia *Hordeum vulgare* sp*.* (orz) este slab reprezentată (0,42%), prin două descoperiri din locuința L5. De asemenea, din locuința L2 provin două semințe de *Hordeum sativum* (orz verde – 0,42%), precum și alte două resturi indeterminabile atribuite *Hordeum* sp. (0,42%).

În eșantionul din L2, cea mai mare reprezentare o are specia *Lithospermum arvense* – mărgeluşe (fig. 4). Două semințe de *Pisum sativum* (mazăre) au fost descoperite, câte una pentru fiecare locuință cercetată, însă considerăm că aceste semințe sunt posterioare stratului arheologic, cel mai probabil contemporane[1]. În plus, s-au putut identifica 2 semințe de *Polygonum lapathifolium* (iarba roşie), în L5, sub nivelul de distrugere, precum și 2 seminţe de *Polygonum hydropiper*

[1] O singură sămânță arsă de *Pisum sativum* (mazăre) din L5 pare a fi contemporană cu perioada studiată.

(piperul bălții). De asemenea, au fost descoperite şi resturi de *Rumex crispus* (ștevie creaţă) și 4 semințe întregi de *Convolvulus arvensis* (volbură).

Specii	Nume generic	L2		L5		Total	
		nr	%	nr	%	nr	%
Polygonum aviculare	troscot			5	7,94	5	1,04
Fallopia convolvulus	hrişca urcătoare	6	1,44	13	20,63	19	3,96
Polygonum lapathifolium	iarba roșie	1	0,24	2	3,17	3	0,63
Polygonum hydropiper	piperul bălții			2	3,17	2	0,42
Convolvulus arvensis	volbură	4	0,96			4	0,83
Lithospermum arvense	mărgeluşe	66	15,83	1	1,59	67	13,96
Polygonaceae sp.		1	0,24			1	0,21
Rumex crispus	ștevie			9	14,29	9	1,88
Chenopodium album	spanac sălbatic	294	70,50	7	11,11	301	62,71
Solanum nigra	zârna	1	0,24			1	0,21
Pisum sativum	mazăre			1	1,59	1	0,21
Lens sp.	linte	1	0,24			1	0,21
Triticum monococcum	alac	2	0,48	7	11,11	9	1,88
Triticum dicoccum	grâu			4	6,35	4	0,83
Triticum sp.	grâu	1	0,24	4	6,35	5	1,04
Hordeum vulgare	orz			2		2	0,42
Hordeum sativum	orz verde	2	0,48			2	0,42
Hordeum sp.	orz	2	0,48			2	0,42
Vitis vinifera	strugure			6	9,52	6	1,25
Rosa sp.	măceș	35	8,39			35	7,29
Corylus avellana	alun	1	0,24			1	0,21
Total		**417**	**100**	**63**	**100**	**480**	**100**

Tab. 2. Distribuția taxonomică și cantitativă a speciilor descoperite la Sultana-*Malu Roșu*.
Taxonomical and quantitative distribution of the species discovered at Sultana-*Malu Roșu*.

Datorită slabei reprezentări a numărului de specii, dar și a cantității reduse de resturi arheobotanice, am fost nevoiți să creionăm o imagine a paleomediului fără a impune însă o anumită preferință a speciilor identificate.

Numărul mic de macroresturi vegetale determinate pentru speciile de cereale (*Triticum monoccocum*, *T. diccocum* și *Hordeum* sp.) poate indica o folosire restrânsă a acestor plante ca sursă de hrană de către populațiile preistorice ce au trăit la Sultana-*Malu Roșu*.

Fig. 3. Glumă de *T. dicoccum* (stânga) și rahis de *T. monococcum* (mijloc și dreapta) identificate în L5.
T. dicoccum glume (left) and *T. Monococcum* cob (middle and right) identified in house L5.

Faptul că majoritatea acestor resturi sunt fragmente din spicul cerealelor demonstrează că respectivele plante au fost vânturate, deci procesate înainte de a fi consumate. Apoi, prezența resturilor de *Vitis vinifera* – vița de vie (fig. 6) poate arăta o utilizare a acestei specii, în perioada culturii Gumelnița[2]. Astfel, cel mai probabil, această specie era cunoscută, însă nu știm dacă *Vitis vinifera* exista în mediul natural, sub forma sălbatică sau dacă era crescută sau cultivată de locuitorii *tell*-ului de la Sultana-*Malu Roșu*.

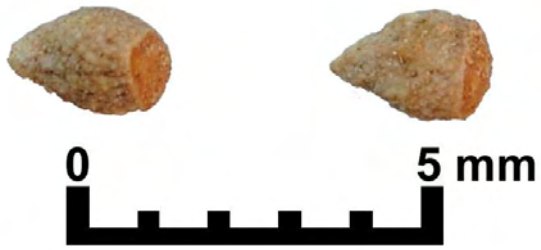

Fig. 4. Sămânță de *Lithospermum arvense* identificată în locuința L2.
Lithospermum arvense seed identified in house L2.

Speciile de plante ruderale și segetale permit o reconstituire a paleomediului. Prin descoperirile de plante segetale precum *Chenopodium album* (spanac sălbatic), *Lithospermum arvense* (mărgeluşe), *Polygonum lapathifolium* (iarba roșie) avem dovada faptului că aceste populații eneolitice practicau agricultura. În plus, descoperirile de plante caracteristice zonelor umede, precum *Polygonum hydropiper* (piperul bălții) demonstrează o apartenență la un mediu umed. Nu în ultimul rând, descoperirile de alun și soc (s-a descoperit o singură sămânță de *Sambucus nigra*), demonstrează faptul că acest sit era așezat în zona delimitată de silvostepă și stepă, având și un caracter mlăștinos datorită râului Mostiștea și al Dunării, fapt confirmat și de studiile geologice (C. Ghiță 2008).

Din punct de vedere ecologic, *Lithospermum arvense* (mărgeluşe) crește doar în zone de trecere sau în arii agricole, fiind o specie ce preferă lumina și se dezvoltă pe un sol calcaros, fertil, dar nu foarte umed, spre uscat (Atlas 2014). Pentru situl de la Sultana-*Malu Roșu*, putem deduce că pH-ul solului era mai acid spre un sol cu pH-ul echilibrat, datorită descoperirilor de *Convolvulus arvensis* (volbură), *Fallopia convolvulus* (hrişca urcătoare) sau de *Polygonum aviculare* (troscot). Ultimile două specii (*Fallopia convolvulus* - hrişca urcătoare şi *Polygonum aviculare* - troscotul) se dezvoltă în medii puțin alcaline, nu necesită foarte multă umezeală, ci un sol relativ fertil și cu lumină. *Polygonum hydropiper* (piperul bălții) se dezvoltă în medii mlăștinoase sau umede, necesită lumină, un sol relativ acid, spre bazic și cu o fertilitate medie. Nici una dintre aceste specii de buruieni nu poate tolera un grad mare de salinitate al solului (Atlas 2014).

Socul și alunul sunt arbuști ce cresc în zona de foioase și necesită un sol cu un pH echilibrat spre alcalin. De asemenea, necesită spații semi-luminate și cu un sol umed spre uscat. În plus, nici una dintre aceste două specii nu se pot dezvolta în medii saline (Atlas 2014). Totodată, speciile de *Corylus avellana* (alun) și *Vitis vinifera* (viță de vie), în stare sălbatică, se pot dezvolta în același mediu datorită solului umed de care au nevoie.

Din punct de vedere etnobotanic, aceste macroresturi vegetale pot prezenta distribuția geografică a anumitor specii, cât și preferința alimentară sau medicinală (M. Scarlat, M. Tohăneanu 2003). Astfel, descoperirea unei cantități importante de *Chenopodium album* (spanac sălbatic) în locuința L2, poate reflecta opțiunea de a depozita plante pentru consum (A. Bogaard 2004).

Specia *Polygonum aviculare* (troscot) poate fi consumată sau utilizată în medicina naturistă, având proprietăți diuretice, astringente și hipotensive (M. Scarlat, M. Tohăneanu 2003). De asemena, *Polygonum hydropiper* (piperul bălții) poate fi consumat ca ingredient pentru alimente datorită gustului piperat, sau poate fi utilizat în scop terapeutic, datorită calităților sale antiscorbutice și diuretice (M. Scarlat, M. Tohăneanu 2003, p. 280). Alte plante ce pot fi consumate sunt *Rumex crispus*

[2] Trebuie precizat că o parte din resturile vegetale determinate nu aparțin epocii preistorice (din cele zece semințe și fragmente de semințe recunoscute, patru provin dintr-o perioadă mai apropiată nouă, probabil din epoca fierului).

(ștevie creaţă) sau *Fallopia convolvulus* (hrişcă urcătoare), atestate în lotul carpologic analizat la Sultana-*Malu Roșu*.

Fig. 5. Impresiune de *Triticum dicoccum* identificată într-un fargment de chirpici din locuința L5.
Adobe impression of *Triticum dicoccum* from house L5.

Cea mai mare parte a speciilor vegetale determinate pentru așezarea de la Sultana-*Malu Roșu* poate fi consumată de către oameni, ceea ce conduce, fără nici un fel de dubiu, la ideea unei cultivări sau recoltări deliberate. În general, se consideră că demonstrarea acestui tip de consum poate fi probată cu certitudine doar prin conservarea macroresturilor ingerate sau prin conservarea resturilor de coprolite. Decomandată, la Sultana-*Malu Roșu* nu avem asemenea date. Însă, contextele domestice din care provin probele carpologice reprezintă dovada clară că semințele erau depozitate în vase ceramice. Toate acestea permit susținerea ipotezei existenței la Sultana-*Malu Roșu* a unor modalități de conservare și depozitare a plantelor, precum și utilizarea acestora pentru hrană sau în scopuri medicale.

Fig. 6. Macroresturi de *Vitis vinifera* identificate în locuința L5.
Vitis vinifera macroremains identified in house L5.

◈ Concluzii

Lotul carpologic analizat din locuințele L2 și L5 de la Sultana-*Malu Roșu* ne oferă o serie de date complementare celor arheologice și arheozoologice (R. Andreescu, C. Lazăr 2008; T. Ignat *et alii* 2012; A. Bălășescu, V. Radu 2014), privind strategiile alimentare ale acestei comunități preistorice, dar și informații privind paleomediul din perioada eneolitică.

Deși, aparent, speciile vegetale caracteristice unei acțiuni agricole sunt în număr mic în așezarea de la Sultana-*Malu Roșu* (tab. 2), totuși acestea coroborate cu o serie de descoperiri arheologice (brăzdare și săpăligi de corn, piese de silex ce prezintă urme de utilizare, rezultate în urma unor acțiuni de recoltare a plantelor) pot proba existența unor practici de cultivare a anumitor cereale. Tot în sprijinul acestei concluzii conduc și descoperirile de *Polygonum aviculare* (troscot) și *Lithospermum arvense* (mărgeluță). Acestea pot demonstra indirect o cunoaștere și practicare a agriculturii de către respectivele comunități, deoarece cele două specii cresc pe terenuri cultivabile, în special pe cele de cereale. În al doilea rând este pentru prima dată când se descoperă semințe de *Vitis vinifera* (viță de vie) în acest sit.

O parte dintre speciile determinate la Sultana-*Malu Roșu* au fost descoperite și în alte situri ce aparțin culturii Gumelnița. Astfel, pentru exemplificare, amintim că specii de cereale (*Triticum monococcum*, *Triticum dicoccum* și *Hordeum vulgare*) au fost atestate la Hârșova-*tell* (F. Monah 2000), Radovanu, Ipotești, Lișcoteanca, Teiu, Căscioarele-*Ostrovel* (M. Cârciumaru 1996), Vitănești, Lăceni (A. Bogaard 2001), Pietrele (M. Toderaș *et alii* 2009), Izvoarele, Vlădiceasca și Vărăști-*Grădiștea Ulmilor* (M. Cârciumaru *et alii* 2005). Alte specii descoperite în situri din perioada gumelnițeană, de pe teritoriul României sunt: *Chenopodium album* (spanac sălbatic) – la Morteni, Geangoiești, Gumelnița, Căscioarele-*Ostrovel* (M. Cârciumaru 1996), Lăceni, Vitănești (A. Bogaard 2001), Pietrele (M. Toderaș *et alii* 2009) și Hârșova-*tell* (F. Monah 2000); *Fallopia convolvulus* (hrișcă urcătoare) – în siturile de la Morteni (M. Cârciumaru 1996) și Vitănești (A. Bogaard 2001); *Polygonum aviculare* (troscot) – la Căscioarele-*Ostrovel* (M. Cârciumaru 1996); *Polygonum lapathifolium* (iarba roșie) – la Pietrele (M. Toderaș *et alii* 2009); *Vitis vinifera* (viță-de-vie) – la Hârșova-*tell* (F. Monah 2000), Vitănești (A. Bogaard 2001) și probabil Căscioarele-*Ostrovel* (M. Cârciumaru 1996); *Pisum sativum* (mazăre) – în siturile Ipotești, Radovanu (M. Cârciumaru 1996), Vitănești (A. Bogaard 2001) și Hârșova-*tell* (F. Monah 2000); *Lens* sp. – la Hârșova-*tell* (F. Monah 2000); *Sambucus nigra* (soc) – în siturile de la Mălăiești de Jos (A. Frînculeasa 2009) și Radovanu; *Solanum nigra* – la Vitănești (A. Bogaard 2001); *Lithospermum* sp. – la Căscioarele-*Ostrovel* (M. Cârciumaru 1996). De asemenea, amintim descoperirea primei podoabe confecționate din resturi vegetale la Ulmeni, din semințe de *Lithospermum purpureo-coeruleum* (meișor albastru) (M. Cârciumaru 1996). Toate aceste date ne indică preferințele specifice comunităților gumelnițene privind mediul vegetal.

Pe de altă parte, aceste specii determinate indică un anumit tip de paleomediu ce ar fi putut exista în perioada culturii Gumelnița, pe valea Mostiștei. Astfel, majoritatea resturilor vegetale de buruieni necesită lumină, un sol fertil cu un pH echilibrat spre acid, nesuportând un mediu salin. În plus, prezența minimă a resturilor vegetale de *Vitis vinifera* (viță-de-vie), *Sambucus nigra* (soc) și *Corylus avellana* (alun) semnalează o zonă climatică situată între silvostepă și stepă. Trebuie reținut că din punct de vedere climatic, Holocenul reprezintă perioada de stabilire a climei, iar cronozona Subboreal (5ka – 2.5 ka), în care evoluează și cultura Gumelnița (cca. 4500-3900 cal BC), prezenta o climă caldă și uscată (M. Tomescu 2000; M. Cârciumaru 2001, p. 144), optimă pentru speciile vegetale determinate de către noi.

Datele prezentate în acest articol vor fi completate în viitor de studiile palinologice aflate în curs. De asemenea, continuarea săpăturilor în *tell*-ul de la Sultana-*Malu Roșu* ar putea aduce la lumină mai multe macroresturi vegetale, care vor completa inerent spectrul informațional referitor la speciile vegetale recoltate de către această comunitate preistorică, dar și datele despre mediul înconjurător sau, preferințele gastronomice ale acestor grupuri de oameni.

◈ Mulțumiri

Această lucrare a fost realizată în cadrul a două proiecte finanțate de către MEN – UEFISCDI, proiect nr. PN-II-PT-PCCA-2013-4-2302 și proiect nr. PN-II-ID-PCE-2011-3-1015. De asemenea, dorim să-i lui Theodor Ignat pentru prelucrarea imaginilor utilizate în acest articol și lui Adrian Bălășescu pentru comentariile realizate pe una dintre variantele inițiale de text.

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Abstract: *This article presents the results of the anthropological analysis of human osteological material excavated from Gârleşti (county Dolj, Romania) belonging to the Neolithic period. The material of this study consists of sixteen human skeletons, from thirteen graves, of which eight are subadults and eight were adults. Of the total number of skeletons, eight were estimated to be female, three male, one possible male, the rest being undeterminable. A few cases have been reported with pathological conditions in the dento-maxillary arcade (dental cavities, abscesses, dental hypoplasia) and postcranian skeleton. During macroscopic examination of skeletal remains, we found a few features that indicate a possible manifestation of an infection with Mycobacterium Leprae, coming from M 004's skeleton. However the differential diagnosis may indicate other diseases which produced similar effects on the skeleton. The pathological changes identified appear to be directly related to the age at death of individuals and demographic features of these skeletons appear to be similar to other contemporary cemeteries.*

Rezumat: *Articolul prezintă rezultatele analizei antropologice a materialului osteologic uman din necropola neolitică de la Gârleşti (jud. Dolj). Au fost analizate 16 schelete, provenind din 13 morminte, opt aparținând unor subadulți și opt unor adulți. Din numărul total de schelete, opt au fost determinate ca fiind de sex feminin, trei de sex masculin, unul posibil masculin, restul fiind indeterminabili. Au fost semnalate câteva cazuri cu afecţiuni patologice la nivelul aparatului dento-maxilar (carii, abcese, hipoplazie dentară) şi scheletului postcranian. Dintre acestea este interesantă prezența unui posibil caz de infecţie cu Mycobacterium Leprae în mormântul 4, diagnosticul diferențial putând indica și alte boli care ar fi putut produce manifestări similare pe schelet. Transformările patologice par a fi în relație directă cu vârsta la deces a indivizilor, iar elementele de demografie ale lotului studiat par a fi asemănătoare cu alte cimitire contemporane.*

Keywords: *Neolithic, human remains, pathology, infectious disease, leprosy, Gârleşti (Romania).*
Cuvinte cheie: *neolitic, oseminte umane, patologie, boli infecţioase, lepră, Gârleşti (România).*

◈ Introducere

Studiul de faţă prezintă analiza antropologică a materialului osteologic uman, provenind din necropola neolitică de la Gârleşti (com. Ghercești, jud. Dolj). Necropola, doar parțial cercetată, este compusă din 15 morminte, fiind atribuită culturii Sălcuța (M. Nica 1993, p. 3-17). Dintre acestea, M 2 pare a fi o reînhumare, fiind identificate puține fragmente osteologice de la doi indivizi, iar mormintele 7-8 par a fi un mormânt colectiv (M. Nica 1993, p. 6, fig. 2). Scheletele sunt dispuse chircit, opt dintre ele pe partea stângă, orientate NNV-SSE, și patru pe partea dreaptă (M 7-10), orientate SE-NV (și nu 10 pe stânga și 4 pe dreapta cum afirmă autorul M. Nica 1993, p. 9-10); pentru trei înmormântări poziția scheletului este indeterminabilă (M 2, 6, 11).

Materialul, descoperit în urma săpăturilor arheologice efectuate în anul 1989, beneficiază de o datare cu radiocarbon (probă prelevată din M 7), care calibrată se încadrează în intervalul 5359 BC (95.4%) - 5218 BC (Poz-52501)[1] şi aparţine Eneoliticului (C. Lazăr, T. Ignat 2012, p. 113, 134, nr. 55).

În custodia Institutului de Antropologie „Francisc I. Rainer" se află doar 13 morminte (lipsind M 12 şi M 15). În acestea au fost identificate 16 schelete, în trei morminte fiind identificate fragmente osteologice care provin de la doi indivizi.

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[1] Calibrated with OcCal v4.1.7. Bronk Ramsey (2010); R:5. Date atmosferice după Reimer et al (2009).

◈ Materiale şi metode

A fost înregistrat gradul de conservare al fiecărui schelet (procentul în care oasele au fost afectate de agenţii naturali din sol, gradul de erodare şi exfoliere al suprafeţei oaselor) (B. Connell, P. Rauxloh 2003, p. 2; Connell 2008, p. 9).

Starea de reprezentare a scheletelor (procentul în care segmentele componente ale oaselor sunt păstrate) a fost înregistrat după R.H. Steckel et *alii* (2006, p. 19).

Pentru determinarea sexului scheletelor au fost utilizate caracterele craniene (glabela, mastoida, eminenţa mentală şi linia nuchală după J.E. Buikstra, D.H. Ubelaker 1994, p. 19-21), post-craniene (concavitatea subpubică, unghiul subpubic, ramul ischio-pubic, arcul ventral, arcul compus, marea incisură sciatică după R.H. Steckel et *alii* 2006, p. 19-24) şi urmele de parturiţie (R.H. Steckel *et alii* 2006, p. 25, fig. 23). Sexul pentru scheletele de subadulți a fost determinat prin aplicarea funcţiilor discriminante pe măsurători prelevate la dentiția permanentă şi deciduală (C. Vito, S.R. Saunders 1990).

Pentru estimarea vârstei scheletelor de subadulţi s-a utilizat stadiul erupţiei dentare (R.H. Steckel *et alii* 2006, p. 17, fig. 11-13), lungimea oaselor lungi (M. Stloukal, H. Hanakova 1978, p. 53-69; Z. Bernert et *alii* 2007, p. 199-206) şi gradul de sinostoză al epifizelor (N. Powers 2008, p. 13-14, tab. 3; J.E. Buikstra, D.H. Ubelaker 1994, p. 41-44, fig. 20). Pentru estimarea vârstei scheletelor de adulţi s-a utilizat gradul de sinostoză al suturilor craniene (T.D. White et *alii* 2012, p. 391-393, fig. 18), evoluţia capetelor sternale ale coastelor (S.R. Loth, M.Y. İşcan 1989, p. 106-118), evoluţia simfizelor pubice şi evoluţia suprafeţelor auriculare (T.D. White et *alii* 2012, 394-397; 400-404, fig. 18.12; 18.15).

În lipsa indicatorilor mai sus menţionaţi, vârsta a fost estimată pe baza transformărilor degenerative ale segmentelor scheletice păstrate, apariţia osteoartrozei pe marginile corpurilor vertebrale şi/sau la nivelul articulaţiilor (D.H. Ubelaker 1980, p. 60-62, fig. 77, 81) şi resorbţia ţesutului spongios din epifizele proximale ale humerusurilor şi femurelor (A.G. Acsádi, J. Nemeskéri 1970, p. 122-135, fig. 20, 22).

Identificarea şi descrierea transformărilor patologice s-a realizat pe baza volumului lui D.J. Ortner (2003). Au fost înregistrate afecţiunile aparatului dento-maxilar, cariile dentare, abcesele și localizarea lor, pierderea dinţilor ante-mortem și hipoplazie emailului (R.H. Steckel et *alii* 2006, p. 15-16, fig. 10), resorbţia osului alveolar, tartrul şi localizarea cariilor (D.R. Brothwell 1981, p. 155, fig. 6/12, 14). La nivelul craniului s-au înregistrat porozităţile craniene *cribra orbitalia* şi *cribra cranii* (R.H. Steckel et *alii* 2006, p. 12-14, fig. 8-9), la nivelul scheletului postcranian s-a înregistrat osteoperiostita (R.H. Steckel et *alii* 2006, p. 30-31, fig. 26) şi urmele de osteoartroză (R.H. Steckel *et alii* 2006, p. 31-33, fig. 27-29).

Datele metrice (tab. 4-5 a și b) au fost prelevate după metodele lui Martin (G. Bräuer 1988, p. 160-232) şi J.E. Buikstra, D.H. Ubelaker (1994, p. 74-84).

Statura a fost calculată prin metoda lui E. Breitinger (1937) pentru scheletele de sex masculin și cea a lui H. Bach (1965) pentru cele de sex feminin.

◈ Rezultate

Stare de conservare și reprezentare

Toate scheletele analizate sunt bine conservate, suprafața oaselor nefiind erodată și exfoliată decât în proporție de 25-50%. În ce privește procentul de reprezentare al segmentelor scheletice, se poate observa că mandibula, craniul și oasele lungi (humerus, radius, cubitus, femur, tibie și peroneu) sunt cel mai bine reprezentate procentual (ele păstrându-se și cel mai bine în sol) fiind de cele mai multe ori singurele oase întregi sau întregibile. Totuși, starea bună de conservare a scheletelor și diferențele între stânga și dreapta, arată faptul că procentul mic de reprezentare al oaselor de dimensiuni reduse (coaste, omoplați, stern, vertebre, coxale, sacrum, oase de la mâini și picioare) sunt mai degrabă rezultatul selecției în cursul recoltării de pe șantier, al depozitării, deranjamentelor ulterioare care au afectat unele înmormântări (M. Nica 1993) și nu rezultatul direct al acțiunii agenților naturali din sol (tab. 1).

Tafonomie

M 9 prezintă urme de pigment verde de la obiecte de metal, în partea medială a diafizei humerusului stâng, iar M 10 prezintă urme similare pe partea anterioară din treimea medială a diafizelor ambelor femure.

Scheletul M 1A prezintă în zona condilului mandibular drept, în partea anterioară a procesului coronoid cinci mici incizii, produse în vechime (fig. 1). Inciziile înregistrate în partea superioară au forma literei U, iar cele din partea inferioară au forma literei V. În lipsa altor indicatori, considerăm că este posibil să fi fost realizate peri-mortem, sau mai degrabă să fie urmele unei intervenţii ulterioare înmormântării (posibil urme de dinți de rozătoare).

Demografie

Distribuția pe sexe și vârste în cadrul lotului indică un număr de nouă adulți (56,25%) și șapte subadulți (43,75%). Dintre adulți, patru au fost determinați ca bărbați sau posibil bărbați, patru ca femei și un indeterminabil. Totuși, adăugând și cei patru indivizi subadulți al căror sex a fost determinat ca posibil feminin obținem un raport de 1:2 în întreg lotul (tab. 2).

Afecţiuni dentare

De la cei 16 indivizi analizați provin 158 de dinți permanenți erupți, păstrați în alveole sau separat (tab. 2). Aceștia prezentau un număr de patru carii (2,53%), toate localizate pe maxilar (tab. 3), opt dinți pierduți ante-mortem (5,26%) și 10 abcese (10,58%) (tab. 3). Bărbații nu prezintă carii, spre deosebire de femei (5% dinți cariați), acestea având și o incidență mai ridicată a abceselor dentare (1,59% M[2] vs. 12,05% F). În schimb, raportul este opus în privința dinților pierduți ante-mortem (9,52% M vs. 1,20% F). Acesta poate fi explicat prin faptul că pierderea ante-mortem a dinților apare la individul de sex masculin cel mai înaintat în vârstă din cadrul lotului (M 7). O explicație similară pare a fi legată și de lotul feminin, marea majoritate a afecțiunilor dentare afectând indivizii cei mai înaintați în vârstă (M 1A și M 4).

Linii de hipoplazie lipsesc la indivizii de sex feminin, în schimb sunt cel puțin trei pe caninii şi incisivii mandibulari şi maxilari la M 14 (50% din totalul cazurilor înregistrate pentru lotul masculin) (fig. 2). De asemenea, unul din subadulți (M 2A) singurul din lot care prezenta și o depunere medie de tartru are cel puțin două linii de hipoplazie (pe caninii și incisivii mandibulari și maxilari). Aceste informații ne arată că individul a avut o alimentație bogată în carbohidrați, iar în perioada formării rădăcinilor incisivilor și caninilor (4-7 ani) a trecut prin episoade de stres sau îmbolnăvire.

Toate femeile și bărbații adulți care au poziții de dinți permanenți păstrate prezintă urme de resorbție a osului alveolar (100%) probabil datorată periodontitei, resorbția fiind mai accentuată în cazul indivizilor cu vârste mai înaintate (M 4-5, 7, 14). Depuneri de tartru, sunt de asemenea, prezente în toate cazurile pentru ambele grupe de sex, în care avem dinți permaneți păstrați (100%).

M 5 are caninul maxilarului stâng microdont (dinte cu dimensiuni mai mici decât în mod normal) și heterotopic (dinte supranumerar în afara regiunii alveolare a maxilarului), dar în acest caz caninul nu este supranumerar, nefiind erupt (D.J. Ortner 2003, p. 598-599, fig. 23/21). M 7 are un premolar permanent, probabil mandibular cu rădăcina bifidă.

Într-un alt caz (M 14) a fost semnalată în partea stângă a mandibulei, între eminenţa mentală şi foramenul mental o excrescenţă osoasă, cu diametrele 8x7 mm, a cărei apariție poate fi legată de o traumă, infecție, tumoare sau de o dezvoltare anormală a corpului mandibular (fig. 2).

M 4 prezintă o uzură patologică a incisivilor, caninilor şi premolarilor maxilari, teșiți spre posterior care a dus la distrugerea emailului dentar și expunerea dentinei și a cavităților pulpare. Acest tip de uzură (în ciuda vârstei relativ înaintate a individului 35-45 de ani) este dublată și de prezența a trei carii, unui dinte pierdut ante mortem și a opt abcese dentare. Acestea pot sugera o dietă diferită față de ceilalți indivizi (T.D. White *et alii* 2012, p. 482-483) sau utilizarea dinților și pentru alte scopuri decât masticația (spartul unor obiecte tari, prelucrarea pieilor de animale, D.J. Ortner 2003, p. 604-605) dar poate fi și rezultat al poziției anormale a dentiției, de tip "overbite" (D.J. Ortner 2003, p. 604-605, fig. 23/36).

Osteoperiostită

Un singur schelet de sex feminin, provenind din M 4, prezintă urme accentuate de infecție a periostului, vindecată, care a afectat oasele lungi ale piciorului drept (14,28% din lotul feminin), tibia și peroneul având peste 50% din suprafața diafizei afectată, cu deformare pronunțată, femurul fiind afectat în proporție mai redusă (sub 50%) (fig. 5). Cauza infecției în acest caz este probabil legată de multiple afecțiuni vizibile pe scheletul acestui individ (vezi mai jos).

[2] M = sex masculin; F = sex feminin.

Hyperostoza porotica

Prevalența *Cribra orbitalia*, este de 12,5% în cadrul lotului studiat, scheletul din M 4, fiind singurul care prezintă această afecțiune (25%) din numărul de segmente scheletice înregistrate pentru lotul feminin. *Cribra cranii* este prezentă în 36,36% din numărul de segmente scheletice înregistrate în întreg lotul, 42,86% în cazul indivizilor de sex feminin și 33,33% în cazul celor de sex masculin.

Osteoartroză

Urmele de osteoartroză au fost înregistrate doar în câteva cazuri (trei schelete de sex masculin M 3, 7, 14 și două de sex feminin M 1A și 4), procentul în care segmentele înregistrate erau afectate variind între 16,67% pentru vertebrele cervicale și 50% (mai ales pentru articulațiile oaselor lungi). Nu există o prevalență a afecțiunilor la o anumită grupă de sex, în schimb apare cu precădere la indivizii cu vârste de 30-50 de ani.

Staturile

Au fost calculate doar pentru câte un individ din ambele grupe de sex (tab. 2), pe baza lungimii maxime a femurului stâng. Acestea sunt asemănătoare (cu excepția celui de sex feminin, M 1A, care este mai înalt decât media celorlalte necropole) cu cele din alte cimitire neolitice (deși acelea au fost calculate prin metode diferite): Cernavodă: media de 166,3 cm pentru lotul masculin, 150,9 cm pentru cel feminin (O. Necrasov et *alii* 1959, p. 28); Cernavodă-*Dealul Sofia*: media de 164,96 cm bărbați, 154,72 cm la femei (O. Necrasov et *alii* 1965, p. 169); Cernica: media de 165,47 cm bărbați, 154,59 cm femei (O. Necrasov et *alii* 1983, p. 13).

Afecțiuni patologice

Un caz particular este reprezentat de scheletul M 4. Acesta prezintă afecțiuni care pot fi urme ale unei boli infecţioase generalizate. Pe lângă patologia dentară prezentată mai sus, craniul prezintă microporozităţi pe parietale şi occipital (*cribra cranii*), în interiorul orbitei drepte (*cribra orbitalia*), pe maxilar deasupra foselor dentare şi pe bolta palatină. Maxilarul prezintă o resorbţie puternică bilaterală în zona foramenelor infraorbitale (fig. 3) şi în porţiunea corespunzătoare incisivilor şi caninilor.

Falanga distală 1 stânga de la oasele piciorului, are epifiza şi metafiza anterioară deformată, cu atrofierea epifizei anterioare dar nu și a diafizei (fig. 4). Falanga intermediară şi metatarsianul corespunzător nu prezintă modificări.

Suprafaţa auriculară dreapta şi aripa sacrală corespunzătoare, prezintă deformări ale suprafeţelor şi exostoze de până la 5 mm. Pe treimea distală a diafizei tibiei şi peroneului stâng se observă urmele unei infecţii, manifestată prin îngroşarea diafizelor şi macroporozitate (fig. 5). Având în vedere faptul că în zona corespunzătoare porozităţii nu se observă urme de fractură a celor două oase, este de presupus faptul că pătrunderea infecţiei s-a produs prin lezarea părţilor moi, ajungând astfel la os. Constatăm prezenţa la nivelul peroneului, pe faţa posterioară a unui orificiu cu dimetrul de 4,76x2,66 mm, care nu perforează diafiza. Foramenul nutritiv este poziţionat la 47,37 mm deasupra acestui orificiu. Tibia şi peroneul de pe partea dreaptă nu prezintă urme de infecţie.

Afecţiuni ale maxilarului, manifestate prin resorbţia şi atrofierea osului la nivelul fosei canine şi a zonei suborbitale, prezenţa de *cribra orbitalia*, asociate cu atrofierea falangelor distale ale membrelor superioare sau inferioare şi cu infecţii puternice la nivelul oaselor lungi caracterizează printre altele și infecţia cu *Mycobacterium leprae* (V. Mariotti et *alii* 2005, p. 311-325; M.G. Belcastro et *alii* 2005, p. 431-448; D.J. Ortner 2003, p. 267-268). Aceasta afectează în principal terminaţiile nervoase ale extremităţilor, ducând în final la pierderea funcţiei motorii în zona respectivă. Din acest motiv deformarea puternică a falangelor distale este considerată a fi o trăsătură distinctivă în stabilirea diagnosticului infecţiei cu *Mycobacterium leprae,* într-un stadiu avansat manifestându-se prin deformarea, atrofierea şi resorbţia osului (V. Mariotti et *alii* 2005, p. 317, fig. 10).

Resorbţia constatată la nivelul maxilarului scheletului M 4 în zona foselor şi în porţiunea suborbitală şi microporozitatea înregistrată la nivelul boltei palatine, sunt asemănătoare cu cele observate în două cazuri diagnosticate cu lepră, înregistrate în Colecţia Craniologică Rainer (**A. 1651**-anonim cauză deces: lepră; **R. 1386** Marinescu Mihail † 1926, cauză deces: lepră, sex: masculin, vârstă: 36 ani, fierar, Spital Colentina), comparate cu un craniu fără asemenea afecțiuni (**R. 158**, Iordache Buboiu † 1943, cauză deces: septicemie, sex: masculin, vârstă: 60 ani, muncitor, Spital Colentina) (fig. 6).

În general se consideră că doar 5% din indivizii cu lepră prezintă și afecțiuni scheletice specifice, boala are manifestări de intensitate variabilă pe oase, manifestări care depind de gravitatea leziunilor părţilor moi, răspunsul imun al organismului etc., iar un număr considerabil de indivizi diagnosticați în timpul vieții cu lepră puteau suferi concomitent şi de alte afecțiuni ce lăsau urme

asemănătoare (D.J. Ortner 2003, p. 264-266). Astfel, diagnosticul diferențial pentru acest caz poate indica și alte boli care lasă pe oase urme asemănătoare leprei. Astfel, resorbția osului maxilar poate fi cauzată de patologia dentară accentuată, sifilisul terțiar, tuberculoză, leishmanioză sau cancer. Urmele de infecție de pe tibie și peroneu pot fi legate de o infecție a periostului (care poate avea o etiologie foarte variată) sau o traumă; prezența *cribra cranii* de deficiențe nutritive; atrofia falangei distale a piciorului și deformarea articulației sacro-iliace de o traumă, de transformări degenerative legate de înaintarea în vârstă; sifilis sau degerături în cazul falangelor etc. (D.J. Ortner 2003, p. 263-271).

Diagnosticul de lepră este cu atât mai dificil de atribuit cu cât, acesta ar fi unul din cele mai vechi cazuri identificate, considerându-se în general că boala are o origine asiatică, fiind adusă în Europa odată cu reîntoarcerea armatelor lui Alexandru cel Mare (D.J. Ortner 2003, p. 264-266). Totuși, analiza genomului *Mycobacterium leprae* a arătat că acesta ar fi prezent în organismul uman de cel puțin 100000 de ani fiind una din cele mai vechi infecții specific umane (X.Y. Han, F.J. Silva 2014, p. 6).

Indiferent de diagnosticul atribuit, cazul de față prezintă cele mai numeroase afecțiuni patologice din cadrul lotului, fiind de altfel și singurul schelet de sex feminin din acest lot care prezintă urme de parturiţie.

Printre resturile osteologice ale scheletului M 11, au fost identificate şi două fragmente de os de animal.

◈ Discuții

Cimitirul de la Gârlești, este unul din puținele descoperiri funerare din sud-vestul României care oferă date asupra practicilor funerare din Eneolitic. Astfel, ca și în alte cazuri (Lîga, Ostrovul Corbului-*Botul Pisculuí*), defuncții adulți sunt lipsiți de inventar funerar, spre deosebire de unele morminte de copii (S. Oanță 2006, p. 57-59). În acest caz, este vorba despre obiecte de metal (mărgele și un pandantiv) depuse în M 8 și M 9, care par a face parte dintr-un grup de înmormântări, M 7-10, orientate bipolar și complementar față de restul înmormântărilor. Acest grup de înmormântări are un schelet de sex posibil masculin, cel mai înaintat în vârstă din cadrul cimitirului (M 7) lângă care a fost depus M 8, posibil concomitent, și la un interval de timp alți doi copii cu vârste apropiate (4-6 ani); toți indivizii subadulți fiind de sex feminin. Interesant este faptul că inventare funerare apar în morminte aparținând celor mai tineri subadulți din cadrul lotului, de sex feminin, ale căror schelete nu prezintă alterări patologice, în contrast cu M 2A, care prezintă urme de stres nutrițional în perioada de creștere și este lipsit de inventar. În ce măsură, distribuția chorologică a acestui grup de înmormântări, ritualul funerar diferit, elementele de demografie și starea de sănătate etc. au și o semnificație socială e dificil de spus, în condițiile în care lotul este restrâns, incomplet studiat, iar cimitirul doar parțial cercetat. Totuși, remarcăm și faptul că acest tratament funerar al defuncților (lipsa inventarelor la adulți vs. subadulți, orientare bipolară a unor subadulți) și numărul mare de subadulți în cadrul cimitirelor contemporane nu este o practică singulară (I. Merkyte 2005, p. 140-154), excepție la Gârlești făcând raportul echilibrat dintre grupele de sex pentru adulți.

Raportul între sexe (Gârlești: 50% femei, 25% bărbați) și cel dintre grupele vârstă (43,75% subadulți) este semnificativ diferit față de alte necropole neolitice. Asftel, luând ca exemplu o serie de necropole neolitice din sudul României, cu loturi scheletice mai numeroase observăm o situație inversă față de Gârlești, la Chirnogi: 16,12% subadulți; Cernavodă: 8,32% subadulți; Cernica: 12,26% subadulți; Sultana-*Valea Orbului*: 22,22% subadulți; Chirnogi: 20,96% femei, 58,06% bărbați; Cernavodă: 27,08% femei, 43,75% bărbați; Cernica: 40,39% femei, 47,02% bărbați; Sultana-*Valea Orbului* 38,89% femei, 44,44% bărbați (C. Bălteanu, P. Cantemir 1991, p. 3-5, tab. 1-3; O. Necrasov et *alii* 1985, p. 3). Ideea că numărul mic de copii din aceste cimitire este legat de practica depunerii acestora în așezări (C. Bălteanu, P. Cantemir 1991, p. 6), pare a fi confirmat și de prezența unui număr mare de subadulți (93,5%) în înmormântări din așezări cu ceramică Gumelnița, comparativ cu subadulții înmormântați în cimitire (A. Ion 2008, p. 118-119).

Explicațiile acestor procente în cadrul lotului de la Gârlești pot fi variate, mortalitate infantilă mai ridicată, un număr mai însemnat de femei în cadrul populației, cercetarea parțială a cimitirului. Totuși tinând cont de asemănările (S. Oanță 2006, p. 57-59) cu alte necropole apropiate în timp și spațiu (Lîga, Ostrovul Corbului-*Botul Pisculuí*) la Gârlești pare mai degrabă a fi vorba despre un ritual funerar diferit față de alte necropole neolitice din sudul României (atribuite altor grupe culturale) în ceea ce privește grupele de sex și vârstă ale indivizilor inhumați, poziției scheletelor în raport cu acestea, distribuției orientărilor și a inventarului funerar.

În ceea ce privește transformările patologice suferite de indivizii studiați, marea lor majoritate par a fi în relație cu vârsta la deces, atât afecțiunile dentare cât și artroza, urmele de infecții etc. fiind înregistrate la indivizii mai înaintați în vârstă din cadrul lotului. Totuși, la indivizii de sex feminin apare un procent mai ridicat de transformări patologice (unele afecțiuni dentare, osteoperiostita, *hyperostoza porotica*). Deși, lotul este restrâns, aceste observații pot indica condiții de viață mai dificile ale femeilor în cadrul populației din care proveneau, care le făceau mai vulnerabile la apariția unor probleme de sănătate.

◈ Mulţumiri

Mulţumim doamnei dr. Sanda Bălţoi, medic primar radiologie și imagistică medicală pentru realizarea radiografiilor fragmentelor osteologice, dr. Andrei Dorian Soficaru pentru ajutorul oferit şi dr. Cătălin Alexandru Lazăr pentru punerea la dispoziţie a rezultatelor datărilor radiocarbon obținute în cadrul proiectului de cercetare exploratorie finanţat de CNCS - UEFISCDI, cod depunere PN-II-ID-PCE-2011-3-1015. Acest articol a fost realizat în cadrul proiectului PNII-ID-PCCE-2011-2-0013 finanțat de CNCS - UEFISCDI.

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1	2	3	4		5		6		7		8		9		10	11	
			d	s	d	s	d	s	d	s	d	s	d	s		d	s
0	25	31,25	56,25	56,25	68,75	68,75	31,25	37,5	50	62,5	56,25	62,5	50	43,8	93,75	43,75	56,3
1	18,75	25	12,5	6,25	6,25	12,5	25	18,75	12,5	6,25	12,5	12,5	37,5	43,8	6,25	37,5	25
2	18,75	6,25	0	6,25	25	18,75	18,75	18,75	12,5	12,5	6,25	6,25	6,25	6,25	0	12,5	12,5
3	37,5	37,5	31,25	31,25	0	0	25	25	25	18,8	25	18,75	6,25	6,25	0	6,25	6,25

12				13		14	15		16		17		18		19	
Cerv.	Tor.	Lomb.	Indet.	d	s		d	s	d	s	d	s	d	s	d	s
50	68,75	62,5	75	62,5	75	75	25	31,25	68,75	93,8	43,75	37,5	37,5	68,75	68,75	62,5
31,25	6,25	12,5	12,5	31,25	6,25	25	25	25	0	0	18,75	31,3	37,5	0	12,5	18,75
0	6,25	18,75	12,5	6,25	12,5	0	31,25	25	0	0	12,5	6,25	6,25	6,25	6,25	6,25
18,75	18,75	0	0	0	6,25	0	18,75	18,75	31,25	6,25	25	25	18,75	25	12,5	12,5

Tab. 1. Reprezentarea procentuală a segmentelor scheletului în cadrul lotului de la Gârlești (1. Scoruri; 2. Craniu; 3. Mandibulă; 4. Claviculă; 5. Omoplat; 6. Humerus; 7. Radius; 8. Ulna; 9. Oase mână; 10. Stern; 11. Coaste; 12. Vertebre; 13. Coxale; 14. Sacrum; 15. Femur; 16. Rotule; 17. Tibia; 18. Fibula; 19. Oase picior).
The procentual representation of the preserved skeletal segments in the sample from Gârlești (1. Scores; 2. Cranium; 3. Mandible; 4. Clavicle; 5. Scapula; 6. Humerus; 7. Radius; 8. Ulna; 9. Hand bones; 10. Sternum; 11. Ribs; 12. Vertebra; 13. Os Coxae; 14. Sacrum; 15. Femur; 16. Patella; 17. Tibia; 18. Fibula; 19. Foot bones).

Mormânt	Sex	Vârstă	Statură	PDPE	DEP	DPC	DPPAM	NA
M 001 A	F	35-45	159,74±4,1 cm (fem. stg.)	29	28	0	1	1
M 001 B	ind.	12-14	-	0	1	0	0	0
M 002 A	ind.	9-10	-	6	10	0	0	0
M 002 B	ind.	18-20	-	0	0	0	0	0
M 003	M	30-35	164,88±4,8 cm (fem. stg.)	32	32	0	0	0
M 004	F	35-45	-	27	24	3	1	8
M 005	F	30-32	-	27	28	1	0	0
M 006	F	23-24	-	0	0	0	0	0
M 007	M ?	40-50	-	0	7	0	5	1
M 008	F	4-5	-	0	0	0	0	0
M 009	F	5-6	-	0	0	0	0	0
M 010	F	5-6	-	0	0	0	0	0
M 011	M	20-40	-	0	0	0	0	0
M 013 A	F	5-6	-	0	0	0	0	0
M 013 B	ind.	4-6	-	0	0	0	0	0
M 014	M	35-45	-	31	28	0	1	0
		TOTAL		152	158	4	8	10

Tab. 2. Gârlești. Sexe, vârste, staturi și patologia dentară (PDPE - numărul de poziţii de dinţi permanenţi erupţi; DEP - numărul de dinţi permanenţi erupţi; DPC - numărul de dinţi permanenţi cariaţi; DPPAM - numărul de dinţi permanenţi pierduţi antemortem; NA - număr de abcese).
Gârlești. Sexes, ages at death, statures and the summary of dental pathology (PDPE - total number of preserved erupted teeth positions; DEP - total number of preserved erupted permanent teeth; DPC - total number of permanent teeth with caries; DPPAM - total number of teeth lost antemortem; NA - total number of abscesses).

Nr. mormânt	Stânga								Dreapta							
Maxilar	M3	M2	M1	PM2	PM1	C	I2	I1	I1	I2	C	PM1	PM2	M1	M2	M3
M 4			1; 5	2	1; 5	5	5	5	5		5			5		
M 5														2		
Mandibulă	M3	M2	M1	PM2	PM1	C	I2	I1	I1	I2	C	PM1	PM2	M1	M2	M3
M 1A			5													
M 7						5										

Tab. 3. Gârlești. Localizarea cariilor și abceselor dentare (1. Carie oclusală; 2. Carie interproximală; 5. Abces dentar).
Gârlești. Positions of caries cavities and abcess cavities (1. Oclusal cavities; 2. Interproximal cavities; 5. Abcess cavities).

Nr. mormânt	**M 001 A**	**M 002 A**	**M 003**	**M 004**	**M 005**	**M 014**
Sex	♀	ind	♂	♀	♀	♂
1. L. max. (g-op)	180	173			173	172
3. L. calotei (g-l)	171	167			167	170
5. L. bazei (n-ba)		89				
7. L. f.m. (ba-o)		33				
8. Lăţ. max. (eu-eu)	135	138	145	140		
9. Lăţ. min. frunte (ft-ft)		91	96	100	95	103
11. Lăţ. calotei (au-au)	111	106	116		115	
16. Lăţ. f.m.		27				
17. Înălţ. craniu (ba-b)		114				
*19a. Înălţ. mast. dr.	25	17,5	28	26	27	32
*19a. Înălţ. mast. stg.	24	16	30	25	27	30
29. Coarda frontală (n-b)	108	101			103	116
30. Coarda parietală (b-l)	112	108	115	114	105	108
31. Coarda occipitală (l-o)	91	94	91	94	118	
43. Lăţ. sup. faţă (fmt-fmt)		91	104	109	98	106
50. Lăţ. interorbitală (mf-mf)		79	93			92
51. Lăţ. orbitei (mf-ek) (dr.)		32				
51. Lăţ. orbitei (mf-ek) (stg)		31				
52. Înălţ. orbită (stg.)			32			
54. Lăţ. nas				26,5	27	
60. L. maxilo-alv. (pr.-alv.)			51,5			
61. Lăţ. maxilare (ekm-ekm)	58		58	58		59
66. Lăţ. goniacă (go-go)	87	83			92	
68. L. mand.	78	67	74			
69. Înălţ. simfiză (id-gn)	36	26,5	36		34	
69(1). Înălţ. corp f.m. dr.	37		34	33	33	32
69(1). Înălţ. corp f.m. stg.			35		32	31
69(3). Gros. corp f.m. dr.	14	13	13	12		14
69(3). Gros. corp f.m. stg.	14	13	14	10	12	13
70. Înălţ. ram mandibular	53	42,5	55			
71a. Lăţ. min. ram dr.	33	35	33	33		34
71a. Lăţ. min. ram stg.	34	34		31		35
71(1). Lăţ. incis. mandib. dr.		38	43		34	
71(1). Lăţ. incis. mandib. stg.	44	38		39		
79. Unghi mand.	122	124	126			
I. 1. I. cranian orizontal (8:1)	75					
I. 13. I. fronto-par. transv. (9:8)			66,21	71,43		

Tab. 4. Gârlești. Măsurători schelet cranian.
Gârlești. Measurements of the skull.

Dim.şi indici	M 1A	M 2A	M 3	M 4	M 5	M 6
Sex	♀	**Ind.**	♂	♀	♀	♀
		dr./stg.	**dr./stg.**	**dr./stg.**	**dr./stg.**	**dr./stg.**
Claviculă						
1. L. max.	-	-/90	146/148	133/-	-	-
4. D. vert.	13/12	-/7	11/11	11/8	11/10,5	-
5. D. sag.	11/11	-/8	14/14	11/10	10/9,5	-
4:5. I. secţ.	118,18/108,09	-/87,50	78,57/78,57	100/80	110/110,53	-
Omoplat						
12. L. cav. glen.	34/33	-	-	-/24	-	-
13. Lăţ. cav. glen.	22/22	-	-	-	-	-
13:12. I. cav. glen.	64,71/66,67	-	**-**	-	-	-
Humerus						
1. L. max.	287/-	-	296,5/301	302/296	-	-
4. Lăţ. epif. dist.	54/-	-	59/59	55/54	-/52	52/-
5. D. max. la mijl.	19/20	-	21/22	22/19	18/18	-
6. D. min. la mijl.	15/15	-	18/19	15/16	14/14	-
9. D. transv. max. cap	40/-	-	44/44,5	41/41	-	-
10. D. sag. max. cap	36/-	-	42/39	38/-	-	-
6:5. I. secţ. diaf.	78,95/75	-	85,71/86,36	68,18/84,21	77,78/77,78	**-**
9:10. I. secţ. cap	111,11/-	-	104,76/114,10	107,89/-	-	-
Radius						
1. L. max.	**-/**226	**-**	233/235	-	205/-	-
4. D. transv. la mijl.	13/13	-	15/14	14/-	15/14	-
5. D. sag. la mijl.	11/10	-	12/11	10/-	11/10	-
5(6). Lăţ. epif. dist.	28/27	-	31/31,5	-	-	-
5:4. I. secţ. diaf.	84,62/76,92	**-**	80/78,57	71,43/-	73,33/71,43	-
Ulna						
*2a. L. fiz.	-/245	-	223,5/227,5	-	-/192	-
3. Perim. min.	32/33	-	36/37	33/-	35/34	-
11. D. dorso-volar	12/13	-	12/13	12/-	12/11	10/-
12. D. transv.	13/13	-	16/15	14/-	15/14	13,5/-
11:12 I. secţ.	92,31/100	-	75/86,67	85,71/-	80/78,57	74,07/-
Coxal						
1. Înălţ. coxal	-	-	-/210	-	-	-
Femur						
1. L. max.	-/404	-	424/429	-	-	-
2. L. poziţie nat.	-	-	420/427	-	-	-
6. D. sag. mijl.	24,5/24	-	28,5/28	24/27	24/23,5	-
7. D. transv. mijl.	23,5/24,5	-	25/24	25/22	22/23	-
8. Perim. mijl.	74/75	-	84/83	76/83	73/73	-
9. D. transv. subtroh.	30/30	-	30/30	31/32	28/28	-/25
10. D. sagit. subtroh.	22/20	-	26/26	21/23	23/24	-/22
18. D. vert. cap.	41/40	-	44/44	42/-	-	-/37
19. D. transv. cap	40/41	-	43/44	42/-	-	-/36
21. Lăţ. epif. dist.	-	-	76/76	-	-	-
6:7. I. pilastric	104,26/97,96	-	114/116,67	96/122,73	109,09/102,17	-
10:9. I. platimeric	73,33/66,67	-	86,67/86,67	67,74/71,88	82,14/85,71	-/88
Patella						
1. Înălţ. max.	37/-	-	38/38	40/-	36/-	-
2. Lăţ. max.	40/-	-	45/45	38,5/-	40/-	-
3. Gros. max.	18,5/-	-	19/19	19/-	17/-	-
1:2. I. înăl.-lăţ.	92,5/-	-	84,44/84,44	103,9/-	90/-	-
Tibie						
1. L. max.	-	-	347/346	-	-	-
3. Lăţ. epif. prox.	67/-	-	69/70	-	-	-
6. Lăţ. epifizei dist.	-	-	50/50	47/-	-	-
8. D. sag. la mijl.	27/26	-	31/31	25/27	28/28	-
8a. D. sag. la f. n.	33/31	-	36/35	33/33	33/33	-
9. D. transv. la mijl.	20/18,5	-	24/22	18/17	20/20	-
9a. D. transv. la f.n.	22/23	-	26/24	22/22	22/23	-
10a. Perim. la f.n.	87/85	-	94/90	85/85	85/85	-
9:8. I. secţ. diaf.	74,07/71,15	-	77,42/70,97	72/62,96	71,43/71,43	-
9a:8a. I. cnemic	66,67/74,19	-	72,22/68,57	66,67/66,67	66,67/69,70	-

Peroneu						
1. L. max.	-	-	-/330	-	-/310	-
2. D. max. la mijl.	13/14	-	17/16	13/13	13/13	-
3. D. min. la mijl.	11/11	-	12/13	11/11	11/10	-
3:2. I. diaf.	84,62/78,57	-	70,59/81,25	84,62/84,62	84,62/76,92	-
Calcaneu						
1. L. max.	66/-	-	72,5/-	71/-	-/71	-
2. Lăţ. la mijl.	36/-	-	38,5/40,5	41/-	-/41	-
2:1. I. lung.-lăţ.	54,55/-	-	53,10/-	57,75/-	-/57,75	-

Tab. 5a. Gârlești. Măsurători schelet post-cranian.
Gârlești. Measurements of the postcranial skeleton.

Dim.şi indici	**M 7**	**M 9**	**M 10**	**M 11**	**M 14**
Sex	♂	**Ind.**	**Ind.**	♂	♂
	dr./stg.	**dr./stg.**	**dr./stg.**	**dr./stg.**	**dr./stg.**
Claviculă					
1. L. max.	-	-/-	-	-	137,5/-
4. D. vert.	9/-	3/-	-	-	10/9
5. D. sag.	12/-	6/-	-	-	11/12
4:5. I. secţ.	75/-	50/-	-	-	90,91/75
Omoplat					
12. L. cav. glen.	-	-	-	-	33/-
13. Lăţ. cav. glen.	-	-	-	-	23/-
13:12. I. cav. glen.	-	-	-	-	69,70/-
Humerus					
1. L. max.	-	-	-	-	-
4. Lăţ. epif. dist.	-	-	-	-	57/-
5. D. max. la mijl.	-/19	11/10	-	-	22/19
6. D. min. la mijl.	-/14	9/9	-	-	16/16
9. D. transv. max. cap	-	-	-	-	-
10. D. sag. max. cap	-	-	-	-	-
6:5. I. secţ. diaf.	-/73,68	81,82/90	-	-	72,73/84,21
9:10. I. secţ. cap	-	-	-	-	-
Radius					
1. L. max.	-	-	-	-	228/-
4. D. transv. la mijl.	-	8/-	8/-	-	14/14
5. D. sag. la mijl.	-	6/-	6/-	-	11/12
5(6). Lăţ. epif. dist.	-	-	-	-	32/-
5:4. I. secţ. diaf.	-	75/-	75/-	-	78,57/85,71
Ulna					
*2a. L. fiz.	-	-	-	-	-
3. Perim. min.	-	-	-	-	31/33
11. D. dorso-volar	-	-	-	-	13/12
12. D. transv.	-	-	-	-	16/16
11:12 I. secţ.	-	-	-	-	81,25/75
Coxal					
1. Înălţ. coxal	-	-	-	-	-
Femur					
1. L. max.	-	-	-	-	-
2. L. poziţie nat.	-	-	-	-	-
6. D. sag. mijl.	25/25	14/-	13/12	30/29	27/-
7. D. transv. mijl.	24/25	14/-	13/13	29/30	24/-
8. Perim. mijl.	80/79	45/-	40/40	90/89	83/-
9. D. transv. subtroh.	28/29	16/-	14/-	-/35	29/-
10. D. sagit. subtroh.	21/22	14/-	12/-	-/28	24/-
18. D. vert. cap.	-	-	-	-	-
19. D. transv. cap	-	-	-	-	-
21. Lăţ. epif. dist.	-	-	-	-	-
6:7. I. pilastric	104,17/100	100/-	100/92,31	103,45/96,67	112,5/-
10:9. I. platimeric	75/75,86	87,50/-	85,71/-	-/80	82,76/-
Patella					
1. Înălţ. max.	-	-	-	-	-
2. Lăţ. max.	-	-	-	-	-
3. Gros. max.	19/-	-	-	-	-
1:2. I. înăl.-lăţ.	-	-	-	-	-

Tibie					
1. L. max.	-	-	-	-	-
3. Lăţ. epif. prox.	-	-	-	-	-
6. Lăţ. epifizei dist.	-	-	-	-	-
8. D. sag. la mijl.	25/23	-	-/14	34/33	-
8a. D. sag. la f. n.	-	-/17	-	-	-
9. D. transv. la mijl.	17/17	-/13,5	-/10	25/23	-
9a. D. transv. la f.n.	-	-	-	-	-
10a. Perim. la f.n.	-	-	-	-	-
9:8. I. secţ. diaf.	68/73,91	-	-/71,43	73,53/69,70	-
9a:8a. I. cnemic	-	-/79,41	-	-	-
Peroneu					
1. L. max.	-	-	-	-	-
2. D. max. la mijl.	-	-	-	-	-
3. D. min. la mijl.	-	-	-	-	-
3:2. I. diaf.	-	-	-	-	-
Calcaneu					
1. L. max.	-	-	-	-	-
2. Lăţ. la mijl.	-	-	-	-	-
2:1. I. lung.-lăţ.	-	-	-	-	-

Tab. 5b. Gârlești. Măsurători schelet post-cranian.
Gârlești. Measurements of the postcranial skeleton.

Fig. 1. Gârlești. Incizii pe condilul mandibular drept, M 1A.
Gârlești. Incisions on the right mandibular condyle, Grave 1A.

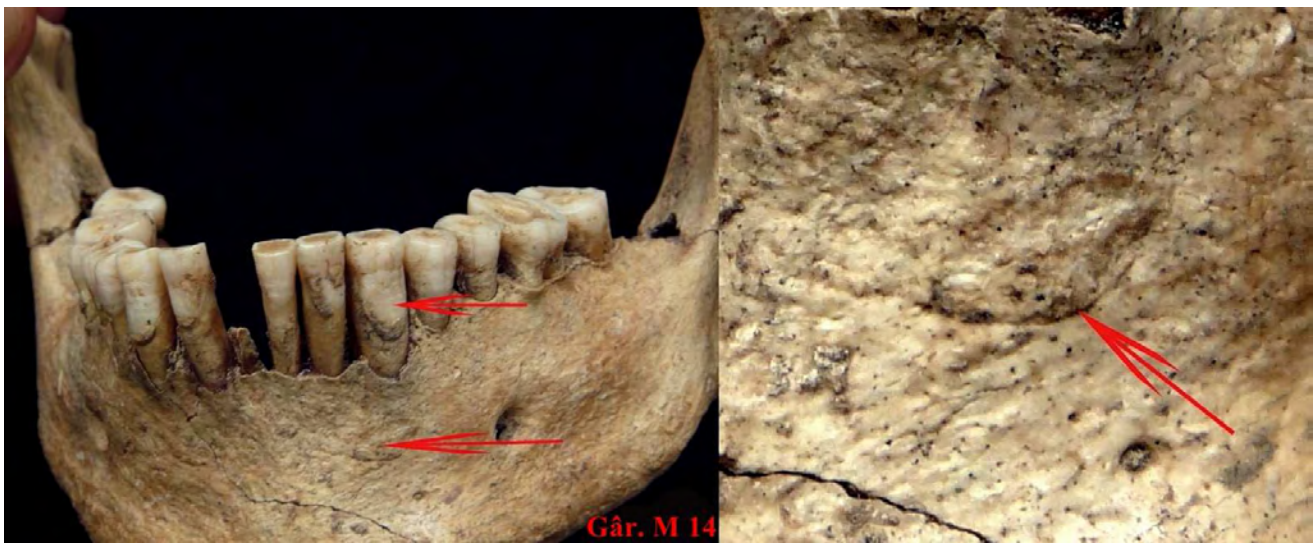

Fig. 2. Gârlești. Linii de hipoplazie și excrescenţă osoasă, pe mandibula din M 14.
Gârlești. Linear enamel hypoplasia and bone growth on the mandible from Grave 14.

Fig. 3. Gârlești. Maxilarul şi radiografia acestuia, evidenţiind resorbţia osului, M 4.
Gârlești. Picture and radiography of the maxilla, highlighting bone resorption, Grave 4.

Fig. 4. Gârlești. Falanga distală stânga (oasele piciorului) şi radiografia acestuia, evidenţiind atrofierea osului, M 4.
Gârlești. Picture of the left distal phalange from the foot bones and its radiography, highlighting bone atrophy, Grave 4.

Fig. 5. Gârlești. Tibia, peroneul stâng şi radiografia acestora, evidenţiind urmele infecţiei pe diafize, M 4.
Gârlești. Picture of left tibia and fibula with their radiography, highlighting changes of the diaphysis due to infection, Grave 4.

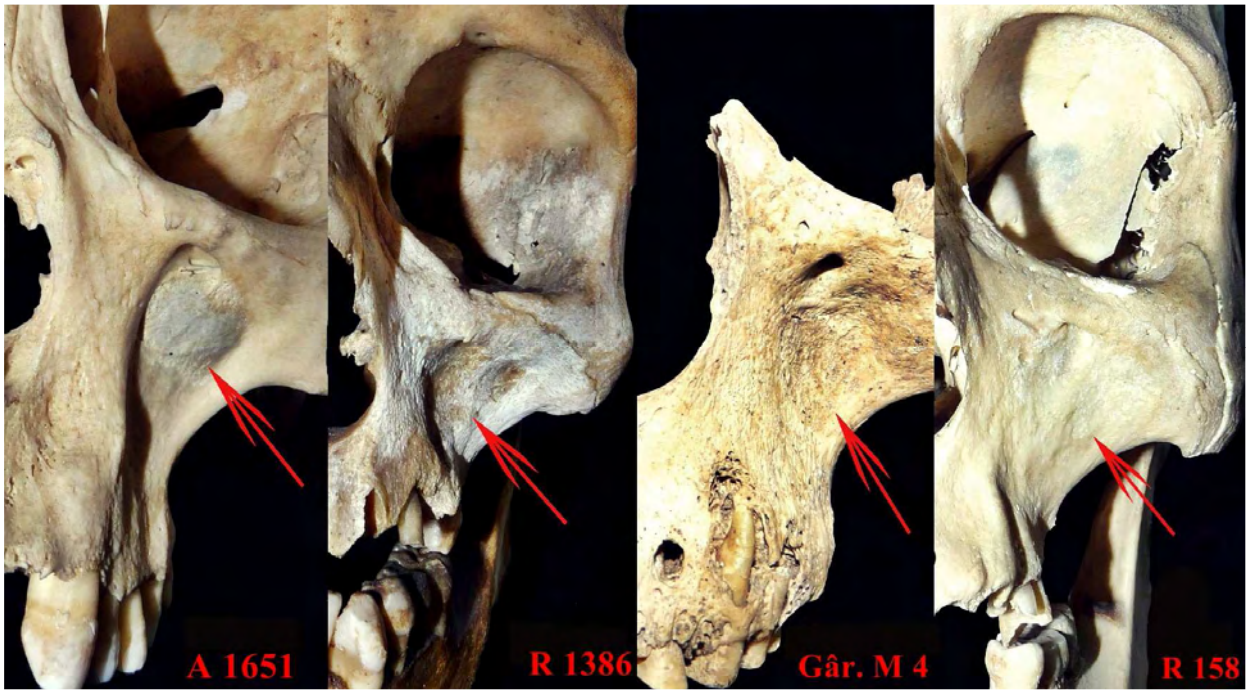

Fig. 6. Imagine comparativă cranii: A. 1651, R. 1386, Gârleşti M 4; R. 158.
Gârlești. Comparative images of the skulls: A. 1651, R. 1386, Gârleşti Grave 4; R. 158.

Un nou tumul preistoric cercetat la Ariceștii Rahtivani (jud. Prahova)

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Abstract: *In 2013 rescue archaeological research was carried out in Ariceștii Rahtivani, in a barrow with a height of 1.2 m and a maximum diameter of 50 m. Five inhumation burials placed around the centre of the mound were unearthed. The primary grave was surrounded by a stone ring. The grave pits were rectangular or oval-shaped. Three of the burials were collective and two of them were individual graves. The inventory consisted of pottery, ornaments such as silver hair rings, tubular copper pearls, a copper torque, a clay pendant, bone pearls and red ochre as well. The ware is attributed to the Coţofeni-Baden cultural horizon and the silver ornaments are well known in burials of the Pit-Grave communities. For the moment, the copper torque is an unique finding in graves attributed to Yamnaya communities. The five radiocarbon dates obtained assign this funerary monument to the last third of the IV millennium BC and the first period of the III millennium BC.*

Rezumat: *În anul 2013 la Ariceștii Rahtivani a fost cercetat în regim de săpătură preventivă un tumul ce avea înălţimea de aproximativ 1,2 m şi diametrul maxim de circa 50 m. Au fost descoperite cinci morminte de inhumație dispuse spre centrul movilei. Mormântul primar era înconjurat de un ring din piatră. Gropile mormintelor aveau forma rectangulară sau ovală. Au fost descoperite trei complexe funerare cu înmormântări colective și două simple. Inventarul acestora era format din ceramică, piese de podoabă de tipul inelelor de buclă din argint, perle tubulare din cupru, un colan de cupru, o podoabă din lut, mărgele din os, dar şi ocru roşu. Ceramica aparţine orizontului cultural Coţofeni-Baden, iar podoabele de argint sunt binecunoscute în mormintele atribuite comunităţilor Jamnaja. Deocamdată colanul de cupru este o prezență singulară în mormintele Jamnaja. Cele cinci datări radiocarbon situează cronologic acest complex funerar între ultima treime a mileniului IV BC şi prima parte a mileniului III BC.*

Keywords: *barrow, graves, inhumation, Coţofeni culture, Yamnaya.*
Cuvinte cheie: *tumul, morminte, inhumaţie, cultura Coţofeni, Jamnaja.*

◈ Introducere

În anul 2013 Muzeul Județean de Istorie și Arheologie Prahova a cercetat în cadrul unor săpături arheologice preventive un tumul aflat pe raza localității Ariceștii Rahtivani (jud. Prahova). Acesta era situat la 2,5 km est de vatra comunei și la 1,8 km nord de DN72, dispus în Câmpia Ploieștiului (pl. I). Movila avea înălţimea de aproximativ 1,2 m şi diametrul maxim de circa 50 m[1].

◈ Metodologia săpăturii arheologice

Având timpul dedicat cercetării limitat, dar și o anumită experienţă acumulată în săparea unor astfel de obiective (A. Frînculeasa *et alii* 2013), pentru controlul stratigrafic și derularea săpăturii arheologice într-un ritm susținut, am optat pentru păstrarea a doi martori stratigrafici ce au traversat întreaga movilă și s-au intersectat în centrul acesteia (pl. II/3), urmând ceea ce este cunoscut drept *săpătură cu martori în cruce*. Aceștia au avut lungimea de 56 m și grosimea de 1 m și au fost orientaţi aproximativ nord – sud (martor stratigrafic I), respectiv est - vest (martor stratigrafic II). Au fost caroiaţi din 2 în 2 m, marcați cu cifre romane (martorul stratigrafic I), respectiv arabe (martorul

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[1] Pentru a ne putea referi la cercetări derulate recent pe raza aceleiași localități, unde au mai fost cercetaţi alți trei tumuli (A. Frînculeasa 2007; A. Frînculeasa *et alii* 2013), am optat pentru abrevierea acestui ultim obiectiv cu denumirea Ariceşti IV.

stratigrafic II). Prin dispunerea acestora au fost obţinute 4 suprafeţe, denumite/numerotate în funcţie de poziţionarea lor în sensul acelor de ceasornic astfel: 1 - suprafaţa nord-estică; 2 - suprafaţa sud-estică; 3 - suprafaţa sud-vestică; 4 - suprafaţa nord-vestică. Următoarele etape ale cercetării au fost:

- cu ajutorul unor utilaje cele patru suprafețe au fost săpate, în plan orizontal, începând de la nivelul superior spre cel inferior şi alternativ în planuri opuse după cum urmează: I. suprafaţa sud-estică (2); II. suprafaţa nord-estică (1); III. suprafaţa sud-vestică (3); IV. suprafaţa nord-vestică (4);
- cele patru suprafețe au fost demontate fiecare succesiv pe direcții opuse (N-S şi apoi V-E), pe lățimi de câte 6 - 8 m de-a lungul celor doi martori până la nivelul natural de pietriș; după prima „secțiune" cercetată din *suprafaţa 2* am avut acces la întreaga succesiune stratigrafică a tumulului, dar și a depunerii naturale;
- identificarea în colţul de nord din *suprafața 2* a ringului de piatră aparținând mormântului primar a impus adoptarea unei strategii în care prioritară a fost surprinderea în plan a întregului complex funerar. Zona centrală a tumulului a fost păstrată (o suprafață regulată de circa 120 mp), iar după desenare, martorii stratigrafici au fost degajați în acest areal până la nivelul superior al ringului (pl. II/3). Primele au fost demontate mormintele secundare. După excavarea umpluturii și „demontarea" scheletelor, complexul primar a fost secționat de la nord la sud obținându-se un profil stratigrafic relevant, fiind astfel completat desenul realizat inițial (pl. III/1). Toate adâncimile consemnate în documentația de șantier au fost raportate la un punct zero amplasat central, în partea superioară a movilei.

◈ Stratigrafia: etape ale amenajării complexului funerar

Stratigrafia terenului este una relativ simplă; deasupra depozitului natural de agregate minerale (pietriş, nisip) cu o grosime ce depăşeşte 0,50 m, se află un strat de pământ brun-roşcat, argilos, cu pietricele mărunte în compoziție, gros de 0,20 – 0,30 m, ce reprezintă nivelul antic pe care s-a construit tumulul. Acesta a fost ridicat pe marginea de vest a unui grind, impresia generată fiind a unei movile ce domina spațiul înconjurător. Spre vest era vizibilă o albiere a terenului, accentuată de prezența grindului şi posibila excavare de pământ necesar pentru ridicarea movilei. Complexul prezenta următoarea succesiune stratigrafică/de amenajări (pl. III/1):

- a fost săpată groapa mormântului primar aproximativ 1 m în adâncime; aceasta a perforat nivelul antic, brun-roşcat cu pietricele mărunte şi depozitul de agregate minerale; pământul excavat şi pietrişul au fost aşezate, în această ordine, în jurul gropii; din pietriş a fost construit un ring cu diametrul la exterior de 5,30 m; după ce au fost depuși defuncții, groapa a fost acoperită cu pământ brun-roşcat;
- deasupra acestui complex a fost ridicată mantaua (nucleul iniţial) pentru care a fost utilizat pământ roşcat, argilos; aceasta a avut diametrul de circa 35 m şi înălţimea maximă de 0,90 m;
- baza mantalei era suprapusă de o lentilă negricioasă, argiloasă, groasă de maximum 0,40 m;
- peste manta şi lentila negricioasă se afla stratul arabil de culoare cenuşie, gros de aproximativ 0,30 m.

Au fost descoperite cinci morminte de inhumație, toate dispuse spre centrul movilei. Între unele dintre aceste complexe a existat o relaţie stratigrafică directă (fig. 1); remarcăm în acest sens suprapunerea între cele două morminte cu groapa ovală, respectiv M1 și M3. De asemenea, ringul era suprapus de două complexe funerare secundare, respectiv M2 și M4, care la rândul lor se întretăiau parţial, M2 fiind mai recent. Alte elemente definitorii sunt cele ce ţin de ritual, respectiv orientări diverse, mai curând spre est şi depuneri laterale, construcţie funerară (ring din pietre). Succesiunile stratigrafice identificate indică cel puţin trei etape de înmormântări. Astfel, un mormânt depus dorsal - M2, orientat vest-est, suprapune unul depus lateral - M4, dar şi ringul din piatră al mormântului primar - M5. De asemenea, un mormânt cu vas Coţofeni (M3) este suprapus de M1 cu un ritual mai curând atipic (depus ventral, într-o poziție nenaturală). M2 aparţine ultimei etape de înmormântări, iar M3 şi M4 etapei a doua ce urmează mormântului primar. Raportul cronologic dintre aceste două morminte ar putea fi precizat, M4 ce taie ringul pare să fi fost realizat ulterior M3 aflat în exteriorul acestuia. Complexul M3 a fost realizat într-o etapă relativ apropiată de ridicarea tumulului pentru M5, iar individul din M1 a fost îngropat într-o etapă apropiată de M3.

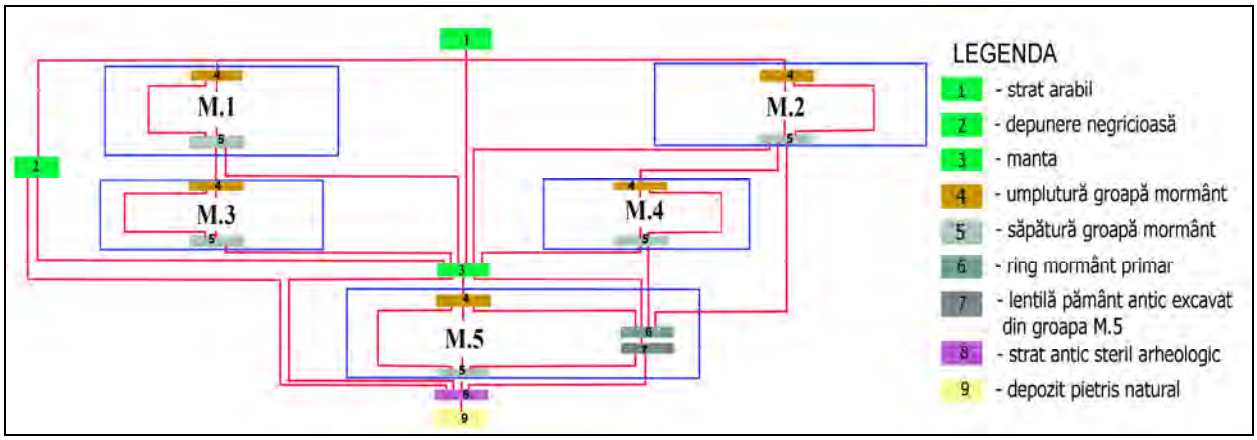

Fig. 1. Ariceștii Rahtivani: diagrama stratigrafică.
Ariceștii Rahtivani: stratigraphical matrix.

◈ Catalogul complexelor

Mormântul 1/M1 – mormânt secundar ce a fost descoperit în *suprafaţa 2*, în caroul 16-XII/XIII. La -0,76-0,85 m adâncime au fost identificate câteva oase umane în poziţie secundară, apoi 10 cm mai jos scheletul propriu-zis. Era depus într-o groapă de formă ovală cu dimensiunile de 1,15x0,81 m, săpată în mantaua movilei. Baza gropii se afla la maximum -0,97 m. Individul era orientat VSV-ENE cu capul oarecum către sud. A fost depus cu faţa în jos, membrul inferior stâng puternic flexat, femurul drept era orientat în faţă, ajungând aproape de craniu. Membrul respectiv a fost poziţionat sub corp, tibia a devenit vizibilă după demontarea scapulei şi a coastelor. Mâna stângă era puternic flexată, cu radiusul şi cubitusul foarte aproape de humerus, iar cea dreaptă era aşezată sub cap. Avea privirea în jos, fiind expus occipitalul. Zona toracică era deranjată de un gang de animal, situaţie care ar explica prezenţa oaselor în poziţie secundară descoperite în nivelul imediat superior. Nu a avut inventar. Determinări antropologice: femeie cu vârsta de 35-40 ani (pl. IV/1-2).

Mormântul 2/M2 – mormânt secundar, descoperit în *suprafaţa 4*, în caroul 18-XIV/XV, era parţial suprapus de *martorul stratigrafic I*. Groapa a fost identificată la -0,60 m şi atingea adâncimea maximă de -1,03 m; avea formă rectangulară cu colţurile rotunjite şi dimensiuni de 1,70x0,70 m. Groapa a fost săpată în mantaua movilei şi a atins partea superioară a ringului amenajat în jurul mormântului primar. Scheletul era orientat pe direcţia VSV-ENE, depus în decubit dorsal cu membrele inferioare îndoite, genunchii iniţial ridicaţi au căzut ulterior către partea dreaptă. Membrele superioare erau întinse de-a lungul corpului, palma dreaptă era suprapusă de femur, iar oasele ei prezentau urme de ocru roşu. Ocru a mai fost găsit şi lângă humerusul drept, la vest de craniu precum şi în colţul de vest-nord-vest al gropii. Nu au fost descoperite piese de inventar. Determinări antropologice: bărbat cu vârsta de 30-40 ani (Pl. IV/3-5).

Mormântul 3/M3 – mormânt secundar, descoperit în *suprafaţa 2*, în caroul 16-XII/XIII, groapa acestuia este suprapusă parţial de cea a lui M1. A fost săpată în mantaua movilei, avea formă rectangulară cu colţurile rotunjite, dimensiuni de 1,37x1,10 m (lăţimea maximă), iar baza gropii se afla la -1,22 m. În groapă au fost depuşi trei indivizi (pl. V/1). Unul dintre aceştia - **M3B** a fost depus în partea de est a gropii, orientat NNE-SSV, cu faţa către est, aşezat în poziţie chircită pe partea stângă, cu mâinile îndoite şi aduse către faţă şi picioarele puternic flexate (pl. V/5). În apropierea craniului se afla depus un vas (formă amforoidală, corp sferic, gât înalt, buza răsfrântă; avea două toarte tubulare ataşate pe corp, dispuse simetric; este decorat prin haşuri incizate, dispuse pe trei etaje în benzi unghiulare; pastă brună, nisipoasă, de slabă calitate, exfoliantă; dimensiuni: H = 235 mm, diam. gură = 85 mm, diam. maxim = 235 mm; diam. bază = 100 mm (pl. V/4, 6-7). Determinări antropologice M3B: femeie cu vârsta de 30-40 ani. În partea de vest a gropii au fost descoperite oase umane de la alţi doi indivizi - **M3A** şi **M3C**. Acestea nu erau în conexiune anatomică, ci erau aşezate unele lângă altele, grupate peste cranii. Determinări antropologice: **M3A** – bărbat, 50 – 60 ani; **M3C** – bărbat, 30 – 40 ani.

Mormântul 4/M4 – mormânt secundar, descoperit în *suprafaţa 4*, în caroul 17-18/XV (pl. VI). Groapa săpată în mantaua movilei, avea formă rectangulară cu colţurile rotunjite, dimensiuni de 1,34x1,13 m (lăţimea maximă) şi atingea adâncimea maximă de -1,18 m. Groapa perfora ringul de

pietriş amenajat în jurul mormântului primar şi era suprapusă pe o suprafaţă redusă în partea sa nordică de groapa M2. Complexul era un mormânt de inhumaţie în care fuseseră depuși doi indivizi.

- **M4A** – era orientat pe direcţia E-V, depus chircit lateral pe partea dreaptă, mâinile îndoite şi aduse către faţă, picioarele puternic flexate. A avut ca inventar funerar trei perle tubulare de cupru, una lângă clavicula stângă, cea de-a doua sub scapula stângă, a treia a fost găsită la curățarea craniului (pl. VI/3); cinci inele de buclă din argint (pl. VI/4), dintre care două în dreptul craniului (unul în zona mastoidei stângi şi celălalt în dreptul bărbiei), alte trei erau în cavitatea bucală (pl. VI/6). Tot la curățarea în laborator a craniului au fost descoperite 7 perle plate, circulare și perforate din scoică (?) (pl. VI/5), lipite (diam. = 7 mm). Sub craniu erau prezente urme verzui, fără însă a fi descoperită o piesă din metal. De asemenea, am observat urme firave negricioase pe peretele exterior al craniului. Determinări antropologice: femeie cu vârsta de 19,4-25 ani.
- **M4B** – era orientat pe direcţia E-V, depus chircit lateral pe partea stângă astfel încât era aşezat faţă în faţă cu M4A (pl. VI/1-2). Mâinile erau îndoite şi aduse către faţă, iar picioarele flexate. Este individul depus al doilea în groapă, membrele inferioare le suprapuneau pe cele ale lui M4A. Nu a fost însoţit de inventar funerar, în schimb a avut ocru depus în cantităţi consistente în zona bazinului şi femurelor, în dreptul toracelui, în partea de nord a gropii, dar şi urme firave sub craniu. Determinări antropologice: femeie cu vârsta de 19,4-25 ani.

Mormântul 5/M5 – mormântul primar, aflat în centrul tumulului în *suprafața 1*, suprapus parțial de ambii martori stratigrafici. Groapa a perforat nivelul antic şi stratul natural de pietriş; era orientată pe direcţia E-V, avea formă rectangulară cu colţurile rotunjite. Avea dimensiunile 1,34x1,12 m și adâncimea de aproximativ 1 m de la nivelul la care a fost identificată. Baza acesteia atingea adâncimea maximă de -2,14 m de la punctul zero. Pământul excavat din groapă a fost depus pe marginea acesteia. Peste această depunere a fost aşezat pietrişul natural excavat în timpul amenajării gropii funerare, formând un ring (pl. VII). Avea diametrul exterior de circa 5,30 m, cel interior având forma uşor ovală varia între 2,80 şi 2,30 m, de aici şi grosimea variabilă a ringului aflată între 0,90 m – 1,70 m. Înălţimea maximă a acestuia era de circa 0,25 m. Ringul a fost tăiat de groapa M4, iar M2 a atins parțial partea superioară a acestei amenajări (pl. III/3; VII/5). În mormânt erau inhumați 3 indivizi:

- **M5A** – orientat în direcţia S-N, depus de-a lungul laturii scurte vestice a gropii, în poziţie chircită pe partea stângă, cu mâinile şi picioarele puternic flexate (pl. VIII/1; IX/5). În apropierea mandibulei se afla un pandantiv perforat realizat din lut, culoare cărămizie, formă neregulată (dimensiuni: 20x15x2 mm) (pl. VIII/6). Sub craniu am identificat urme firave de culoare negricioasă. Defunctul era aşezat peste o parte din membrele inferioare ale individului M5C. Determinări antropologice: indeterminabil, cu vârsta de 7 - 9 ani.
- **M5B** – orientat în direcţia E-V, cu faţa către nord, depus chircit pe partea dreaptă, mâinile îndoite şi aduse către faţă, picioarele flexate (pl. VIII/3). La cap avea depus un vas, respectiv o cană cu gura uşor oblică şi un mic „cioc", corp sferoidal turtit, gât înalt, toartă în bandă, supraînălţată, realizată din pastă relativ fină, poroasă, culoarea cenuşiu-negricioasă (pl. VIII/4). Vasul avea următoarele dimensiuni: H = 90 mm, diam. gură = 54 mm, diam. bază = 42 mm. La gâtul individului a fost descoperit un colan cu capetele rulate, fracturat în trei bucăţi (pl. VIII/2, 5; X/5-7). Corpul pare torsadat, oval-uşor deformat, circular în secţiune (diam. = 135 mm, grosime = 4 mm); capetele erau şubţiate (diam. = 2,5 mm). În depunerea oxidată păstra imprimate urme de textile (pl. X/8-9). Sub schelet în zona toracică am identificat pe o suprafață restrânsă urme negricioase, dar și roșiatice. La curăţarea craniului în laborator a fost găsit un inel de buclă spiralic realizat din argint (pl. X/3). Determinări antropologice: bărbat cu vârsta de 35,2 - 38,4 ani.
- **M5C** – o parte dintre oase par să fie în conexiune anatomică în special membele inferioare și bazinul, altele erau dispuse în diverse zone ale gropii (pl. VIII/1; IX/4). Oase de la acest individ au fost descoperite peste oasele M5B, craniul său era aşezat peste vasul depus la capul defunctului M5B, iar mandibula tot pe vas, dar nu în conexiune anatomică cu restul craniului, ci orientată în sens opus (pl. VIII/2); oase de la membrele sale inferioare au fost descoperite sub scheletul de copil (M5A). Determinări antropologice: bărbat cu vârsta de 45,2 - 45,6 ani.

Ținând cont de modul de dispunere a defuncţilor, dar și de faptul că M5C păstra în conexiune anatomică bazinul și membrele inferioare, se conturează următoarea succesiune a înmormântărilor: primul îngropat a fost M5C, urmat de individul M5B; deși oasele primului (numai membrele inferioare și bazinul) se aflau peste cele ale M5B, ele par să fi fost mutate pentru a crea spațiu de înmormântare pentru individul M5B, ulterior reașezate peste acesta sau împrăștiate prin groapă. Ultimul depus în groapă a fost M5A care a fost așezat peste membrele inferioare ale M5C. Nu am identificat urmele unei intervenții care să afecteze acest complex.

◈ Construcții funerare: date sintetice

Un element constructiv deosebit identificat în tumulul de la Aricești este structura circulară de piatră ce înconjura mormântul primar, realizată din pietrişul rezultat din excavarea gropii respectivului complex (pl. VII). Deşi identificate şi în cazul altor tumuli cercetaţi pe teritoriul României, informaţiile sunt lacunare, fiind cunoscute complexele de la Tariverde (D. Popescu 1952, p. 273), Independenţa (G. Simion 1991, p. 33-34), Sabangia (I. Vasiliu 1995b, p. 151), Mihai Bravu (I. Vasiliu 1995b, p. 144-145), Peştera (C. Schuster *et alii* 2011b, p. 211), toate din Dobrogea, la care îl adaugăm pe cel de la Manoleasa, aflat la vest de Prut (A. Păunescu *et alii* 1976, p. 159). Informații detaliate există despre ringul din tumulul de la Blejoi I aflat la aproximativ 7 km ENE de cel de la Aricești (D. Lichiardopol *et alii* 2005). Diametrul movilei era de aproximativ 40 m, înălţimea nu depăşea 1,90 m. Mantaua ce acoperea singurul mormânt descoperit avea diametrul de cca 12 m și înălțimea de 0,90 m. În zona centrală a tumulului se afla mormântul primar ce era înconjurat de un ring din piatră cu diametrul maxim de 4,90 m. În interiorul acestuia, ușor lateral, era depusă o singură persoană adultă, de sex feminin, aşezată dorsal cu picioarele strânse căzute lateral și brațele îndoite aduse spre mandibulă. La baza membrelor inferioare se afla depus un vas cu corpul rotunjit, cu gura evazată, ce avea aplicate pe pântec opt „pastile" circulare, grupate câte două. Între femure se găsea, probabil în poziție secundară, o perlă tubulară realizată dintr-o tăbliță din cupru rulată. Defunctul a fost depus în zona sud-vestică a ringului pe un „*pat*" de pietriş gros de cca. 4-6 cm. În apropierea scheletului, lângă humerusul stâng a fost descoperit un fragment de scapulă dreapta şi alte câteva oase provenind de la un al doilea individ, adult. În interiorul ringului au fost observate urme negricioase de arsură, iar în exteriorul acestuia au fost descoperite câteva oase de mamifere și fragmente ceramice grosiere (E. Paveleţ 2007, p. 111).

Deşi sunt considerate specifice standardului funerar Jamnaja (I. Motzoi-Chicideanu 2011, p. 266), ringuri precum cele de la Aricești și Blejoi sunt printre puținele amenajări de acest tip cercetate la sud de Carpați. Deși cronologic sunt mai recente, le amintim şi pe cele de la Milostea și Budurească ce aparțin unor morminte de incinerație din bronzul timpuriu (E. Popescu, Al. Vulpe 1966, p. 150, fig. 4; A. Frînculeasa 2011). Morminte cu ringuri de piatră apar la est de Prut în eneoliticul târziu (A. Häusler 1976; I. Manzura 1994, p. 109; B. Govedarica 2004; Y. Rassamakin 2004; 2011; S. Agulnikov, V. Pașa 2008; N. S. Kotova 2008), fiind cunoscute în mediul Usatovo (V. Dergacev, I. Manzura 1991; Y. Rassamakin 2004), dar şi Jamnaja (A. Häusler 1976; V. Dergacev, I. Manzura 1991; O. Leviţki *et alii* 1996; E. Kaiser 2003; S. Agulnikov, V. Pașa 2008), mai spre est în complexe Majkop (S. Korenevskij 2006). Sunt prezente la sud de Dunăre (I. Panayotov 1989; G. Kitov *et alii* 1991; I. Iliev 2010; St. Alexandrov 2011, p. 316), dar și în mediul cultural Baden (C. Sachße 2010) şi posibil Coţofeni (P. Roman 1976, p. 32). În Transilvania morminte tumulare cu ringuri din piatră atribuite grupului Livezile au fost identificate la Meteș, posibil Tureni (H. Ciugudean 1996, p. 80, 130), dar și la Floreşti; acesta din urmă aparține grupului Copăceni (M. Rotea 2009, p. 15, fig. 5). Remarcăm descoperirea unor şanţuri circulare sau ringuri din pământ prezente în cazul unor tumuli Jamnaja cercetați pe ambele maluri al Prutului, dar și în Dobrogea (O. Leviţki *et alii* 1996; F. Burtănescu 2002, p. 226; M. Brudiu 2003, p. 60; C. Schuster *et alii* 2011a, p. 61; C. Schuster 2012, p. 33).

În ce privește descoperirea de la Aricești și relația acesteia cu orizontul cultural Coțofeni/Baden, evidențiem situația de la Târnava (Bulgaria) în care au fost identificate morminte de incinerație cu vase Coțofeni, depuse în interiorul unei amenajări rectangulare din piatră (I. Panayotov 1989). Acest tip de construcție, la care se adaugă prezența incinerației, are mai curând legătură cu mediul cultural Baden sau eventual cu arealul sudic Coțofeni. Spre răsărit aceste amenajări din piatră de mici dimensiuni, atât circulare, cât și rectangulare, dispuse oarecum aleatoriu în planul tumulului, sunt specifice înmormântărilor usatoviene (V. Dergacev, I. Manzura 1991; Y. Rassamakin 2004; 2011). În movilele Jamnaja ringurile sunt amplasate preponderent în zona centrală, amenajate pentru înmormântarea primară. La Târnava ringul era suprapus de morminte de inhumație cu defuncți așezați dorsal, orientați vest-est, ce pot fi atribuiți unei etape post Coțofeni. De asemenea, apar morminte de inhumație cu vase Coțofeni, suprapuse de cele cu ring, atât de incinerație, cât și de inhumație. Acest tip de amenajare este cunoscut și standardului funerar Baden (C. Sachße 2010).

◈ Despre ritual: poziţionarea şi orientarea defuncţilor

Ritualul de depunere a defuncţilor într-o anumită poziţie reprezintă un comportament bine structurat, ce probabil reprezenta un element de identitate culturală. Poziţionarea diversă a defuncţilor reflectă segmente/tradiţii culturale diferite, dar şi anumite componente alogene sau autohtone din cadrul grupurilor dominante. Diversitatea ritualului pare să aibă o relevanţă cronologică, fără să

excludem pentru un anumit palier temporal prezența unor aspecte regionale ce au contingenţă inclusiv cu fenomene de coexistenţă culturală ce au generat şi/inclusiv decalaje cronologice. În tumulul de la Aricești au fost descoperite trei morminte în care defuncţii erau depuşi chircit-lateral, numai în cazul complexului M2, individul era aşezat dorsal cu membrele inferioare îndoite și căzute lateral, poziţia aproximativ ventrală a M1 fiind una atipică.

În ce privește poziţia ritualică a defuncţilor în tumuli evidențiem diversele scheme propuse, unele foarte detaliate (A. Häusler 1974, fig. 1; E.V. Jarovoi 1985, pl. 2; F. Burtănescu 1998; 2002). Considerăm că multe din aceste scheme tipologice/descoperiri nu reflectă ritualul asumat de comunităţile respective, ci mai curând reprezintă imaginea ajunsă în atenţia arheologului datorită istoriei proprii fiecărui complex în parte, fără să uităm procesele specifice tafonomiei. Două sunt poziționările generale (fig. 2) pe care le-am consemnat şi la Ariceşti, ce par să indice două tradiţii diferite:

- **lateral** - defuncții erau așezați pe o parte, chircit moderat, membrele superioare aduse spre faţă, rar pe abdomen, cele inferioare flexate. Indivizii erau depuși atât pe partea dreaptă, cât şi pe cea stângă. Orientarea variază, aveau capul dispus spre sectoarele sud-vestic, sud-estic, nordic, nord-estic, estic. Mormintele aparțin atât adulților, de ambele genuri, cât și subadulților. Au fost descoperite la Blejoi I/M1, Ariceşti IV/M3B, M4A, M4B, M5A, M5B, Păuleşti I/M2, Păuleşti II/M3, Păuleşti III/M4A, Ploieşti-Triaj I şi Ploieşti-Triaj II. Din această categorie morminte primare sunt cele de la Ariceşti IV, Păuleşti I şi Păuleşti II, Păuleşti III, Ploieşti II.
- **dorsal** - defuncții erau aşezați dorsal cu membrele inferioare îndoite, ridicate şi căzute lateral, erau orientaţi în sectorul de vest, aveau membrele superioare întinse pe lângă corp sau eventual aşezate pe bazin. Scheletele aparțineau unor adulți de sex masculin, nefiind exclusă prezența unora de subadulți la Ploiești II, dar și Ploiești I. Au fost cercetate la Ariceşti I/M1, M3, Ariceşti II/M1, Ariceşti III/M1, Ariceşti IV/M2, Păuleşti I/M1, Păuleşti II/M2, Păuleşti III/M2, M3, M4B?, Strejnicu/M2, M3, Blejoi II/M1. La Ploieşti II singurul matur depus pe spate este M6, la care am putea adăuga, cu anumite rezerve, doi dacă nu chiar trei subadulți - M15, M20 și M21. Din cele așezate dorsal, morminte primare sunt cele de la Blejoi II, Ariceşti I, Ariceşti II, Ariceşti III, Strejnicu, Păuleşti III, posibil Ploiești I.

În grupa indivizilor depuși dorsal se pot remarca câteva morminte ce aparţin unor persoane adulte de sex feminin sau unor subadulţi precum M1/Blejoi I, M3/Ploieşti I, M15 M20, M21/Ploieşti II, ce au orientări diverse: SSV-NNE (M1/Blejoi I), ENE-VSV (M15/Ploieşti II), ESE-VNV (M20/Ploieşti II), VSV-ENE (M21/Ploieşti II). În cazul acestora orientarea în sectorul vestic nu este predominantă, aşa cum este cazul înmormântărilor dedicate persoanelor de sex masculin. De remarcat că în toate apar vase, unele decorate cu șnur, ceea ce certifică încadrarea lor în prima jumătate a mileniului III BC. Deocamdată astfel de complexe constituie o bază de analiză foarte restrânsă, dar ar trebui urmărit dacă nu cumva aceste descoperiri reflectă o abordare diferită din perspectiva ritualului a acestor categorii de vârstă și sex, inclusiv în cadrul grupei cu indivizi depuși dorsal.

Au fost identificate două situaţii stratigrafice ce indică anterioritatea mormintelor în care defuncţii erau aşezaţi lateral (fig. 3). Această situaţie a fost observată în cazul mormintelor de la Păuleşti I, Păuleşti II, Păuleşti III, Ariceşti IV, Ploieşti II. Atunci când în mormântul primar defuncții erau așezați dorsal, complexul nu era suprapus de altele cu indivizi depuși lateral, ci doar de cele aflate într-o poziţie similară. O altă situație stratigrafică este cea a mormintelor cu defuncţi depuși lateral ce erau suprapuse de unele din aceeași grupă. Astfel de cazuri au fost identificate la Ploieşti II în care defunctul aşezat lateral - M5 este suprapus de unul depus în aceeași poziție - M1 (E. Comşa 1989, p. 182). În mormântul primar - M5 de la Aricești IV defuncții așezați lateral, erau suprapuși direct de un mormânt dublu cu schelete chircite lateral - M4, ce la rândul său era suprapus de un complex în care scheletul era depus dorsal - M2. De asemenea, defunctul din M3 era înhumat într-o etapă ulterioară celui primar - M5. Remarcăm și orientările, net diferite, cele dorsale fiind în sectorul vestic, celelalte cunoscând o mare variabilitate, dar mai puțin orientate spre vest (fig. 2).

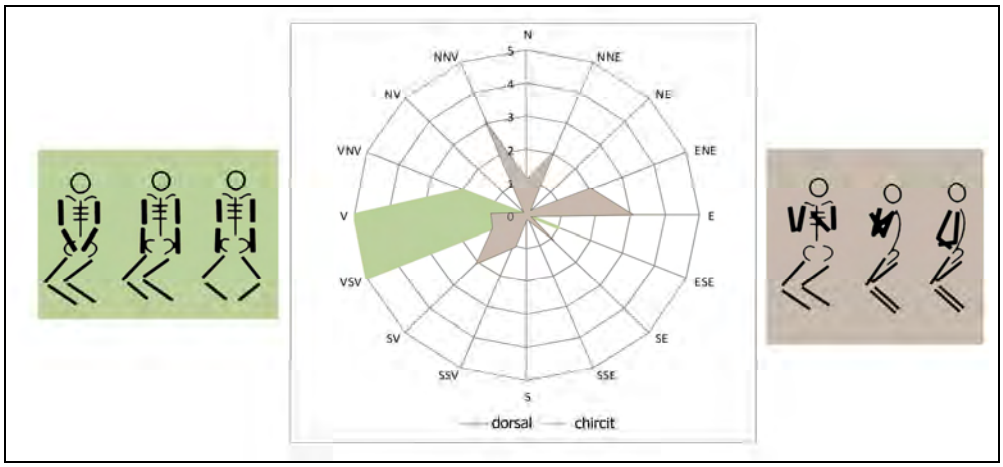

Fig. 2. Diagramă privind orientarea şi poziţionarea defuncţilor în cadrul mormintelor cercetate în judeţul Prahova.
Diagram of the position and orientation of the deceased in burials investigated in Prahova County.

Deși dominante sunt situațiile stratigrafice descrise mai sus, există totuși, chiar dacă nu în acest areal, și cazuri în care morminte cu defuncți depuși dorsal sunt suprapuse de cele din a doua grupă. Un caz reprezentativ este movila de la Smeeni, descoperirile din acest obiectiv par să reflecte (și) un segment cronologic în care reapar morminte cu defuncți așezați lateral (N. Simache, V. Teodorescu 1962).

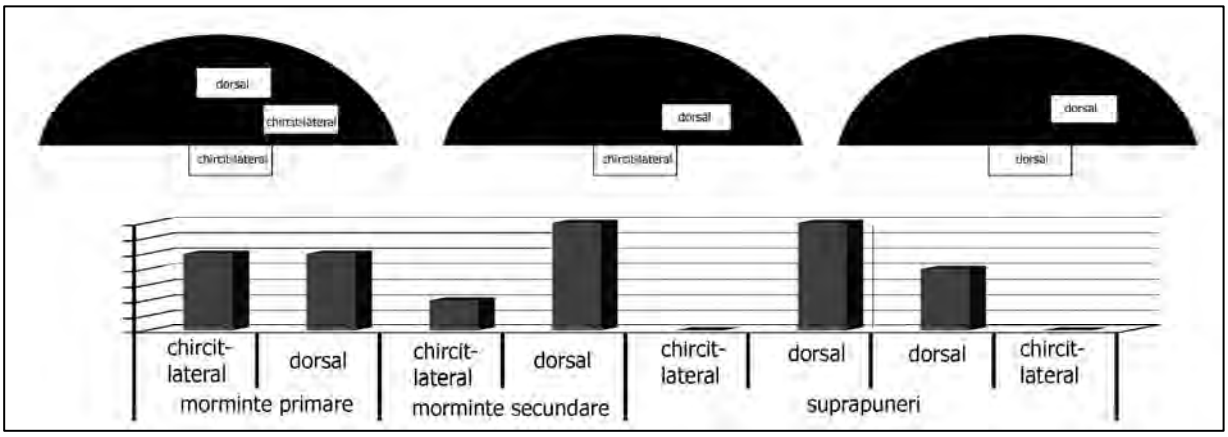

Fig. 3. Raportul statigrafic al mormintelor primare şi secundare în funcție de ritualul de înmormântare.
The stratigraphic relation between primary and secondary graves according to the burial ritual.

◈ Tradiţii sau contexte arheologice: morminte colective/înmormântări multiple

În tumulul de la Aricești au fost cercetate trei complexe funerare în care apar schelete umane provenind de la mai mulți indivizi, dar și două morminte individuale. În cazul celor colective, fiecare situație pare să reprezinte o categorie. Astfel, în M3 apare un individ principal în poziţie ritualică/inițială, lângă care sunt grupate, pe un perimetru restrâns, resturi „dezmembrate" (cel mai probabil natural) ce aprţin altor doi indivizi. În M4 apar două persoane depuse lateral, față în față, cu oasele aflate în poziţie ritualică. O situație tranzitorie este reprezentată de M5 în care apare un individ depus lateral, iar la baza membrelor inferioare ale acestuia era un alt individ așezat lateral depus de-a latul gropii. Al treilea individ apare parțial „dezmembrat", iar oasele sunt dispuse împrăștiate în diverse zone ale gropii.

În judeţul Prahova morminte colective au mai fost descoperite la Păuleşti II, Păuleşti III, Blejoi I, Ploieşti I, Ploieşti II. Lipsesc informaţiile cu privire la poziţia şi orientarea defuncţilor din M4/Ploieşti I ce conţinea doi indivizi adulţi (V. Zirra 1960, p. 103; A. Vulpe 1987, p. 177). La Ploieşti II apar două morminte duble (E. Comşa 1989). În cazul complexelor de la Blejoi I, Păuleşti II, Păuleşti III, Aricești IV există morminte în care au fost depuse alături de individul principal oase aparţinând altor persoane adulte. La Păuleşti III există două situaţii, în M1 ce este un complex secundar, alături de un adult apar resturi de schelet provenind de la trei subadulți, iar în cazul mormântului primar - M4, apar două schelete depuse în aceeaşi groapă, poziţionate și orientate diferit (A. Frînculeasa *et alii* 2013).

Morminte colective apar cu preponderență în cazul depunerilor laterale, dar nu lipsesc nici din cealaltă grupă. De asemenea, există cazuri în care oasele defuncţilor nu se mai aflau în conexiune anatomică, indicând manipulări postmortem. Pe teritoriul României morminte colective în tumuli au fost descoperite în Muntenia la Adâncata, Smeeni, Sudiți și Vităneşti, în Oltenia la Pleniţa, în Dobrogea în localitatea Peştera, iar în Moldova la Glăvăneştii Vechi, Holboca, Valea Lupului și Vânători. În literatura arheologică românească sunt menționate 27 de astfel de complexe, cu un grad de certitudine mai ridicat pentru 21 dintre acestea, conținând un număr total de 60 de indivizi. Chiar și pentru acest număr restrâns de complexe în anumite cazuri informaţiile sunt lacunare, lipsind detalii cu privire la structura funerară (forma, dimensiunile gropii) şi elementele de ritual (poziţia, orientarea defuncţilor). Numărul mormintelor pentru care există analize antropologice este chiar mai mic (47 indivizi din 16 morminte), făcând astfel dificile încercările de a corela elementele de ritual cum ar fi poziția sau orientarea defuncților cu grupa de vârstă/sex a acestora. Prin urmare eșantionul analizat este unul restrâns numeric, de aceea gradul de reprezentativitate a informațiilor nu trebuie supraevaluat. Poziţia stratigrafică a acestor morminte în movile este variabilă, ele reprezintă atât înmormântări primare, cât și secundare.

◈ Date antropologice

În tumulul de la Aricești sunt prezenţi defuncţi adulţi şi subadulţi, iar în ce privește prima grupă apar persoane de ambele genuri (tab. 1). Individul depus dorsal este din grupa adulţilor de gen masculin, confirmând descoperirile anterioare în cazul defuncţilor aşezaţi similar şi orientaţi în sectorul de vest. Toate scheletele de adulți de gen feminin erau aşezate lateral, orientarea mai curând în sectorul estic. Din punct de vedere antropologic tot lotul analizat din arealul discutat (Prahova) în acest studiu este reprezentat de 34 de indivizi provenind din 22 morminte. Acest decalaj numeric a fost determinat atât de apariția mormintelor cu înmormântări multiple, dar și a unor oase umane izolate depuse lângă defunctul ce reprezenta înmormântarea propriu-zisă. Din punct de vedere al distribuţiei pe vârste, 5 indivizi sunt subadulţi şi 29 adulţi, iar pe sexe, 15 de bărbaţi, 9 de femei, pentru 10 indivizi genul nu a putut fi determinat. Din lotul studiat, 12 schelete prezintă afecţiuni patologice, toate aparţinând unor adulţi, din care 3 de sex feminin, 8 de sex masculin, 1 este indeterminabil.

Nr. mormânt	Sex	Vârstă	Patologie	Traume	Statură
M1	F	35-40	o carie, un dinte pierdut *am*, un abces; osteoartroză		
M2	M	30-40	osteoartroză		
M3A	M	50-60	osteoartroză, hipoplazia emailului		
M3B	F	30-40	cinci carii, doi dinţi pierduţi, trei abcese; osteoartroză		
M3C	M	30-40	patru carii, doi dinţi pierduţi, două abcese; osteoartroză, hipoplazia emailului		
M4A	F	19,4-25	un dinte pierdut; osteoartroză		
M4B	F	19,4-25	o carie; osteoartroză		154,37 cm
M5A	IND	7-9	*cribra orbitalia*		
M5B	M	35,2-38,4	o carie, un dinte pierdut *am*, un abces; osteoartroză; *cribra cranii*	lovitură vindecată pe parietal	
M5C	M	45,2-45,6	*cribra cranii*, hipoplazia emailului	două lovituri perimortem pe temporal şi parietalul stâng	165,35 cm

Tab. 1. Aricești Rahtivani: determinări antropologice.
Aricești Rahtivani: anthropological determinations.

◈ Lumea nu are graniţe: inventare funerare *versus* bunuri

Din cele 22 de morminte cercetate recent în Prahova, un număr de 13 nu au avut inventar, ocrul a fost găsit în 8 complexe, iar asociat cu artefacte în doar 4[2] (fig. 4; 6). Mormintele cu inventar sunt de adulţi, respectiv de femei la Blejoi I/M1, Ariceşti IV/M3B, M4A, bărbaţi la Ariceşti I/M3; Păuleşti III/M4A; Ariceşti IV/M5B, indeterminabili la Ariceşti I/M1 şi subadulţi la Păuleşti II/M2; Ariceşti IV/M5A. La Ploieşti piese apar mai curând în mormintele de subadulţi (T1/M3; T2/M5, M15, M20, M21), dar şi în câteva de adulţi (T1/M4a și M4b; T2/M19a). Din mormintele în care defuncții au fost depuși în poziţie laterală, trei aveau inventar şi doar unul ocru, iar în cazul celor aflate în decubit dorsal, patru au avut inventar, iar ocrul a fost identificat în șapte. Ocrul a apărut în special în complexele în care defunctul este aşezat dorsal, depus în cantităţi mai mari la Ariceşti I/M1, M3 și Ariceşti IV/M2 sau nesemnificative la Ariceşti II/M1, Păuleşti II/M2 și Păuleşti III/M2, M3. În M3/Ariceşti I ocrul a fost depus atât în zona craniului, cât şi în apropierea humerusului drept, iar în M1 se afla şi în zona membrelor inferioare. În M2/Ariceşti IV ocrul a fost aşezat în apropierea craniului și humerusurilor, dar și spre bazin. În cazul celorlalte morminte acesta a fost descoperit în apropierea craniului, niciodată pe oase. Tot în apropierea humerusului drept a fost depus ocru şi în M2/Păuleşti III. În cazul mormintelor cu defuncți aşezaţi lateral, M4B/Ariceşti IV este singurul ce avea depus ocru în zona abdomenului și a membrelor inferioare. În opt morminte de la Ploieşti II ocrul se afla în apropierea craniului sau pe oase (E. Comşa 1989, p. 186), în M3/Ploieşti I a fost aşezat pe membrele superioare şi abdomen, iar în M4a din acelaşi tumul o grămăjoară de ocru a fost depusă la picioarele defunctului (V. Zirra 1960, p. 103).

Ceramica nu are o frecvență deosebită fiind parte din inventarul câtorva morminte[3], asociată cu piese de podoabă (fig. 4; 6). La Ariceşti IV au fost descoperite două vase dispuse în tot atâtea morminte, respectiv M3B şi M5B. La Blejoi I în M1 a fost descoperit un vas apropiat de tipologia ceramicii Folteşti (E. Paveleț 2007, fig. 6/4-5), iar cele trei vase ce provin de la Ploieşti II sunt decorate cu șnurul (E. Comşa 1989). Vase au fost descoperite și la Ploieşti I (I. Nestor 1944, p. 30) sau Târgşoru Vechi (A. Frînculeasa 2010, p. 214, nota 197), iar fragmente ceramice au fost identificate la Strejnicu, Blejoi I, Păuleşti I, Ariceşti III, Ploieşti I, toate aflate în poziţie secundară.

Din punct de vedere tipologic, vasul asociat colanului din M5B/Ariceşti IV se regăsește în mediile culturale Coțofeni și Baden (P. Roman 1976; P. Roman, I. Nemeti 1978; N. Tasić 1995; H. Ciugudean 2000). De asemenea, vasul amforoidal din M3B are o formă și decor cu analogii în mediul Coțofeni (P. Roman 1976, pl. 61/6, 82/9; 1976a, fig. 7/18; H. Ciugudean 2000, pl. 54, 56). Este decorat cu hașuri incizate amplasate într-un spațiu rezervat prin incizare ce definește un motiv decorativ unghiular dispus în trei etaje pe corpul vasului. Gâtul înalt cu o gură ușor evazată, precum și partea inferioară a vasului, sunt nedecorate. Are două toarte tubulare dispuse simetric pe corp. Pasta poroasă, neomogenă, conține nisip grosier, are culoarea maronie la exterior şi negricioasă la interior (pl. V/4, 6-7). Un vas având formă şi decor asemănătoare a fost descoperit recent în situl Coţofeni de la Silvaşu de Jos (S.A. Luca *et alii* 2012, fig. 5/2).

O categorie de bunuri bine reprezentată în aceste complexe funerare este cea a inelelor de buclă realizate din metal preţios. Cinci cercei de buclă spiralați din argint au fost descoperiți în M4A/Ariceşti IV, iar unul în M5B. Inelul spiralat din M1/Ariceşti I este realizat din argint acoperit cu o foiţă de aur. Două piese de tip „Zimnicea" din mormântul primar M3/Ariceşti I sunt din argint, au formă semilunară. Un alt inel de buclă spiralat, fracturat, provine din M1 din același tumul (A. Frînculeasa 2007). La Ploieşti I/M3 a fost descoperit un inel de buclă spiralat realizat din argint (I. Nestor 1944, p. 30), alte două piese din acelaşi material au fost identificate în M15 şi M20 în *Movila II* de la Ploieşti (E. Comşa 1989, p. 183, 185).

Fără să ne propunem să stabilim o filieră directă, originea acestor piese pare a se regăsi în complexele funerare Usatovo (V. Dergacev 2002, p. 74-75). Pentru etapa timpurie a epocii bronzului în România au fost catalogate 15 puncte și un total de 37 de inele buclă din argint (A.D. Popescu 2010, p. 166), din care 15 provin din cimitirul de la Zimnicea (A.D. Alexandrescu 1974, pl. 8, 9). La ele ar trebui adăugate piesa din M15/Ploieşti II considerată iniţial din bronz (E. Comșa 1989, p. 183), dar și cea din M3/Ploieşti I, precum şi cele 6 de la Ariceşti IV, plus câte una de la Ariceşti I/M1 și Rahman I (S. Ailincăi *et alii* 2014)[4], alte două de la Rahman II (C. Micu *et alii* 2014, p. 188)[5].

[2] Pentru o discuţie extinsă privind cronologia, chorologia pieselor ce apar în aceste morminte vezi A. Frînculeasa *et alii* 2013.

[3] Remarcăm și zona dintre Volga și Urali unde ceramica apare în circa 30% din morminte Yamnaya, în special în morminte de bărbați adulți și copii (N.P. Salugina 2011, p. 92).

[4] Deși este publicat ca fiind din cupru/bronz, analiza metalografică a indicat argintul drept materie primă (informație oferită de S. Ailincăi, căruia îi mulțumim şi pe această cale).

Fig. 4. Bunuri descoperite în mormintele tumulare cercetate în județul Prahova (fără scară).
Grave goods found in barrow burials investigated in Prahova County (no scale).

Sunt atât din categoria celor spiralate (Ariceşti I, Ariceşti IV, Ploieşti I, Ploieşti II, Chilia Veche, Mihai Bravu, Zebil, Văleni, Gurbăneşti, Stelnica, Verbiţa, Celei, Pleniţa, Broşteni, Vânători, Zimnicea), cât şi semilunare (Ariceşti I, Zimnicea, Zebil, Năieni[6]) (E. Zaharia 1959; I. Motzoi-Chicideanu, Gh. Olteanu 2000; A.D. Popescu 2010). La est de Prut apar la Kurči, Sărăţeni, Balaban I, Balaban II, Orhei, Roşcani, Căuşani, etc (O. Leviţki *et alii* 1996, p. 22; L. Subotin 2008; I. Motzoi-Chicideanu, Gh. Olteanu 2000, p. 30-31; V. Dergacev 2002), iar la sud de Dunăre remarcăm complexele funerare de la Plachidol I, Goran-Slatina, Kălugerica, Pet Mogili, Madara, Boyanovo, Lozyanskata, Zimnitza (I. Panayotov 1989, p. 112; G. Kitov *et alii* 1991; I. Motzoi-Chicideanu, Gh. Olteanu 2000, p. 56; I. Iliev 2010, p. 384, 387, 390). Astfel de podoabe au fost descoperite și în Ungaria la Buj, Tiszaeszlar, Ketegyhaza (N. Kalicz 1968, p. 18-19, pl. I/8, 9, 10; I. Ecsedy 1979, p. 21-23).

Piesele spiralate sunt mai numeroase şi ocupă un spaţiu larg de la Dunărea Mijlocie până în nordul Caucazului (A. Popescu 2010, p. 166) şi apar mai ales în morminte tumulare cu ocru (I. Motzoi-Chicideanu, Gh. Olteanu 2000, p. 28), dar și în mediul cultural Bell Beaker - A1 (R. Harrison, V. Heyd, 2007, fig. 39), etc. Cele din Caucaz descoperite în contexte funerare provin din tumuli atribuiţi grupului Novotitarovka, acoperind intervalul 3000 – 2700 BC (P. L. Kohl 2007, p. 266; A. N. Gej 2000). Deşi mai puţin numeroase (I. Motzoi-Chicideanu, Gh. Olteanu 2000, p. 29), cele de tip „Zimnicea" au aceeaşi răspândire, în multe situaţii apar în acelaşi context, dar pentru o perioadă ceva mai restrânsă (A.D. Popescu 2010, p. 167).

Din M1/Ariceşti I provine un inel spiralic ce avea ataşată o foiţă de aur (C. Chiojdeanu *et alii* 2011, p. 690). Inele de buclă din aur au fost descoperite în contexte funerare la Ampoiţa (H. Ciugudean 1996, p. 33, 127-128, fig. 31/8-9), Jurilovca (I. Vasiliu 2007, p. 122-123, fig. 4/2), Vlădești (M. Brudiu 2003, p. 69) sau în aşezarea Schneckenberg de la Braşov (I. Motzoi-Chicideanu, Gh. Olteanu 2000, p. 58, nr. 38). Sunt mai numeroase în Banat sau Transilvania (H. Ciugudean 1996, p. 127-128; Fl. Gogâltan 1998, p. 20 şi urm.; Fl. Gogâltan 1999, p. 186 şi urm.). Le regăsim în morminte Jamnaja de la sudul Dunării la Târnava, Goran-Slatina (I. Panayotov 1989), dar şi la est de Prut la Glubokoe (A. Häusler 1976, p. 108, pl. 30/15), Plavni, Taraklia, Brăviceni (L. Subotin 2008, fig. 5/7; O. V. Larina *et alii* 2008, p. 28, fig. 13/1; A. Niculiță 2009, p. fig. 4/5, 9, tabel 2, nr. 3, 6/1), în Ungaria la Sárrétudvari-Őrhalom (J. Dani, I. M. Nepper 2006, p. 33-34, fig. 4, 5). Apar şi la Neusiedl (E. Ruttkay 2002, abb. 4), Mala Gruda, Leukas (M. Primas 1995, p. 84-85, fig. 2).

[5] O situație incertă este la Silvaşu de Jos unde într-un tumul a fost descoperit un cercel (S.A. Luca *et alii* 2011, p. 122).
[6] Confecționat din cupru.

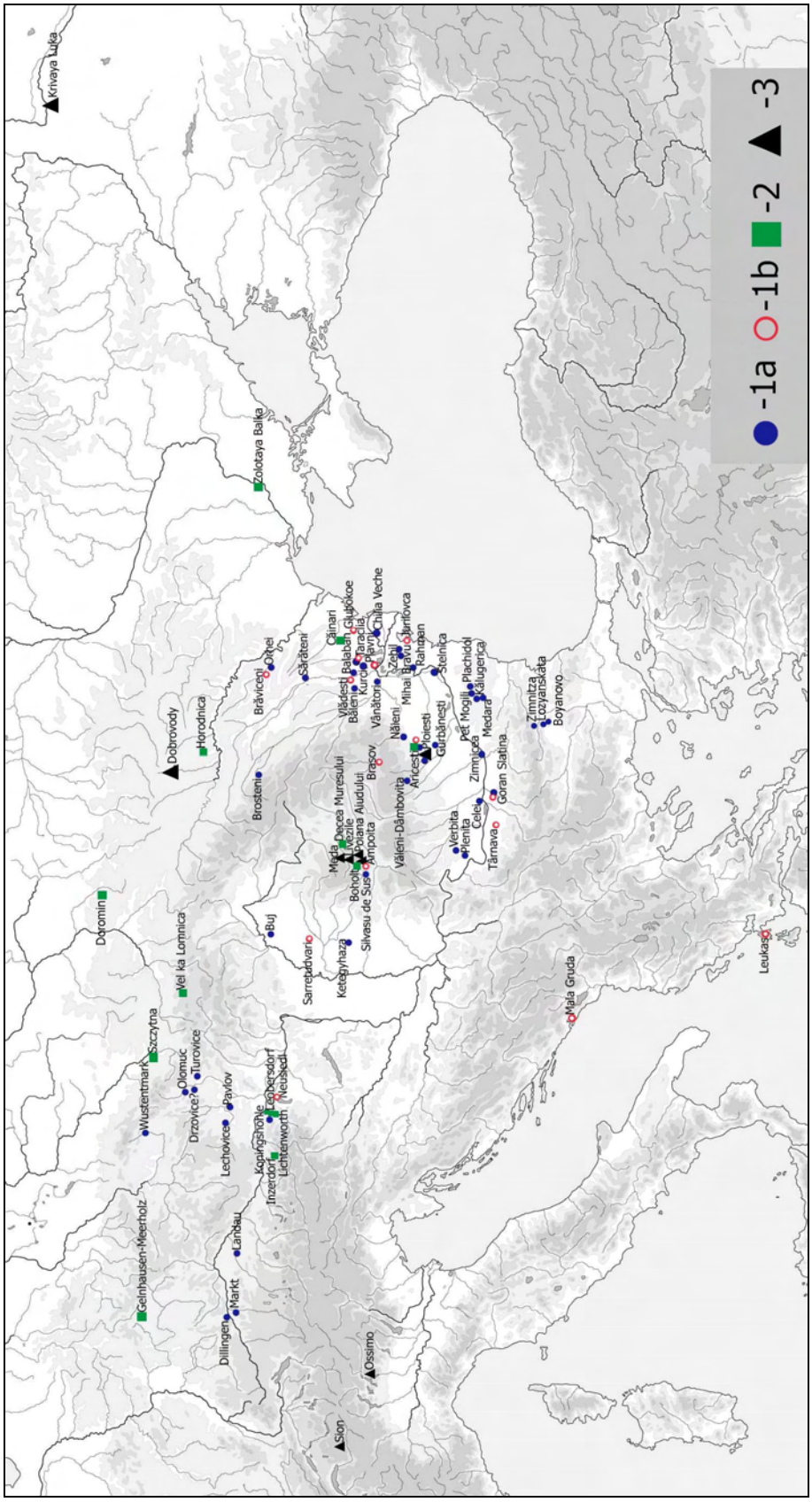

Fig. 5. Distribuția unor piese de inventar: 1. Inele de bucă (1a - din argint, 1b - din aur); 2. Colane; 3. Pandantive ochelari.
The distribution of inventory pieces: 1. Hair rings (1a – silver, 1b – gold); 2. Neck ring; 3. Eyeglasses pendants.

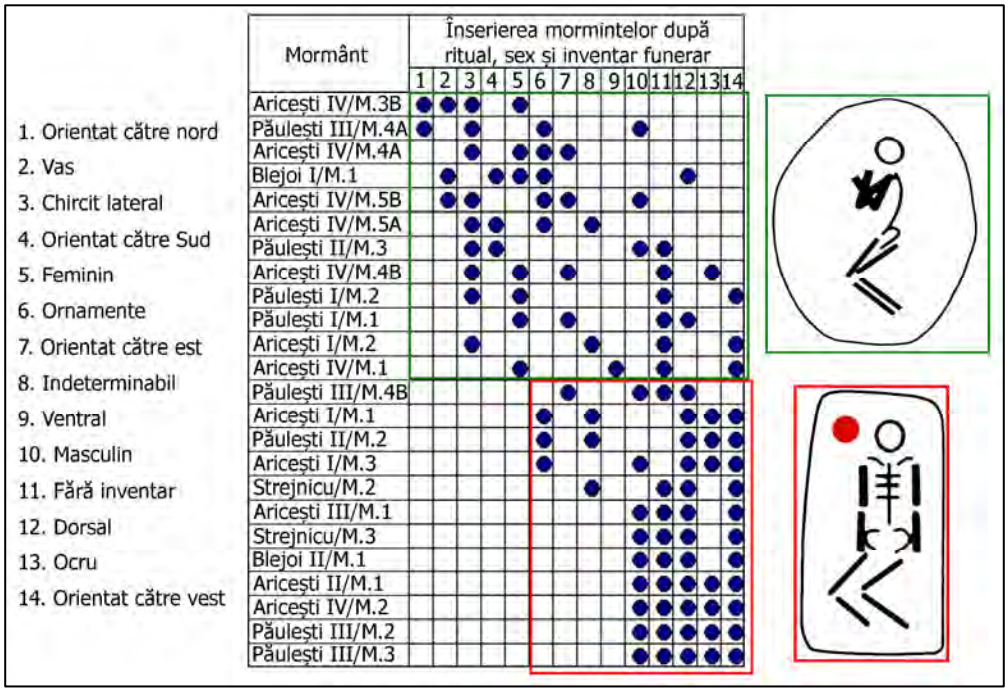

Fig. 6. Înserierea mormintelor după ritual, sex și inventar funerar.
The seriation of graves according to the burial ritual, sex and funerary inventory.

Perle tubulare din cupru precum cele din M4A/Ariceşti IV au fost descoperite la Blejoi I/M1, Păuleşti II/M2, dar și Ploieşti I/M2, M3, M4, Ploieşti II/M5, toate în morminte de femei sau subadulţi. Sunt prezente în morminte plane sau tumulare la Şendreni (I.T. Dragomir 1976, p. 55, fig. 4, 5), Târpeşti (S. Marinescu-Bâlcu 1964, p. 241), Răcăciuni (E. Tudor 1973, p. 283, fig. 2/4) sau în zona Bugeacului la Cholmskoe, Semenovka, Roşcani, Borisovka, Plavni, Taraklia (S. Agulnikov 1995, p. 82; Fl. Burtănescu 2002, p. 257), mai la nord în Republica Moldova (V. Dergacev 2002, pl. 64, 96B). În Dobrogea le găsim la Mihai Bravu şi Luncavița (I. Vasiliu 1995a, p. 126; I. Vasiliu 1995b, p. 155). Apar şi în cimitirul de la Brăiliţa (I.T. Dragomir 1959, p. 676, fig. 5/7-8; N. Harţuche 2002, p. 47-48) sau în nivelul II de la Periam (F. Gogâltan 1999, p. 176). Dacă luăm în consideraţie cele două extreme cronologice, se evidențiază cimitirul eneolitic de la Decea Mureșului (Șt. Kovacs 1932, p. 100) și depozitul de la Băleni atribuit, bronzului târziu (I.T. Dragomir 1967, nr. 67, 68).

În tumulul de la Ariceşti IV în M4A au fost descoperite 6 perle inelare din scoică (?) asemănătoare cu cele de la Ploieşti I (V. Zirra 1960, p. 103). Un șirag de perle tubulare, inelare sau rozete realizate din caolin provine din M3 de la Ariceşti I (A. Frînculeasa 2007, p. 185), iar la Păuleşti II/M2 şi Ploieşti I au formă inelară, în acest ultim punct apar și perle din scoică (E. Comșa 1998, p. 22). La Păuleşti III, în mormântul primar, a fost descoperit un şirag de perle tubulare dintr-un material „osificat", dar şi o mică mărgea ovală, neregulată, de culoare verzuie, realizată din pastă sticloasă. Remarcăm prezența unei podoabe din lut în M5A/Ariceşti IV. La Ploieşti II şi Păuleşti III, în apropierea unor morminte a fost descoperită câte o piesă din corn de cerb (E. Comşa 1989, p. 185), iar oase de mamifere provin de la Ploieşti II (E. Comşa 1989, p. 185), Blejoi I (E. Paveleţ 2007, p. 111). În M19 de la Ploieşti II au fost descoperiţi 10 canini de câine şi un colţ de suin perforat (E. Comşa 1989, p. 185). Singular este vârful de săgeată din silex din M3/Ariceşti I (A. Frînculeasa 2007, p. 185).

Movila I de la Ploiești este una ce ar merita o analiză extinsă, dar lipsesc informațiile detaliate despre contextele arheologice. În M3 au fost descoperite un pandantiv de tip *Brillenspirale* din cupru, o brățară din cupru, un colier de perle inelare din caolin şi altele tubulare din cupru, perle şi valve din scoică, un inel de buclă spiralat din argint, un vas, ocru (V. Zirra 1960, p. 103; E. Comşa 1998, p. 22; A. Frînculeasa *et alii* 2013, pl. 17). Din M4 (dublu) ce reprezenta mormântul primar provin o secure din cupru de tip *Randleistenbeil*, perle tubulare din cupru, un colier din piese de os, ocru (V. Zirra 1960, p. 103; E. Comşa 1976, p. 43; 1998, p. 22). Cele două tipuri de piese apar rar în astfel de complexe. Un mormânt cu secure a fost cercetat la Tamar-Utkul (est de Volga) și a fost datat la 4145±35 BP (2864-2635 BC) (N.L. Morgunova, O.S. Khokhlova 2013, p. 1292, no. 42, fig. 2/15), iar unul cu pandantiv la

Dobrovody (bazinul superior al Nistrului), respectiv T2/M10 datat la 3920±60 BP (2580-2200 BC) (K.P. Bunyatyan, A.V. Nikolova 2010, p. 37, nr. 19, p. 40, fig. 10/7). Pandantive au fost descoperite și într-un tumul Jamnaja la Krivaya Luka (Volga Inferioară; N. Shishlina 2008, p. 70, fig. 45/8).

Securi plate cu marginile ridicate apar din eneolitic (I. Mareș 2002, p. 79-81, 117 și urm.) până în bronzul târziu (Al. Vulpe 1975, p. 68; 1999, p. 44). Piesa de la Ploiești a fost inclusă variantei Șincai împreună cu altele de la Sighișoara, Valea lui Mihai, Banat, Târpeşti, Hlăpeşti, Grădina, Moldova Veche, Bretea Mureșană (Al. Vulpe 1975, p. 66-67; Gh. Dumitroaia 1985, p. 469-471; D. Monah 1986, p. 34; H. Ciugudean 1996, p. 122; F. Gogâltan 1999, p. 135). Cu excepţia celei de la Ploiești, toate celelalte piese provin din descoperiri întâmplătoare sau aşezări. În morminte Jamnaja apar la est de Prut la Byčok, Koržovo, Alkaliya (F. Burtănescu 2002, p. 258), dar și la sud de Dunăre posibil în M8/T3 de la Goran-Slatina (I. Panayotov 1989, p. 140-141).

Pandantivele de tip *Brillenspirale* din România au fost încadrate „grupei danubiene" ce ar corespunde cronologic cu sfârşitul eneoliticului şi bronzul timpuriu, spre deosebire de varianta vest-alpină ce aparţine mai curând epocii mijlocii şi târzii a eneoliticului (I. Matuschik 1996, p. 20 şi urm.). Cele din mormintele tumulare din zona munţilor Apuseni au fost atribuite etapei timpurii a epocii bronzului (C.I. Popa 2010, p. 16), cunoscute fiind piesele de la Poiana Aiudului, Livezile, Meda, Ampoiţa (N. Vlassa *et alii* 1985-1986; H. Ciugudean 1996, p. 33, fig. 31/12; C. Rişcuţă *et alii* 2009, p. 267, 270; C.I. Popa 2010). În bronzul mijlociu (eventual final de timpuriu) apar la Sărata-Monteoru, Beba Veche, Pitvaros, Periam, Pecica, Mokrin, Tiszafüred, etc (I. Bóna 1975; L. Bârzu 1989, p. 78, fig. 28/10; T. Soroceanu 1991, p. 89, 113; I. Matuschik 1996; F. Gogâltan 1999, p. 169-170; C.I. Popa 2010; 2011). Un pandantiv provine din cimitirul eneolitic de la Varna (I. Matuschik 1996, p. 2), majoritatea apar însă în segmentul cronologic suprapus de eneoliticul târziu şi bronzul timpuriu (H. Ciugudean 2000, p. 37), având o ocurenţă ce acoperă Europa centrală şi nordică (I. Matuschik 1996; M. Primas 1997; A. Harding 2000), dar le regăsim și în spaţiul eurasiatic în complexe Jamnaja (K.P. Bunyatyan, A.V. Nikolova 2010; N. Shishlina 2008, p. 70), apoi în morminte din bronzul mijlociu (E. Chernykh 1992, fig. 44/5, 49/9) până cel târziu în bazinul Donului sau al Volgăi Superioare în cultura Abashevo (E. Chernykh 1992, fig. 68, 3, 4). Un pandantiv, dar şi alte două fragmente, făceau parte din depozitul de la Băleni atribuit bronzului târziu (I.T. Dragomir 1967, nr. 73, 79-80) sau cel hallstattian timpuriu de la Dridu (V. Enăchiuc 1987, p. 77, fig. IV/30).

Decoruri asemănătoare cu acest tip de podoabă apar pe vase Coţofeni la Răchita, Sebeş, Seuşa, Câlnic, Livezile (P. Roman 1976, fig. 43/7; H. Ciugudean 2000, pl. 141; 2002, pl. 3; C. Popa 2013, p. 79-80), în Banat la Piatra Ilişoaiei, Albeşti în mediul Wietenberg (Gh. Baltag, N. Boroffka 1996, p. 389), dar şi pe stele menhir din Elveţia la Sion (R. Harisson, V. Heyd 2007) sau Italia la Ossimo (I. Matuschik 1996, fig. 9/5).

◈ Despre colanul de cupru: chorologie și cronologie

La gâtul M5B a fost descoperit un colan din cupru, fracturat în trei segmente. Are capetele rulate, circular în secțiune, corpul ușor torsadat (pl. X/5-8). Analiza elementală a colanului: 98,4% Cu, 0,7% As, 0,5% Fe, 0,3% Ag, 0,1% Ni[7]. Deocamdată, acest tip de podoabă este o apariţie excepţională în complexe tumulare pre-Jamnaja sau chiar Jamnaja (fig. 7). Originea acestui tip de podoabă trebuie căutată în mileniul V BC cunoscut fiind colanul din cimitirul plan de la Decea Mureşului[8] (Șt. Kovacs 1932, p. 93, fig. 4/2). Singura datare radiocarbon existentă, respectiv 5380±40 BP (4340-4050 BC), alături de elementele de cronologie relativă, situează evoluția cimitirului de la Decea Mureşului în ultima parte a mileniului V BC (B. Govedarica 2004, p. 72, Abb 9). O descoperire rămasă incertă dintr-un mormânt cercetat la Marosdécse a fost atribuită aceleiaşi etape crono-culturale (I. Ecsedy 1971, p. 12, nota 6). Ușor mai timpurie având în vedere data radiocarbon obținută de 5580±50 BP (4511-4339 BC) (B. Govedarica 2004, p. 82, Abb 13) este piesa de la Căinari (T. G. Movşa, G. F. Cebotarenko 1969, fig. 18/2). Tot în ultima treime a mileniului V în Europa Centrală, dar şi mai spre vest, în contexte eneolitice apar o serie de podoabe (pectorale), având capetele răsucite (V. Šikulová, M. Zápotocký 2010).

Pentru începutul mileniului IV remarcăm o piesă provenind din depozitul de la Horodnica (Tripolie B/Cucuteni A-B), deși pentru aceasta există o ambiguitate legată de funcționalitate, respectiv

[7] Analiza elementală a fost realizată de dr. Bogdan Constantinescu și dr. Daniela Stan (Institutul de Fizică si Inginerie Nucleară "Horia Hulubei") cărora le mulțumim şi pe această cale.

[8] Colanul a fost publicat atât cu capetele rulate (Șt. Kovacs 1944, fig. 5/2), cât şi fără (Șt. Kovacs 1932, p. 93, fig. 4/2). B. Govedarica 2004 îl consideră Halsring, nu Ősenhalsring; piesa este redesenată, fotografiată şi publicată fără capete rulate (B. Govedarica 2004, p. 66, nota 265; tafel 1/8; VI/4).

de diademă sau colan (T. Sulimirski 1961, p. 96)[9]. O altă piesă a fost descoperită la Ksiażnice într-un mormânt eneolitic atribuit culturii Lublin-Volhinia (S. Wilk 2004, p. 227, fig. 11/1).

În mediul cultural Baden au fost descoperite colane din cupru, toate cu capetele rulate, în complexe funerare precum cele de la Leobersdorf, Lichtenwörth, Königshohle, (K. Willvonseder 1937; H. Ladenbauer-Orel 1954) sau în depozitul de la Vel`ká Lomnica (M. Novotná 1984, p. 9, pl. 1). Două piese de la Vel`ká Lomnica au corpul torsadat (M. Novotná 1984, p. 9, pl. 1), fiind singurele ce au această caracteristică alături de cel de la Aricești[10]. Există informaţii despre o piesă descoperită la Boholt în context Coţofeni, fără ca aceasta să fie redată grafic (I. Andriţoiu 1984, p. 12, nota 26; H. Ciugudean 2000, p. 37). Un fragment de colan apare la Zolotaya Balka într-un complex funerar atribuit orizontului/stratului cultural inferior de la Mihailovka (E. Chernykh 1992, p. 91, fig. 29/20).

Pentru prima jumătate a mileniului III la Dunărea Inferioară și Eurasia nu cunoaștem deocamdată nicio piesă, colanele fiind relativ bine reprezentate în complexe funerare atribuite culturii cu ceramică șnurată cercetate în Europa Centrală (fig. 7). Un colan a fost descoperit recent într-un mormânt de inhumaţie de la Szczytna (Catalog expoziţie 2011, p. 244, 249, nr. 64.14), din același context cultural provine și o piesă dintr-un mormânt de la Doromin (P. Wlodarczak 2006, p. 331, pl. CIX/2). O altă piesă tot dintr-un context funerar a fost descoperită la Inzersdorf (V. Heyd 2007, p. 357, fig. 17b), iar o reprezentare de colan apare pe un menhir provenind din Germania de la Gelnhausen-Meerholz atribuit aceluiași orizont cultural, respectiv cultura cu ceramică șnurată (T. Kerig 2010).

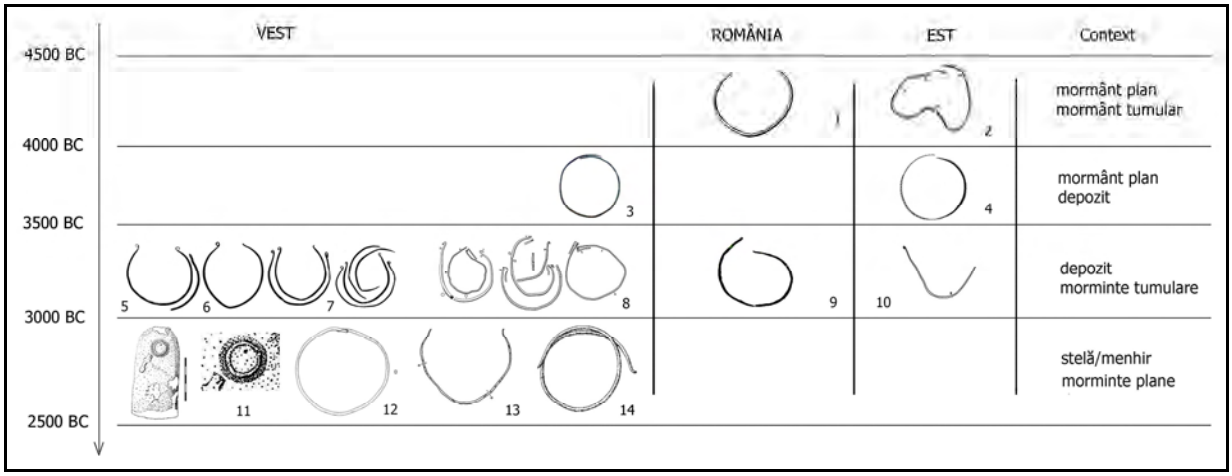

Fig. 7. Reprezentarea cronologică, spațială și tipologică a colanelor descoperite în contexte eneolitice/tranziție la epoca bronzului:
The chronological, chorological and typological representation of neck rings found in Eneolithic/transition to the Bronze Age period contexts:
1.Decea Mureşului; 2.Căinari; 3. Ksiażnice; 4.Horodnica; 5.Leobersdorf; 6.Königshohle; 7.Lichtenwörth; 8.Vel`ká Lomnica; 9.Aricești Rahtivani; 10.Zolotaya Balka; 11.Gelnhausen-Meerholz; 12.Inzersdorf; 13.Szczytna; 14.Doromin.

Ulterior colanele apar în mediile culturale Nitra, Aunjetitz, Periam-Pecica (I. Motzoi-Chicideanu 2011, p. 180), dar și Monteoru în contexte funerare la Cândești, Pietroasa Mică, Sărata-Monteoru, Cârlomănești (I. Motzoi-Chicideanu, D. Gugiu 2001-2002, p. 17 și urm.). Diverse variante tipologice ale acestor podoabe apar până în bronzul târziu (I. Motzoi-Chicideanu, Gh. Olteanu 2000, p. 25-26; A. Ţârlea *et alii* 2009, p. 316 și urm.; C.I. Popa, R. Totoianu 2010, p. 138 și urm.). În România mai sunt cunoscute descoperirile de la Predeal-Sărari, Deva, Maglavit, Periam, Cetea, Lopătari, Cetățeni (I. Andrieșescu 1915; M. Petrescu-Dâmbovița 1977; I. Motzoi-Chicideanu, D. Gugiu 2001-2002, p. 18; A. Ţârlea *et alii* 2009; C.I. Popa, R. Totoianu 2010, p. 139; T. Soroceanu 2012, p. 141), ultima aflată probabil în context funerar (D.V. Rosetti 1975, p. 281, fig. 10). Un fragment de colan provine din

[9] Pare mai curând diademă, putând avea analogii funcționale cu piesa descoperită în mormântul 2 de la Vörs, cultura Baden (J. Banner 1956, pl. LXXXVII/1, 2, 4, 8).
[10] Pentru mediul cultural Baden remarcăm o piesă alungită realizată din corn de cervideu (imitație?), descoperită în mormântul 75 de la Budakalász, asezată la gâtul defunctului - copil (M. Bondár, P. Raczky 2009, p. 62, pl. XXXV/9; C. Sachße 2010, pl. 44/10); mormântul are datarea la 4295±40 BP (3030 - 2870 BC) (Z. Siklósi 2009, fig. 13).

aşezarea din epoca bronzul de la Băleni-Români (T. Muscă 1980, p. 116, pl. 1). În epoca bronzului le regăsim din Franța, până în Rusia, Sardinia și Anatolia, multe realizate din metale prețioase (S. Gerloff 1993; A. Ţârlea *et alii* 2009; M.G. Melis 2012).

◈ Repere de cronologie relativă și absolută

Ceramica descoperită în tumulul de la Ariceștii Rahtivani, dar și situația de contingență/coexistenţă dintre mormintele tumulare și cultura Coțofeni, prezintă o serie de analogii la Dunărea Inferioară. Un tumul de la Coslogeni acoperea o serie de „alveole" în care au fost identificate vase decorate în manieră Coţofeni (V. Cavruc, M. Neagu 1995, p. 72, 76). La Brăiliţa dintr-un mormânt provine un *askos* ce pare a fi un import Coţofeni (N. Harţuche, I.T. Dragomir 1957, p. 141, fig. 11/2). La Basarabi au fost descoperite schelete chircite și ceramică Coţofeni (V. Dumitrescu 1944, p. 85), iar la Bodo în mantaua tumulului au fost găsite mai multe fragmente ceramice Coțofeni (I. Stratan 1974, p. 72). La Cârna într-un tumul, un mormânt cu ocru conţinea vase ornamentate în manieră Coţofeni (Gh. Bichir 1959, p. 276-278). La Pleniţa în *movila I*, în mormântul central, în manta şi în nivelul antic a fost găsită ceramică Coţofeni (D. Berciu, S. Morintz 1952, p. 163-166), iar la Plopşor un mormânt în tumul avea ca inventar o ceaşcă Coţofeni (I. Nestor 1933, p. 67). În cazul unei movile cercetate la Rast, ceramica Coţofeni a fost descoperită la diverse adâncimi, inclusiv pe nivelul antic (C.S. Nicolăescu-Plopşor *et alii* 1951, p. 275-277). La Silvaşu de Jos, *Movila 4,* groapa mormântului a tăiat un nivel ce conţinea fragmente ceramice Coţofeni (S.A. Luca *et alii* 2011, p. 122-123). Și la Suharu lângă un schelet în poziţie întinsă, orientat est-vest, se afla o ceaşcă Coţofeni (D. Berciu 1939, p. 82). La Cheile Aiudului dintr-o serie de tumuli provine ceramică Coţofeni (N. Vlassa *et alii* 1985-1986), iar la Ampoița în mantaua şi sub tumulul I atribuit grupului Livezile se găseau fragmente ceramice Coţofeni (H. Ciugudean 1996, p. 38).

Tumulii de la Perlez și Padej, ambii din Serbia, sunt construiți peste depuneri arheologice Baden, iar în cazul celui de la Bare în pământul utilizat au fost descoperite fragmente ceramice Coțofeni (M. Giric 1987, p. 72-73; P. Medović 1987, p. 78). O movilă cercetată la Jabuka era ridicată peste un sit în care apare ceramică Baden și Kostolac (N. Tasić 1995, p. 73-74), iar într-un tumul de la Mokrin, alături de un mormânt de inhumație Jamnaja se afla unul de incinerație cu două vase Baden (M. Girić 1987, p. 73-74). În spațiul maghiar remarcăm tumulul 5 de la Ketegyhaza ce a fost construit peste o așezare Cernavoda III, altul de la Ohat-Dunahalom ridicat peste un complex Baden, aceeași situație pare să fi existat și la Hortobagy-Halaszlaponyag (T. Horváth 2011, p. 87-88). La Mezocsat-Horcsogos și Tiszavasvari-Gyeparos tumulii erau amenajați peste morminte Baden, iar un fragment ceramic Coțofeni a fost găsit în mantaua movilei de la Hajdúnánás (T. Horváth 2011, p. 74-75). În Bulgaria la Târnava în primul tumul au fost descoperite zece morminte, din care trei de incinerație, în care erau depuse vase decorate sau având forme specifice Coțofeni. Câteva morminte aveau structuri realizate din pietre. Altele aveau în inventar inele de buclă spiralate din cupru sau aur, ocru, dar și un vas decorat, cu analogii la Celei (I. Panayotov 1989, p. 84-93). La est de Prut remarcăm un vas atribuit culturii Coţofeni (V. Heyd 2011, p. 549), provenind dintr-un tumul de la Taraklia (V. Dergacev 1998, p. 52, fig. 20/2).

Pentru România sunt publicate șase date radiocarbon pentru complexe Jamnaja cercetate la Baia-Hamangia (2) şi Hamangia (2), Galaţi, Rahman, dintre care trei au însă o marjă de eroare mare (S. Forenbaher 1993, p. 241; A. Laszló 1997, p. 265; S. Ailincăi *et alii* 2014, p. 145, fig. 7). Numai o dată de la Baia-Hamangia poate fi luată în considerare având o eroare acceptabilă, datarea în ani radiocarbon fiind de 4530±65 BP (3380-3010 BC) (I. Motzoi-Chicideanu 2011, p. 226, 328, fig. 17). O dată publicată recent de la Ariceștii II aflată la 4146±25 BP, este situată în intervalul 2873 – 2630 BC (A. Frînculeasa *et alii* 2013, fig. 8), iar alta de la Rahman are 4220±35 BP, aflată în segmentul 2910-2670 BC (S. Ailincăi *et alii* 2014, p. 145, fig. 7). În ce privește tot arealul vestic lotul de datări absolute este mult redus raportat la spațiul eurasiatic (I. Ecsedy 1979, p. 52; I. Panayotov 1989; S. Forenbaher 1993; Y.B. Boyadziev 1995, p. 186; J. Görsdorf, J. Bojadziev 1996, p. 155-156; L. Nikolova 1999, tab. A, p. 406; J. Dani, I. M. Nepper 2006; T. Horváth 2011; T. Horváth *et alii* 2013). Până în prezent sunt cunoscute 22 datări ^{14}C, din care 16 provin din Ungaria, 5 din Bulgaria și una din Serbia (S. Forenbaher 1993; T. Horváth 2011, p. 92-94; T. Horváth *et alii* 2013; A. Frînculeasa *et alii* 2015).

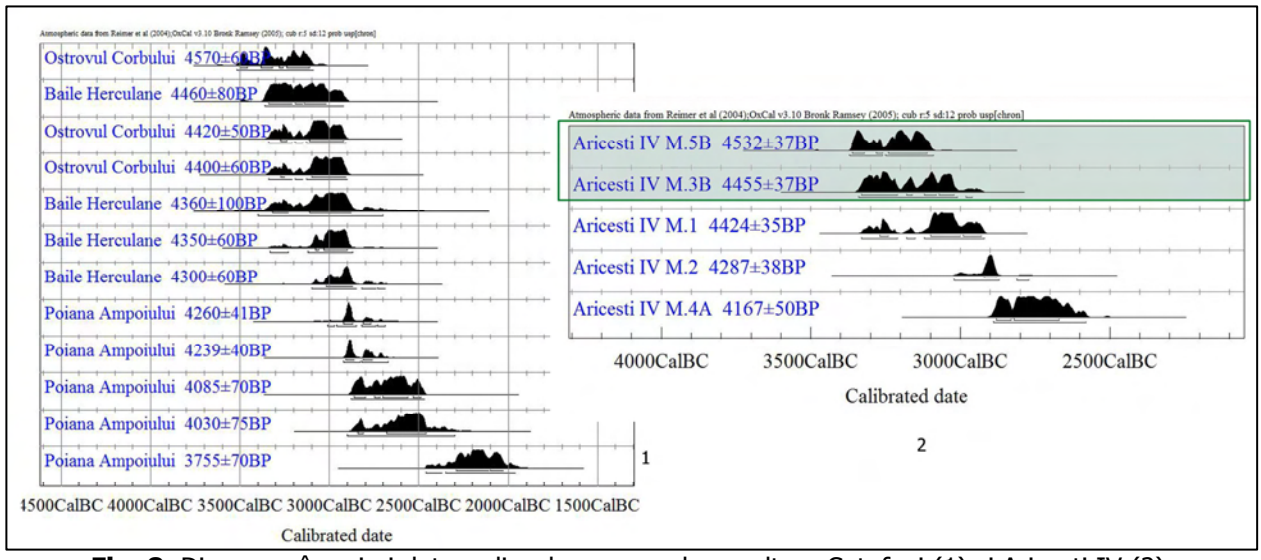

Fig. 8. Diagrame înserieri date radiocabron, complexe cultura Coţofeni (1) și Aricești IV (2).
Seriation of radiocarbon dates from Coţofeni features (1) and Aricești IV (2).

O serie de 12 date obţinute pentru niveluri de locuire Coţofeni de la Ostrovul Corbului, Băile Herculane şi Poiana Ampoiului (fig. 8/1), la care se adaugă alte două din Bulgaria de la Măgurata (ce par eronate), situează evoluţia acestei culturi între jumătatea mileniului IV şi începutul mileniul III BC (H. Ciugudean 1996, p. 146; 2000, p. 58; I. Motzoi-Chicideanu 2011, p. 182), deşi există autori ce identifică finalul acesteia înainte de pragul anilor 3000 BC (H. Ciugudeanu 2000, p. 59). Cinci din datele de la Poiana Ampoiului și Băile Herculane coboară în mileniul III și sunt contemporane cu cele atribuite orizontului Jamnaja. În ce privește cultura Baden, datările sunt mult mai numeroase, inclusiv cele dendrocronologice, și acoperă aproximativ acelaşi segment cronologic cu cel Coțofeni, respectiv 3600-2800 BC (T. Horváth *et alii* 2008; 2013; Z. Siklósi 2009; I. Motzoi-Chicideanu 2011, p. 187). Cele atribuite siturilor Horodiștea sunt situate în intervalul 3350 – 2750 BC (C.M. Mantu 1998, p. 252-253, tab. 7), par să coabiteze şi apoi să le urmeze pe cele tripoliene târzii aflate între 3600-3100 BC (I. Motzoi-Chicideanu 2011, p. 190). Mai introducem în discuție și o serie de complexe funerare atribuite culturii Amforelor Globulare de la Basarabi, Dolheştii-Mari, Piatra Neamţ, Bârgăuani, aflate între 3500-2500 BC, deşi datările timpurii de la Dolheşti sunt probabil eronate (V. Bîrliba-Mihăilescu, M. Szmyt 2003, p. 107, tabel 1).

Pentru tumulul de la Ariceşti IV au fost realizate o serie de cinci datări ^{14}C, pentru fiecare mormânt câte una (fig. 8/2; tab. 2), toate probele fiind prelevate din oasele umane. Patru date confirmă observațiile stratigrafice (fig. 1), numai cea pentru M4A pare a fi eronată[11]. Trei confirmă (și din prisma inventarului) vechile datări pentru situri Coțofeni, celelalte două pentru complexe Jamnaja. Datele pentru M3 și M5 pot fi asociate cu inventarele ce cunosc analogii în cultura Coțofeni. Existența timpurie a unui inel de buclă din argint în M5B indică o relație inclusiv cu zona estică pe filiera usatoviană. Data obținută pentru M2 este una ancorată mediului vestic Jamnaja, toate datele cunoscute până în prezent pentru morminte cu defuncți așezați dorsal cu picioarele îndoite și genuchii ridicați, sunt situate în același interval (T. Horváth 2011).

[11] De la laboratorul de la Debrecen am primit următoarele informații: *„I have checked the collagen yield for your bones: it was between 4-10 % for almost all of your samples, but just now realized it was only 0,22% for your sample Nr. 4! (**M4 s.n.**) This means your sample Nr. 4. is very sensitive sample with very low collagen content, so reliability of that C-14 results is certainly questionable because of the sample matrix"* (M. Molnar).

Complex funerar	Inventar	Poziție schelet	Orientare	Cod laborator	ani BP	Date calibrate BC, domeniul sigma 2
M1	-	Ventral?	VSV-ENE	DeA-2796.1.1	4424±35 BP	**95,4% probabilitate** 3330(19,3%)3210 BC 3180(2,0%)3150 BC 3120(74,1%)2920 BC
M2	Ocru	Dorsal	VSV-ENE	DeA-2797.1.1	4287±38 BP	**95,4% probabilitate** 3020(94,0%)2870 BC 2810(1,4%)2770 BC
M3B	Vas	Lateral	NNE-SSV	DeA-2879.1.1	4455±37 BP	**95,4% probabilitate** 3340(93,9%)3010 BC 2980(1,5%)2960 BC
M4A	5 inele de buclă din Ag, 3 perle tubulare din Cu, perle din os?, ocru	Lateral	E-V	DeA-2880.1.1	4167±50 BP	**95,4% probabilitate** 2890(94,5%)2580 BC
M5B	colan din Cu, vas, inel de buclă din Ag	Lateral	E-V	DeA-2943.1.1	4532±37 BP	**95,4% probabilitate** 3370(34,5%)3260 BC 3250(60,9%)3090 BC

Tab. 2. Ariceștii Rahtivani: datări radiocarbon calibrate corelate cu inventarul, orientarea și poziția scheletului.
Ariceștii Rahtivani: calibrated radiocarbon dates correlated with grave-goods, orientation and position of the deceased.

Pentru tumulii din arealul de vest datările se încadrează aproximativ în intervalul 3100 – 2500 BC (V. Heyd 2011, p. 541), situaţie ce îşi găseşte analogii în zona de silvo-stepă de la est de Prut (Y. Rassamakin, A.V. Nikolova 2008, p. 65). Pentru discuţia legată de apariţia acestor complexe funerare în spaţiul vestic remarcăm data radiocarbon obţinută pentru M12 de la Sárrétudvari-Őrhalom (J. Dani, I.M. Nepper 2006, p. 44, 48), apropiată de cea de la Baia-Hamangia (I. Motzoi-Chicideanu 2011, p. 226, 328, fig. 17) sau cele de la Ariceşti IV, Păulești II, Păulești IV (A. Frînculeasa *et alii* 2015). În ce priveşte ultimele trei exemple ne aflăm în fața unor morminte cu defuncții așezați lateral, dar sunt prezente și reînhumările sau utilizarea mormântului în etape succesive pentru mai multe înmormântări. Și M12 de la Sárrétudvari-Őrhalom era unul cu defunct depus lateral și aparține unui orizont ce precede în acest areal înmormântările Jamnaja (V. Heyd 2011).

Originea complexelor Jamnaja a fost căutată de o parte și de alta a Donului în cultura Repin la est, respectiv orizontul „post Stredni-Stog" la vest de fluviu (Y. Rassamakin 2013, p. 117). Se consideră că faza timpurie a culturii Repin poate fi încadrată între 4000-3300 BC (N. L. Morgunova 2011). Este încă disputată problema generată de reperele de cronologie relativă și racordarea culturii Repin acestui fenomen (D.Y. Telegin 2002; Y. Rassamakin 2013, p. 117 și urm.), deoarece o parte din mormintele Jamnaja conțin ceramică specifică acestei culturi (D.Y. Telegin *et alii* 2003, p. 138), inclusiv în tumulii timpurii din sudul munților Urali, cum sunt cei de la Lopatino, Petrovka, dataţi pe oase umane în intervalul 3640-3490 BC (N.L. Morgunova 2011, p. 137). Datările din așezări sunt apropiate de cele din mormintele cercetate în Ucraina ce ating 3500-3350 BC, dar în acest caz probele pe ceramică sunt cele înalte, cele pe oase de mamifere fiind joase (P.F. Kuzneţov 2013).

În nord-vestul Mării Negre mormintele Jamnaja timpurii apar în jurul anilor 3300-3100 BC (D.Y. Telegin *et alii* 2003, p. 150), aproximativ în același segment cronologic aceste comunităţi se răspândesc în tot spaţiul vest-pontic (D.W. Anthony 2007, p. 321). Cele mai numeroase sunt seriile ce acoperă intervalul 2950-2550 BC (B. Govedarica *et alii* 2006; Y. Rassamakin, A. Nikolova 2008, tab. 1; N.I. Shishlina *et alii* 2009, p. 492-493; 2012; N.L. Morgunova 2011).

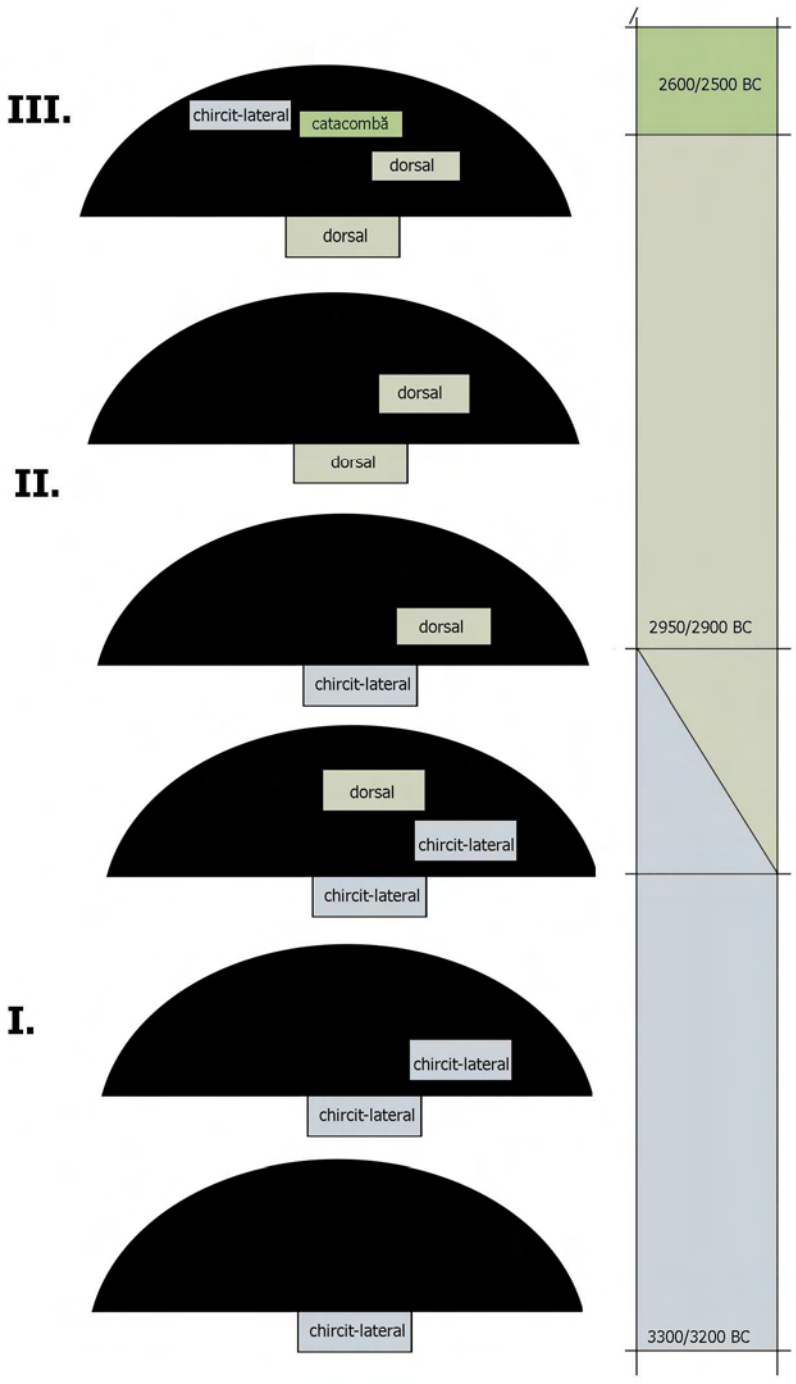

Fig. 9. Reprezentare figurativă a raportului dintre evoluția ritualului de înmormântare și cronologia absolută.
Figurative representation of the relation between the evolution of the burial ritual and the absolute chronology.

Datele ^{14}C de la vest de Carpaţi şi sud de Dunăre (A. Frînculeasa *et alii* 2015) indică contemporaneitatea acestui fenomen cultural cu descoperirile din arealul răsăritean (I. Motzoi-Chicideanu 2011, p. 226), cu ceea ce a fost definită drept fază clasică (N.L. Morgunova, O.S. Khokhlova 2013). Discutabilă rămâne definirea culturală a mormintelor ce au în inventar materiale Coțofeni/Baden, ce probabil datează din ultima parte a mileniului IV. Sunt aceste complexe Jamnaja în care apar importuri sau ne aflăm în faţa unui fenomen de aculturație? Probabil descoperirile timpurii pot fi atribuite unui orizont ce precede apariţia în acest spaţiu a comunităţilor Jamnaja, aceeaşi situaţie fiind

observată şi în Ungaria (J. Dani, I.M. Nepper 2006), Bulgaria (S. Alexandrov 2011, p. 317) şi Serbia (V. Heyd 2011, p. 542-543). Defuncţii de ambele genuri erau aşezaţi chircit-lateral în gropi ovale, inventarul era uneori mai diversificat decât în etapa următoare, orientarea este una variabilă. La începutul mileniului III ritualul de înmormântare devine unul standardizat, caracterizat de depunerea defuncţilor, preponderent a celor de gen masculin, dorsal cu picioarele îndoite și ridicate, orientarea în sectorul vestic, gropile au formă rectangulară, cu inventare formate din inele de buclă realizate din metale preţioase, îndeosebi argintul, ceramica apare mai rar, ocrul este mult mai prezent.

◈ Scurte considerații finale

Descoperirile din acest complex funerar marchează segmentul cronologic, dar şi chorologic, în care comunități cu origini în stepele din spaţiul Eurasiatic au contacte cu cele Coțofeni/Baden, continuând o serie de relaţii ce aveau în acest areal tradiţii vechi de un mileniu (F. Gogâltan, A. Ignat 2011; F. Gogâltan 2013; A. Ilie 2012). Prezența unor materiale Coțofeni în nordul Munteniei crează spațiu unor dezbateri viitoare. O descoperire recentă de la Mănești[12], dar și altele semnalate la Mârlogea, Valea Călugărească (P. Roman 1976, p. 13), deschid noi perspective asupra evoluției culturii Coțofeni în Muntenia și a relațiilor comunităților eneolitice târzii cu cele aflate la nordul Mării Negre.

Mormântul cu ring cercetat la Ariceștii Rahtivani aparţine unei etape a înmormântărilor în tumuli ce pare să preceadă în acest spaţiu instalarea fenomenului Jamnaja. La sud de Dunăre semnalăm aceeași situație, primele înmormântări cu astfel de amenajări sunt atribuite unor complexe eneolitice târzii de tip Cernavoda I, Usatovo târziu - Cernavoda III, în care se regăsesc morminte cu ringuri de piatră şi schelete depuse dorsal cu picioarele îndoite sau chircit-lateral (St. Alexandrov 2011, p. 317-318).

Datările radiocarbon realizate recent par să confirme existenţa a cel puţin două etape/grupe principale de înmormântări în tumuli, la care am mai putea adăuga o a treia în care apar complexele funerare specifice comunităţilor Katakombnaja (fig. 9). Prima etapă este situată în ultima treime a mileniului IV BC şi este caracterizată de prezenţa în tumuli a defuncţilor de ambele sexe, aşezaţi chircit-lateral, cu orientări diverse, inventare compuse din ceramică, podoabe din cupru, mai rar din argint, os, izolat arme sau unelte din piatră sau curpu; gropile au mai curând forma ovală, ocrul apare rar. A doua etapă/grupă acoperă prima jumătate a mileniului III; reprezentativă este depunerea indivizilor orientaţi în sectorul vestic, preponderent de sex masculin, așezați dorsal cu picioarele îndoite şi ridicate, căzute în lateral. Gropile au formă rectangulară, inventarul este unul auster, apar în special inele spiralice din argint, ceva mai rar ceramică sau alte tipuri de piese, ocrul este o prezență obișnuită. Trebuie remarcat că între aceste prime etape nu apare o delimitare cronologică abruptă, inițial cele două tipuri de ritualuri coexistă (A. Frînculeasa *et alii* 2015). A treia etapă se suprapune parţial pe cea de-a doua şi coboară în a doua jumătate a mileniului III BC. Este caracterizată (inițial) de coexistenţa mormintelor ce au ritualul specific din etapa a II-a cu cei aşezaţi întinşi pe spate în gropi cu catacombă, dar și de reapariția celor depuși lateral. Absența unor date radiocarbon în cazul complexelor Katakombnaja din acest spațiu, dar și a unor observații stratigrafice lipsite de ambiguitate, lasă deschisă discuția asupra segmentului cronologic ocupat de această etapă/grupă.

Considerând că primele morminte Jamnaja de la Dunărea Inferioară sunt datate în jurul anilor 3000 BC, atunci întregul sector vestic a făcut parte din acest fenomen în acelaşi segment cronologic, ceea ce este un indiciu important legat de mişcări de populaţii cu origini în spaţiul eurasiatic, pe fondul unui fenomen de aculturație prezent din ultima treime a mileniului IV BC. Originile acestor relații/fenomene ce implică un areal foarte mare ce acoperă Eurasia și Dunărea de Jos se regăsesc într-o serie de evenimente și istorii proprii acestui spațiu încă de la sfârșitul mileniului V BC.

◈ Mulțumiri

Mulțumim unor colegi cercetători ce ne-au ajutat cu o serie de materiale bibliografice și informații utile acestui studiu. Amintim pe Sorin Ailincăi, Anca Diana Popescu, Florin Gogâltan, Cristian

[12] Descoperire de suprafață inedită, aflată într-un context arheologic complex. Astfel, în aceeași localitate, la circa 1,1 Km nord-est de un sit în care a apărut la suprafață un fragment ceramic decorat în manieră Coțofeni alături de altele atipice, în punctul *Movila Mare* se află o așezare Glina, iar la 200 m sud de acest sit există un tumul. Alți 6 tumuli se găsesc în apropierea *Movilei Mari*, dispuşi în localitățile Coada Izvorului, Băltița şi Zalhanaua. Precizăm că tumulii sunt descoperiri izolate la vest de râul Prahova, concentrarea acestor complexe funerare fiind în interfluviul Teleajen – Prahova (pl. I/3).

I. Popa, Sorin Oanță, Daniel Garvăn, Volker Heyd, Janos Dani, Ilia Iliev și Piotr Wlodarczak. De asemenea, adresăm mulțumiri speciale lui Volker Heyd pentru sugestii pertinente legate de problematica Jamnaja în spațiul vest-pontic.

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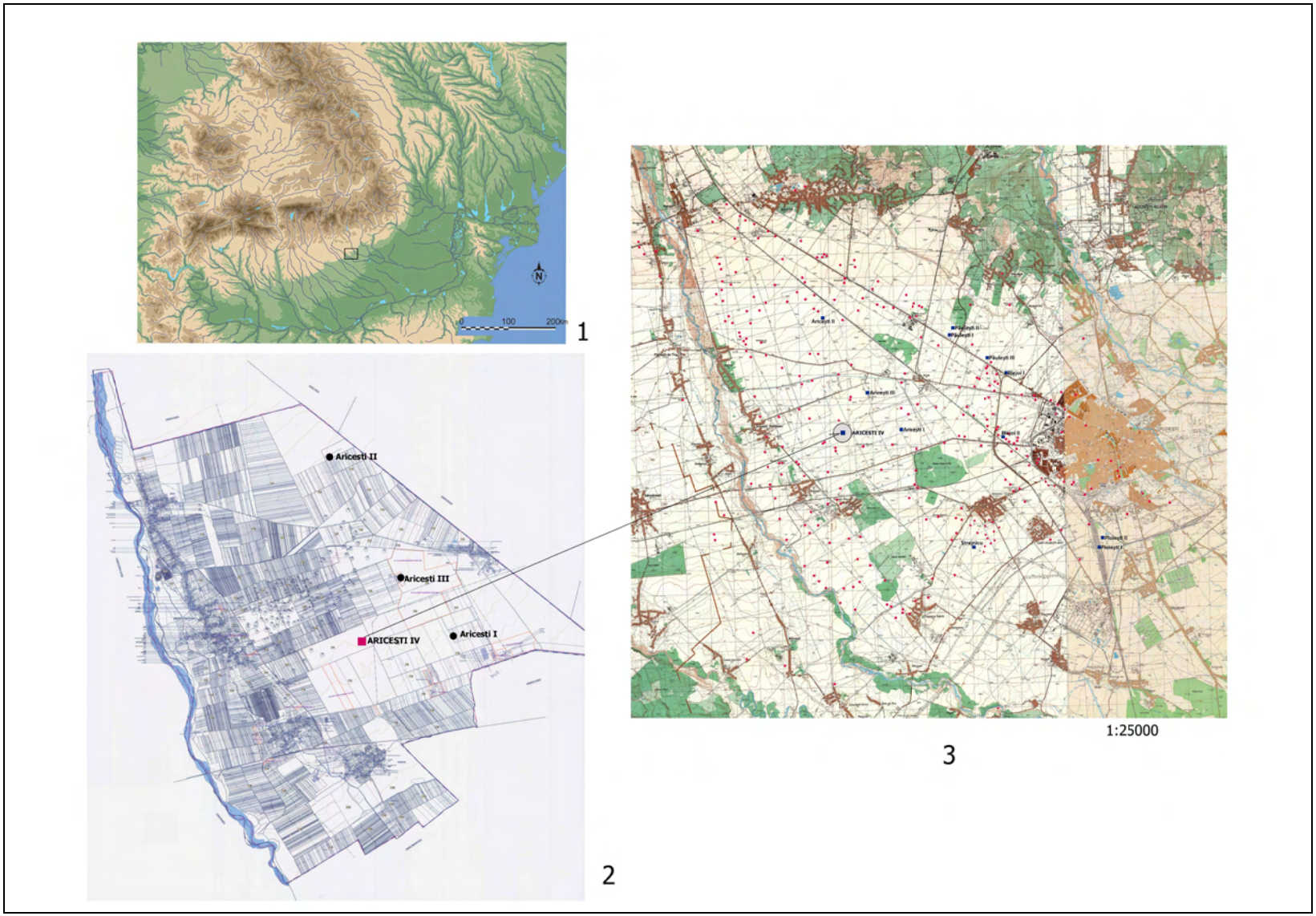
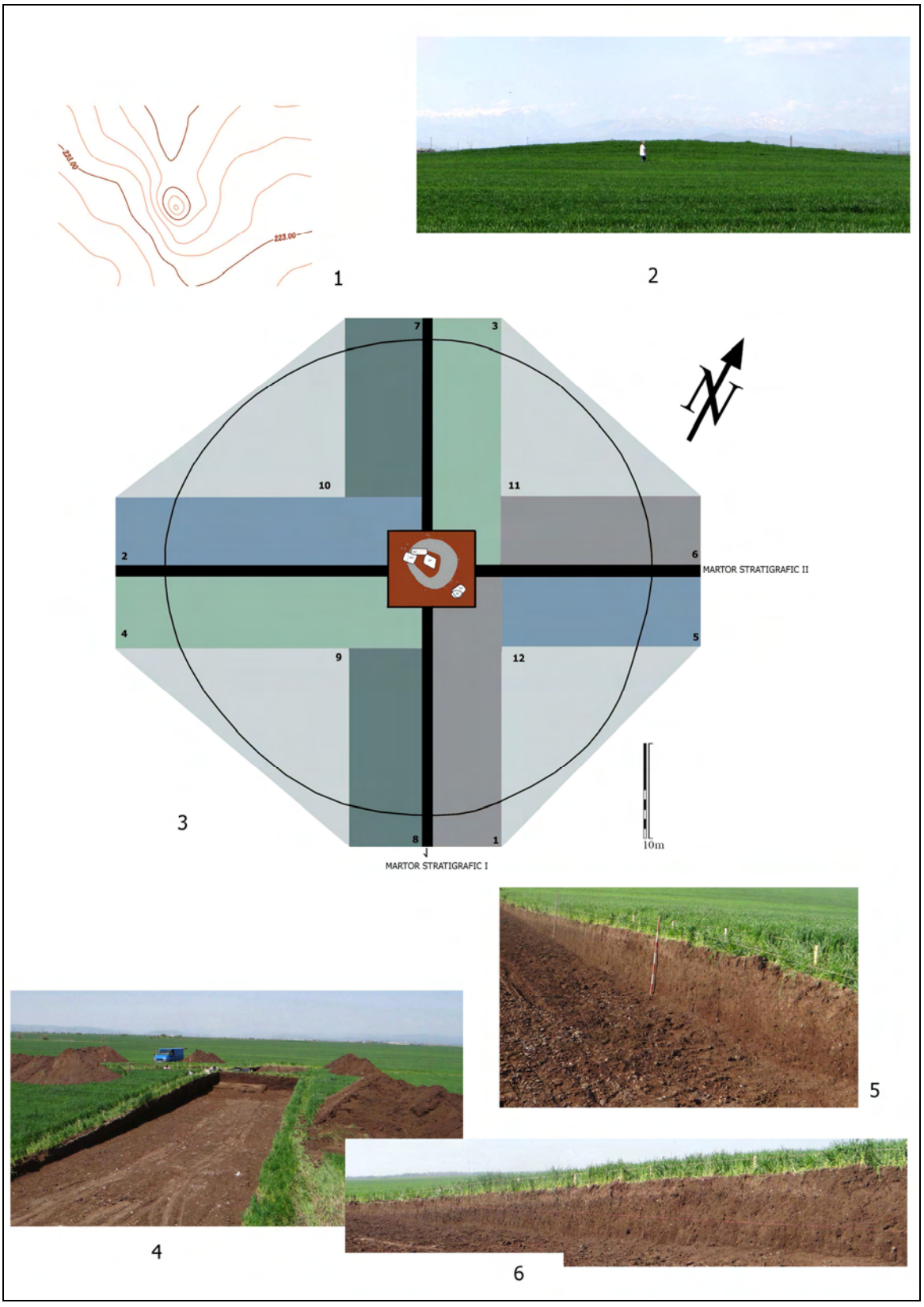
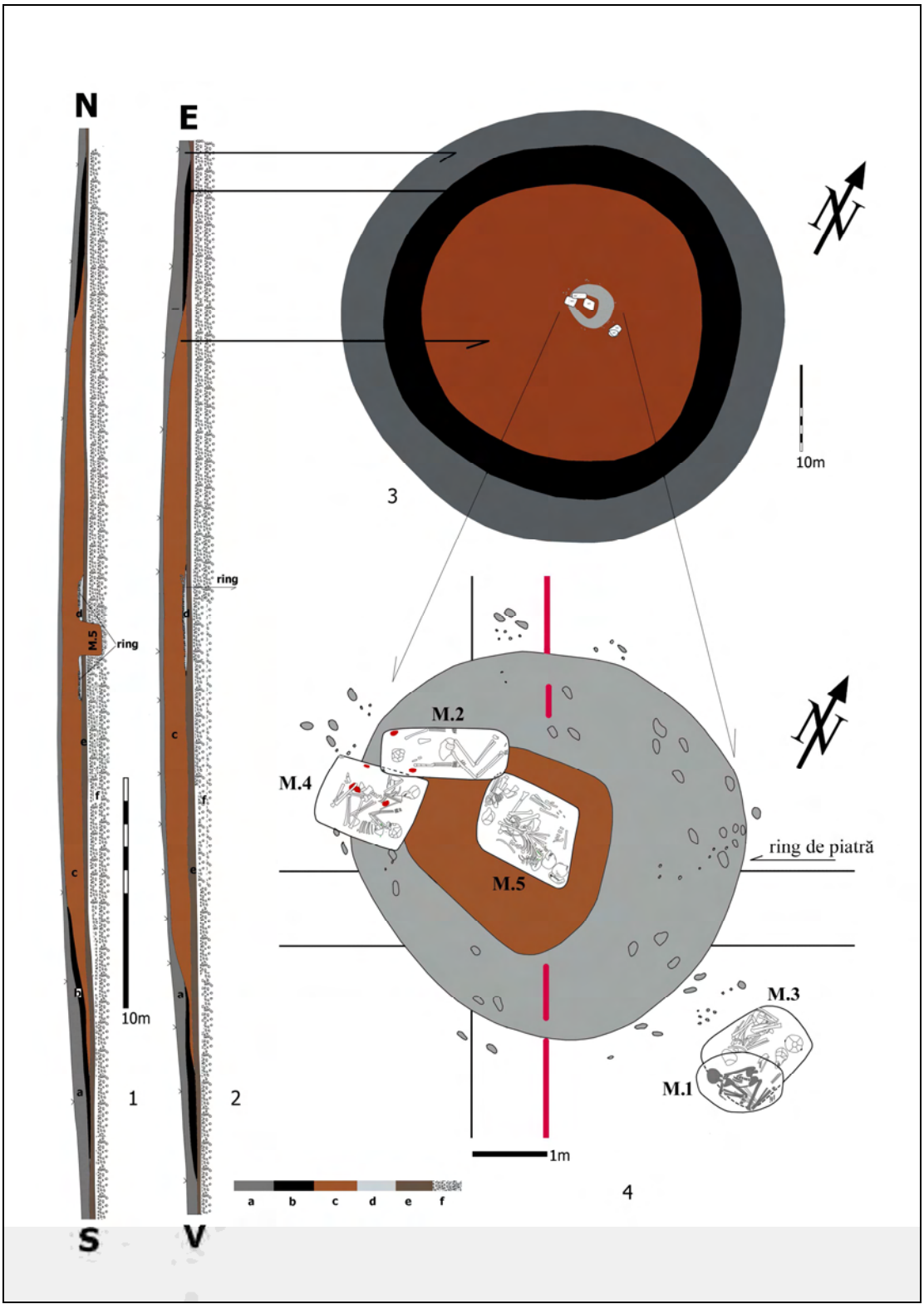


Pl. 1. Poziționarea zonei cercetate (1); poziționarea tumulului cercetat pe harta localității Ariceștii Rahtivani (2); distribuția tumulilor în interfluviul Teleajen - Prahova (3).
The position of the investigated area (1); the position of the investigated mound on the map of Ariceștii Rahtivani (2); the distribution of mounds in the Teleajen - Prahova interfluve(3).

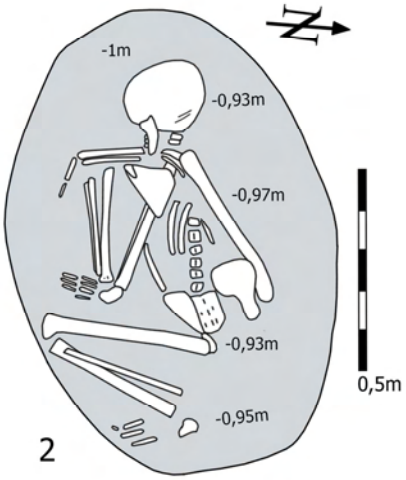


Pl. 2. Planul topografic al tumulului (1); tumulul de la Aricești IV înainte de cercetare (2); metodologie de cercetare (3); imagini din timpul cercetării (4-6).
The topographical survey of the mound (1); the Aricești IV mound before research (2); research methodology (3); images during research (4-6).



Pl. 3. Profil stratigrafic al martorului I (1); profil stratigrafic al martorului II (2); planul general al tumulului (3); detaliu distribuția în plan a complexelor funerare cercetate (4); legendă: a. strat vegetal/arabil, b. lentilă negricioasă, c. manta, d. lentilă de pământ excavat din groapa M.5, e. strat antic, f. depozit natural de pietriș.
The stratigraphic profile of baulk I (1); the stratigraphic profile of baulk II (2); the general plan of the mound (3); detail of the spatial distribution of the investigated burials (4); legend: a. ploughing layer, b. black lens, c. mantle, d. lens of soil excavated from the pit of Gr.5, e. ancient layer, f. natural deposit of gravel.

1



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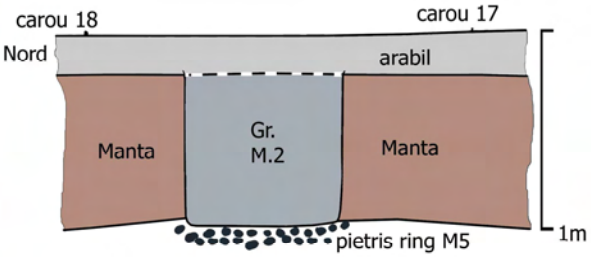

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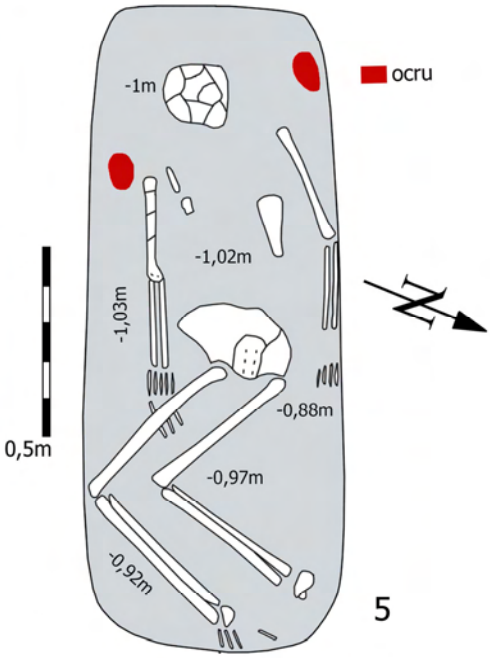

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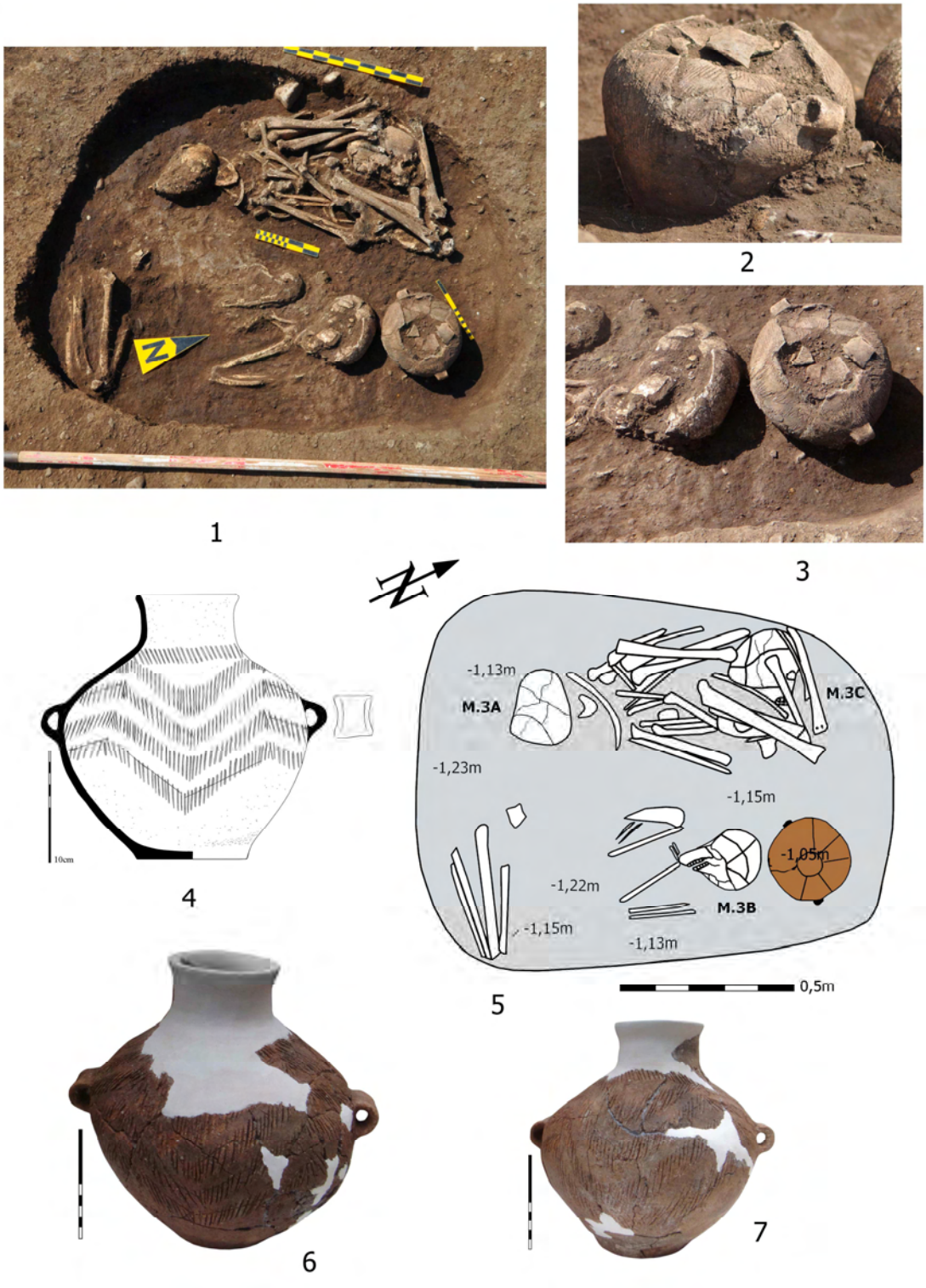
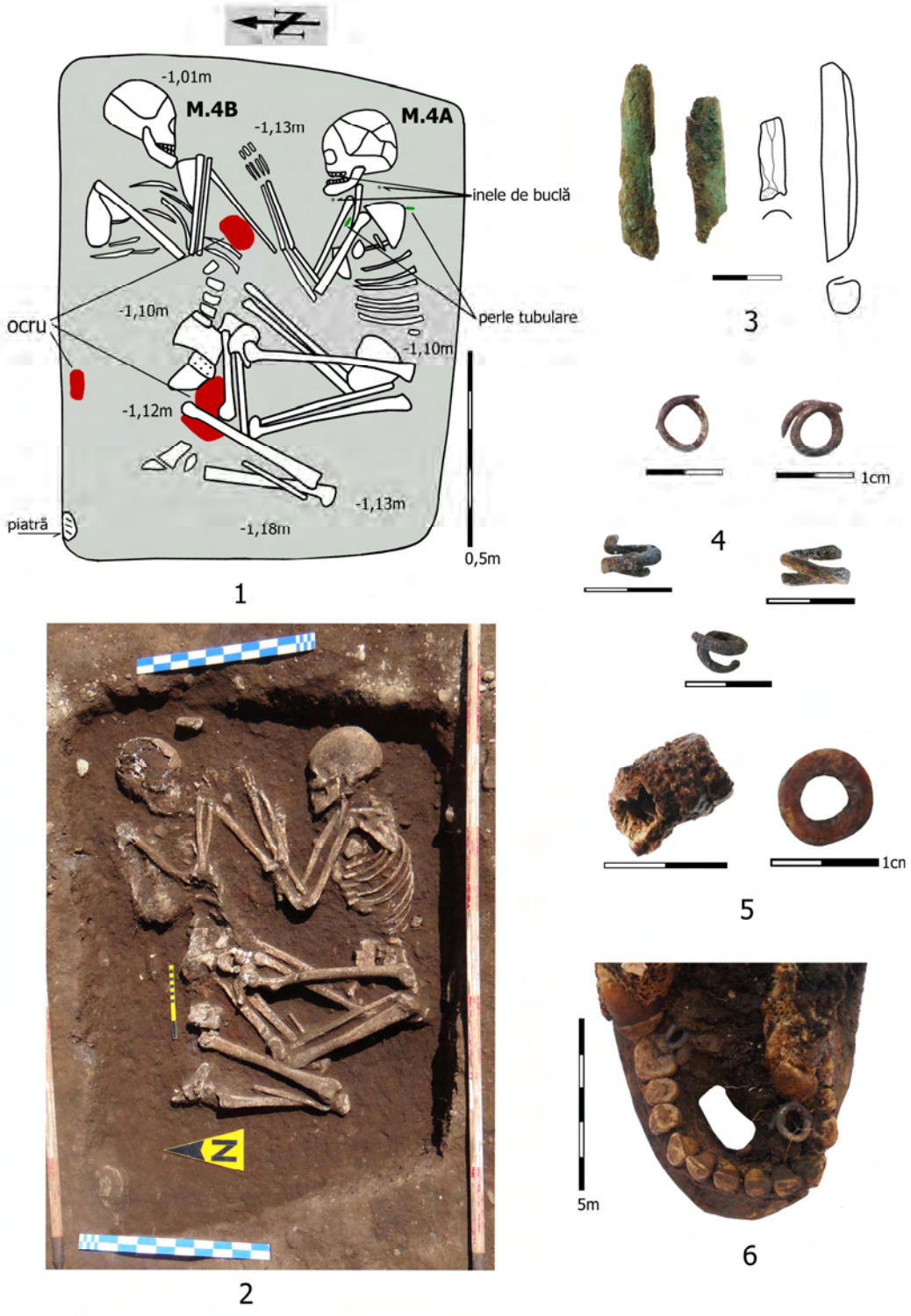
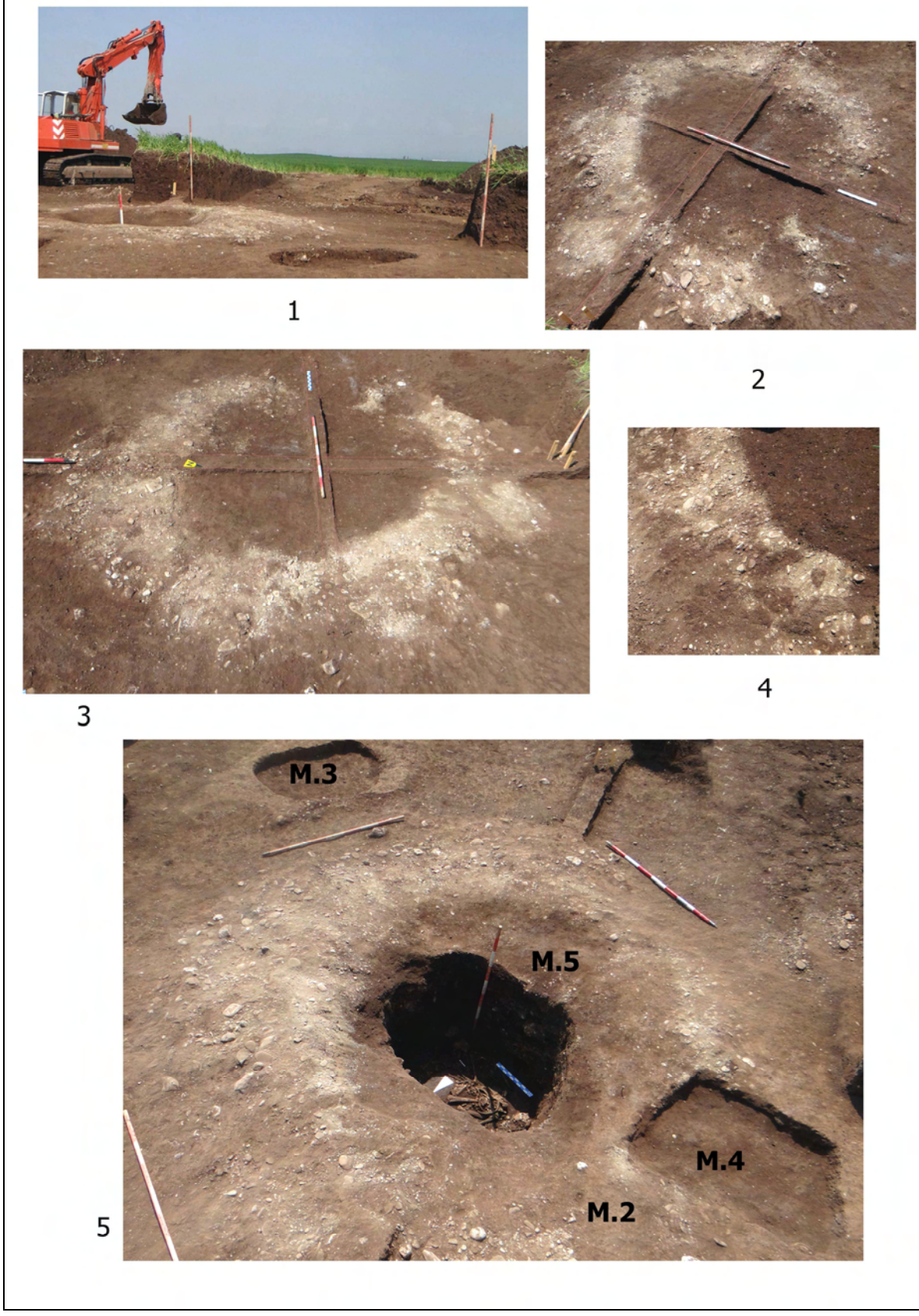
Pl. 4. Mormântul 1 (1-2); mormântul 2 (3, 5); desen profil stratigrafic, mormântul 2 (4).
Grave 1 (1-2); grave 2 (3, 5); drawing of stratigraphic profile, grave 2 (4).



Pl. 5. Mormântul 3 (1, 5); vas din mormântul 3 *in situ* (2, 3); vas din mormântul 3 (4, 6-7).
Grave 3 (1, 5); pot from grave 3 *in situ* (2, 3); pot from grave 3 (4, 6-7).

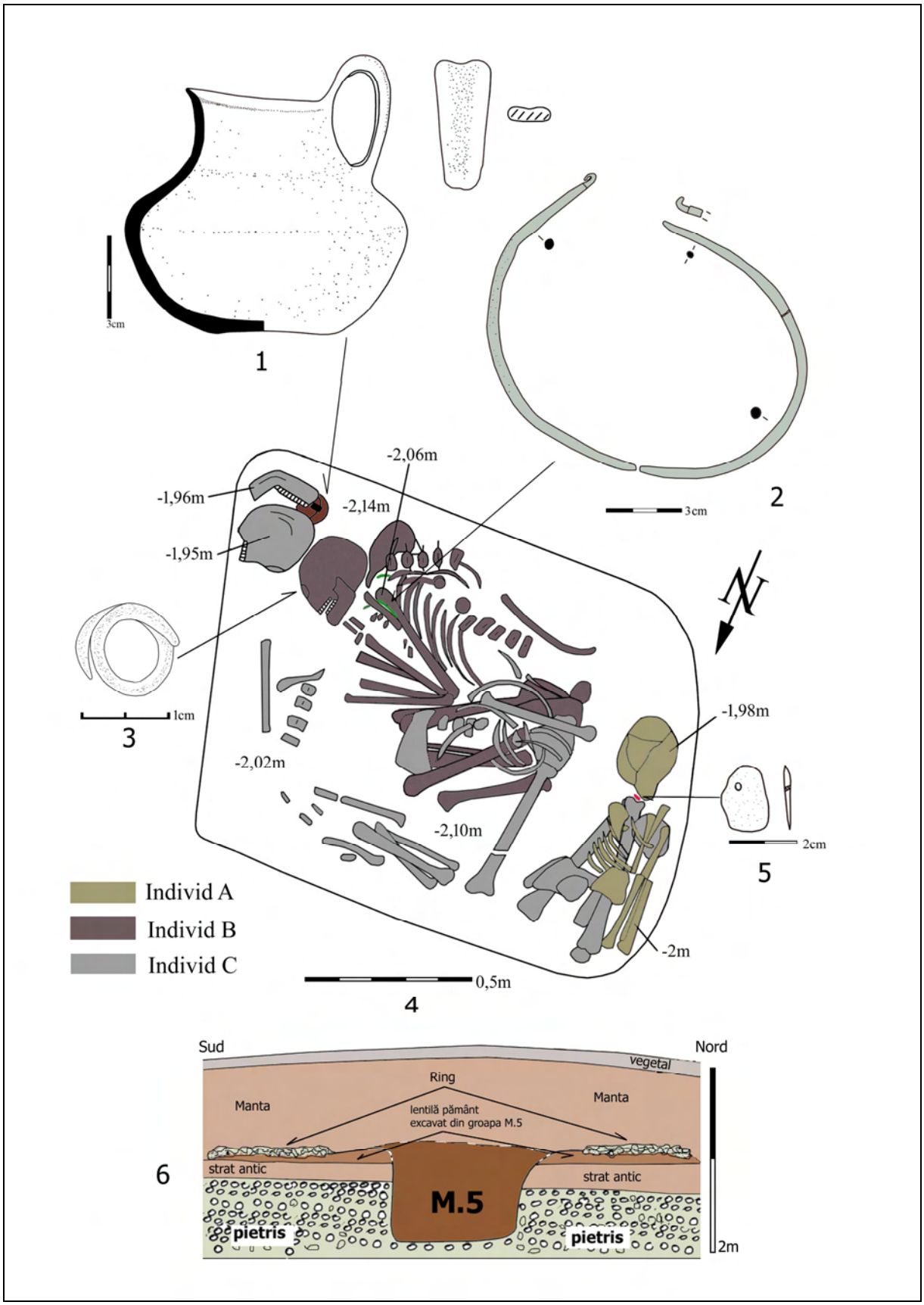


Pl. 6. Mormântul 4 (1-2); podoabe din cupru (3); inele de buclă din argint (4); perle din os (5); inele de buclă din argint *in situ*/cavitate bucală a mormântului 4A (6).
Grave 4 (1-2); copper ornaments (3); silver hair rings (4); bone pearls (5); silver hair rings *in situ*/the buccal cavity of grave 4A (6).

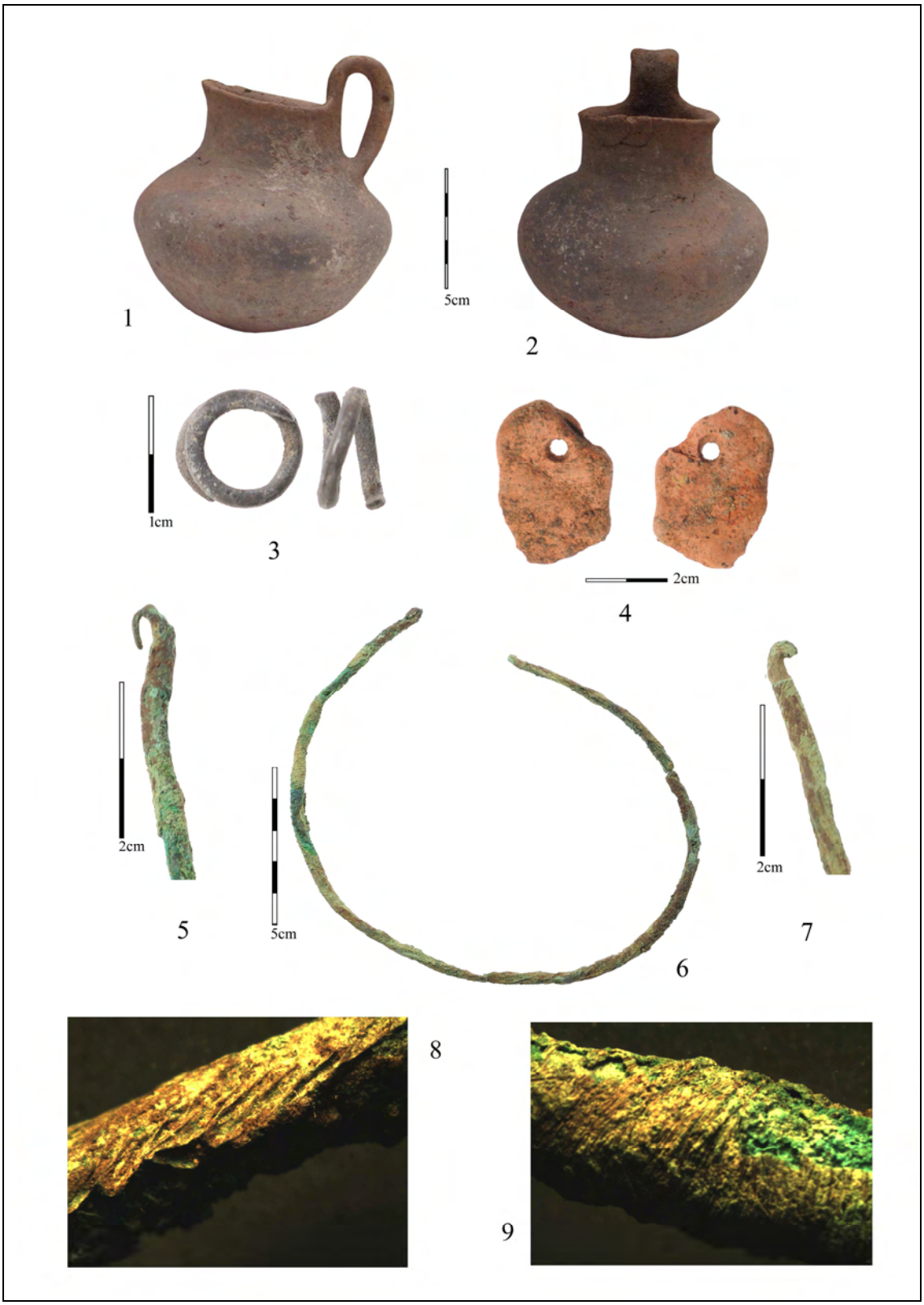


Pl. 7. Mormântul 5 – detalii cu ringul din piatră (1-5) și poziția unor morminte secundare (5).
Grave 5 – detail of the stone ring (1-5) and the position of some secondary graves (5).

Pl. 8. Mormântul 5 – detalii cu poziționarea vasului (2, 4); colanului de cupru (2, 5); perlă din lut (5); detaliu cu mormântul M5B (3).
Grave 5 – detail of the pot (2, 4); the copper neck ring (2, 5); clay pearl (5); detail of grave 5B (3).



Pl. 9. Mormântul 5 cu dispunerea inventarului (1-5); detaliu profil stratigrafic în zona mormântului 5 (6).
Grave 5 with grave goods (1-5); detail of the stratigraphic profile in the area of grave 5 (6).



Pl. 10. Inventarul mormântului 5 – vas (1, 2); inel de buclă din argint (3); podoabă din mormântul M5A (4); colan din cupru (6); detalii cu capetele rulate ale colanului (5, 7); imagini la microscop cu colanul, detalii țesătură (8-9).
The inventory of grave 5 – pot (1, 2); silver hair ring (3); ornament from grave 5A (4); copper neck ring (6); detail of the rolled ends of the neck ring (5, 7); microscopic images of the neck ring, detail of textile traces (8-9)**.**

The making of historical bodies: sex, race, and type in the beginnings of the Romanian physical anthropology

Alexandra ION*

Abstract: *Human remains are a particular type of archaeological resource, the material evidence of past individuals. From its beginnings, archaeology and osteoarchaeology seemed to have divided their understanding of the human body and focus of study: while the first was interested in the social and historical dimension of the body, the latter focused on the body-as-biological organism. However, in this process even the notion of the „biological" body is not that clear cut and stable, and the case of the early Romanian anthropology is a relevant example. The goal of this presentation is to explore the meanings that the osteoarchaeological body took in this particular context. Starting from Francisc I. Rainer's (the founder of the Institute of Anthropology in Bucharest) research on a Paleolithic human skull, along his observations on archaeological artefacts and populations, I intend to highlight the way in which the link between archaeology and biology/anatomy was constructed through the concepts of race, genetics, functional anatomy and evolution. In his view, the body appeared as a historical entity, the locus for understanding human variability, with its different parts being considered as diagnostic elements for studying the history of humanity.*

Rezumat: *Osemintele umane reprezintă un anumit tip de resurse arheologice, urme materiale ale ființelor din trecut. De la începuturile sale, arheologia și osteoarheologia par a-și fi împărțit înțelegerea corpului uman și obiectul de studiu: în timp ce prima disciplină a fost interesată de dimensiunea socială și istorică a corpului, cea din urmă s-a concentrat asupra organismului-corp-biologic. Cu toate acestea, în acest proces, chiar noțiunea de corp "biologic" nu este atât de clar definită și stabilă, iar începuturile antropologiei fizice românești reprezintă un exemplu relevant. Astfel, scopul acestui studiu este acela de a explora sensurile pe care corpul antropologic l-a dobândit în acest context particular. Pornind de la analizarea unui craniu paleolitic de către Francisc I. Rainer (fondatorul Institutului de Antropologie din București), am de gând să evidențiez modul în care a fost construită legătura dintre arheologie și biologie / anatomie, prin intermediul conceptelor de rasă, genetică, anatomie funcțională și evoluție. În concepția lui Rainer, corpul a fost definit ca o entitate istorică, locul de înțelegere a variabilității umane, iar fragmentele diferite devenind elemente de diagnostic pentru studierea devenirii umanității.*

Keywords: *Francisc I. Rainer, physical anthropology, Romania, skull, race.*

Cuvinte cheie: *Francisc I. Rainer, antropologie fizică, România, craniu, rasă.*

◈ The elusive materiality of the archaeological body

Human remains are a particular type of archaeological resource, "provocative through their materiality" (J. Sofaer 2006, p. xiii), the evidence of past individuals. As highlighted by K. Verdery (1999, p. 27), they are "indisputably there, as our senses of sight, touch, and smell can confirm". In most cases, osteoarchaeologists are dealing with bones (rarely and especially in forensic cases retaining also hair/tissue/skin fragments). The bone's durability makes it prone to be a rather common presence in the archaeological record, so archaeologists have been trying to use them as part of the interpretative process of establishing a link with the traces of the past.

But how is the human body approached and understood in this process of interpretation? As noted by D. Borić and J. Robb (2008, p. 1), the body has not been a main topic of interest in archaeology for a long time, and when this happened its understanding was divided between the discipline of funerary archaeology and that of physical anthropology, later osteoarchaeology[1]. One can

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[1] In the present day, the analysis of the Paleolithic skull which represents the case study presented in this article would be designated as an osteoarchaeological or paleoanthropological analysis. However, during the first half of the 20th century in Romanian academia, there was no such distinction, and the term "anthropology" was employed. In the same time, Francisc Rainer's understanding of "anthropology" is more in line with what we might define as physical anthropology, while the cultural aspects would have been reserved to the science of archaeology or ethnography.

observe that the two disciplines seem to have divided their understanding of the human body and focus of study: while the first is interested in the social and historical dimension of the body, the latter focuses on the body-as-biological organism. In their paper, A.E. Rautman and L.E. Talalay (2000, p. 2) highlight these two different meanings that the body took in archaeology, with some studies focused on the "physical or skeletal components that define the human species...seen as an archive of ancient diet, state of health, life span, physical activity" and those studies that address the body in terms of how "cultural ideas" are made manifest. Hence, the body has been defined either as a "fossilized rest of the natural world" of interest to physical anthropology, or it has been treated as another category of archaeological material that often remains the backdrop for the analysis of funeral inventory, or funeral practices (L.N. Stutz 2008).

In addition, the biological data provided by physical anthropology (sex, age, pathologies) have been used to fill in the details of the larger archaeological narratives, and to quote J. Sofaer (2006, p. 2) "once sex or age has been determined, the body no longer seems of interest to archaeology". This created a tension between the two seemingly parallel views on the body: a "natural" and a cultural one. J. Sofaer (2006) analysis extensively the history of these two approaches[2]. The first, operating in the tradition of an empirical investigation, is based on the positivist methods of inquiry taken from the natural sciences. The human body (the bones) is measured, broken down and analyzed to obtain data related to diet, lifestyle, anthropometric characters, demographics, individual variation. The principles and interpretative models are based on the findings and methods taken from biology, bio-mechanics, anatomy, genetics or chemistry. In line with such studies, the body appears as an historical entity (J. Sofaer 2006, p. 51), an organism seen as universal and apriori. The terms in which such a body is described are: sex, age, pathology, trauma, life expectancy, occupational markers etc. Thus, for physical anthropologists, the understanding of a past individual starts through the window of this type of materiality - their biological makeup becomes the focus of study. This is how the illusion of a durable nature of the human body and materiality of humanity was built, a perspective which has been strongly criticised in the recent post-modern literature. As J. Butler commented, "materialization is something which happens, rather than something which simply is" (apud J. Thomas 2002, p. 33). Therefore, it is not a matter of being a man/woman, or young/old, but of performing the body in a certain way.

On the other hand, for most of the funerary archaeology studies, the body is interesting just as the subject of funerary practices, usually being analysed in terms of placement, position, treatment of the body, disposal methods (J. Sofaer 2006, p. 12). What matters in these instances are the cultural practices and beliefs, and less the particular individual. In recent years, under the influence of cultural anthropology, gender or philosophical studies, there have been some attempts to move beyond this dichotomy, and to focus on an archaeology of the body or of embodiment, where the body appears as "an experiential location" (J. Sofaer 2006, p. 21), or as a specific cultural and historical construct, varying with time (Y. Hamilakis *et alii* 2002; L. Meskell, R. Joyce 2003; A.E. Rautman 2000). The concepts which have been employed in relation to the body in these contexts are: "gender", "performance", "embodiment", "agency".

Even so, most of the archaeological and anthropological literature seems to find it difficult to bypass the divide between the biologic, "natural" body, and the body as experienced in cultural practices, and one reason is due to the theoretical foundations of the disciplines: the embracing of humanism, the belief that "the character of humanity is fixed and knowable" and man is made up of different layers, a biological body to which mind, soul etc. has been added (J. Thomas 2002, p. 30). Thus, the body has been seen as a "neutral template through which people live" (C. Fowler 2002, p. 47), of a seemingly universal nature and made up of the material substances which can be known through empirical questioning. This is a historically constructed model, the result of the "culture of dissecting" and anatomical inquiry from the Renaissance period onwards and of a Cartesian view of knowledge. It led to a certain view on the human body in the western world - the culture of dissecting determined the construction of an anatomical body, structured around the skeleton. As E. Hallam (2010, p. 474) resumes, "anatomical practices, descriptions and images made bones distinct and vivid, materially discernible, whilst also placing them in necessary relations with other organs" (see E. Hallam 2010 for an analysis). Therefore, an individual becomes a stable self, contained in a knowable body, and the whole discipline of physical anthropology is built on the premise that an investigation in this material makeup is a way of understanding human variability.

[2] However, the relationship between the two disciplines varied throughout history, depending on the theoretical approach employed.

However, even in the physical anthropological studies the notion of the "biological" body is not that clear cut and stable. Recent studies have tried to explore this issue, by looking at the impact of bodies' materiality on scientists (C. Krmpotich *et alii* 2010; J. Sofaer 2012), or at the way in which materiality is constructed and performed as part of the anthropological analysis (E. Hallam 2010; A. Ion 2011). In this article I intend to take the argument even further and show how a specific body was defined in the physical anthropological literature, and the case of the early Romanian science is a relevant example. Thus, it is my goal to explore the meanings the osteoarchaeological body took in this particular context, to analyse the structuring of the discourse in which the human body was produced (to use M. Foucault's terms), in order to understand the different layers of meaning highlighted. Starting from F.I. Rainer's (the founder of the Institute of Anthropology in Bucharest) research on a Paleolithic human skull, along his observations on archaeological artefacts and populations, I intend to highlight the way in which the link between archaeology and biology/anatomy was constructed through the concepts of race, genetics, functional anatomy and evolution. Thus, for him the body appeared as a historical entity, and the locus for understanding human variability, with different parts being considered as relevant for anthropological research- diagnostic elements for studying the history of humanity.

◈ A Paleolithic human skull

In order to understand how variability was defined and framed in the history of Romanian physical anthropology, we shall start from the specific case of one of the first academic studies.

In 1942, the anatomist and doctor F.I. Rainer (1874-1944), the founder and Director of the Institute of Anthropology in Bucharest, published the first article about a Palaeolithic skull (F. Rainer, I. Simionescu 1942). Starting from his activity and experience as dissector and medical teacher at the University of Iași (1913-1920) and then at the University of Bucharest (1920-1941), he had developed an interest in searching for human variability and its transformation with time. He had started handling, preparing and archiving human specimens as laboratory assistant at the Colțea Hospital (Bucharest) and then, as Director of the Institute of Anatomy of the Faculty of Medicine and of the Institute of Anthropology he gathered an entire archive of human remains. In over 40 years of research he collected skulls, body parts, tissue samples, death masks, anthropological photographs and notes taken during the campaigns led by the sociologist D. Gusti, as well as annotated anatomical drawings, statues, autopsies and criminals' photographs[3]. But what were the theoretical elements which linked all this elements and how was his anthropological gaze constructed?

The topic of the article he wrote in 1942 was a Palaeolithic skull discovered at Cioclovina, the second human fossil found in Romania (fig. 1). After an introduction that recounts the discovery location and the geological and archaeological context (with the associated archaeological material), F.I. Rainer devotes the second part of the article to the description of the skull (F. Rainer, I. Simionescu 1942, p. 493-503). This description followed several characteristics: age (30-40 years), sex (possibly female), type (*Homo sapiens diluvialis*). Based on the skull's shape and measurements, the individual had been assigned to the *Homo sapiens diluvialis* type; as F.I. Rainer described it, the supraorbital region of the skull recalled the Homo Neanderthal, but there was no torus present.

Then the analysis broke the body down into morphologically significant fragments. These fragments, such as the "supraorbital torus", "glabellar depression", "supra orbital triangle", "calvary" became typologically diagnostic elements, the basis of comparison with the skulls discovered at Neanderthal and Predmost, the other two sites where Palaeolithic human remains had been discovered- and any observed differences constituted the basis for identifying a new type of human. The morphologic affinities with the other skulls discovered at Neanderthal and Predmost were proven through the superposition of the skulls' horizontal contours, and the differences were interpreted in evolutionary terms - the decrease of primitive traits. The median curve created a group between the four skulls from Predmost and this one. The absence of the frontal sinus in the Cioclovina individual was interpreted as a sign of individual variation.

Moreover, the skull was transformed into a series of indices, figures, measurements, which turned it in a series of mathematical relationships that could be compared. The terminology used to

[3] He also analysed several roman skulls discovered by Prof. Bărcăcilă at Turnu Severin and he collected other specimens (M. Sevastos 1946, p. 72; see fig. 8).

describe and analyse the body was: curve, contour, horizontal, vertical, median, arch length, chart, sagittal, frontal / parietal / occipital suture, indices, distance, variant (figs. 2-3).

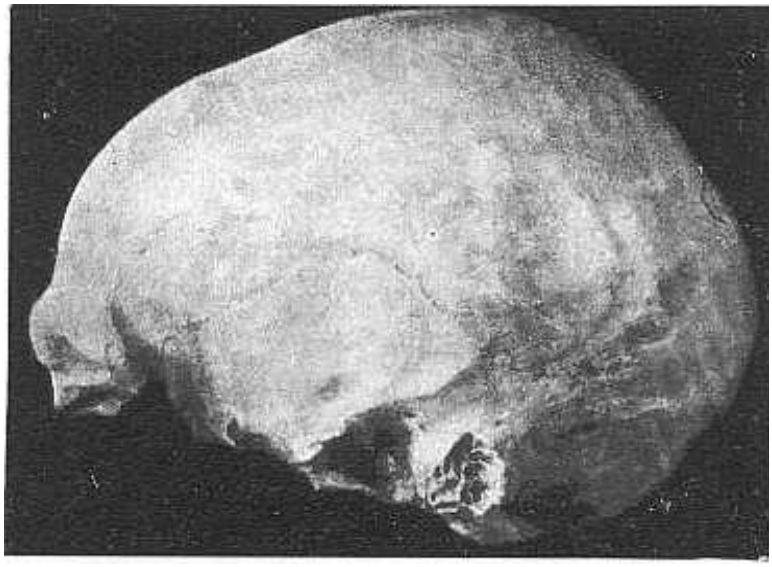

Fig. 1. Scanned image showing the Cioclovina skull (after F. Rainer, I. Simionescu 1942).
Imagine scanată a craniului de la Cioclovina (după F. Rainer, I. Simionescu 1942)

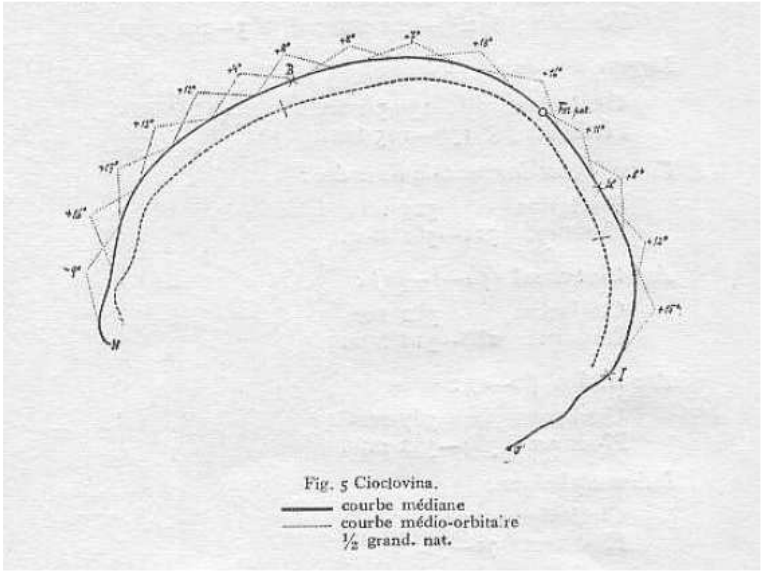

Fig. 2. Scanned image showing the Cioclovina skull (after F. Rainer, I. Simionescu 1942).
Desen scanat al craniului de la Cioclovina (după F. Rainer, I. Simionescu 1942).

◈ Constructing bodies in the beginnings of the Romanian anthropology

Thus, the first question raised by this analysis is what had determined the construction of such a perspective? In order to better understand the slowly coming into being of this anthropological gaze, one needs to look at the broader theoretical context in which F.I. Rainer constructed his method.

At a first glance, it can easily be noticed that starting with the last quarter of the 19th century, the anthropological understanding of the human body had been slowly entering the academic life in Romania[4]. The first anthropological methods of inquiry had been introduced by doctors and anatomists, as part of an interest in craniological and racial anthropological studies (see Ș.M. Milcu 1954 and the extensive studies of M. Turda 2006, 2007a, 2007b, 2008, 2010, 2013).

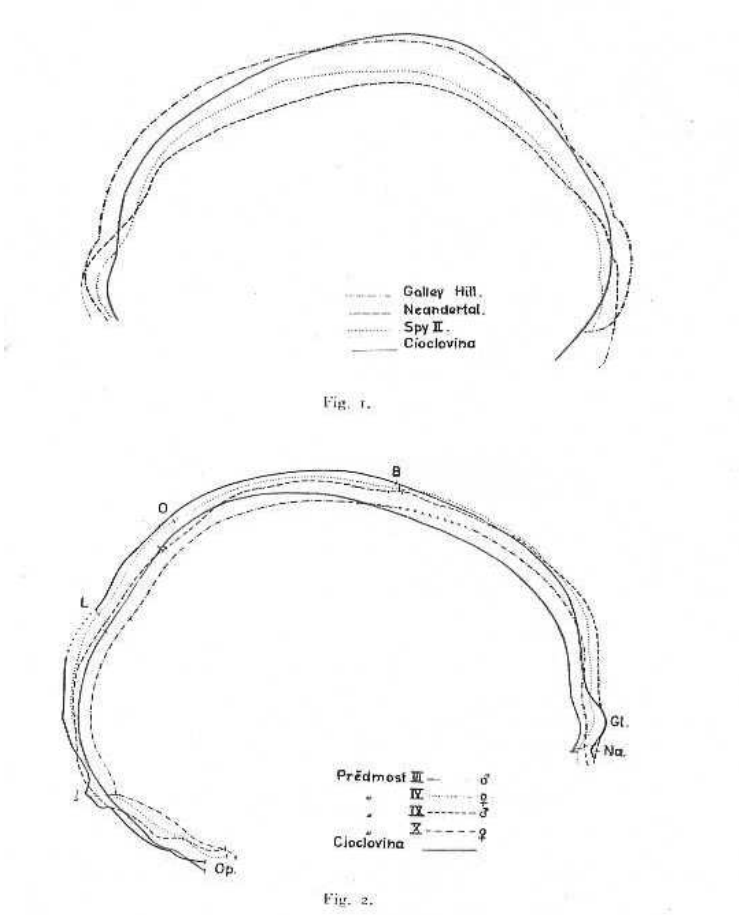

Fig. 3. Scanned image showing the Cioclovina skull compared with four other fossil human skulls (after F. Rainer, I. Simionescu 1942).
Desen scanat al craniului de la Cioclovina (după F. Rainer, I. Simionescu 1942).

Hence, they wrote several studies on the Romanian contemporary population, on archaeological specimens and osteological collections, with the purpose of either refining identification methods for forensic studies, or defining and mapping racial types, developing models of racial classification. Among these are the works of the forensic scientists M. Minovici (1857-1933) and N. Minovici (1868-1941), the craniological studies presented by the psychiatrist A. Obreja (1860-1937), N. Gomoiu, A. Borcescu, or C.I. Parhon (1874-1969) who introduced endocrinology elements for

[4] Craniology was already an established discipline in the nineteenth century, with its set of standardised methods: in 1842 the anatomist A. Retzius (1796–1860) introduced the first measurement of the ratio of the width to the length of skulls in order to distinguish between various types (and so the dolichocephalic, long-headed, and brachycephalic, short-headed crania appeared) (M. Turda 2006, 2007b). In the years that followed, scientists devised several other quantitative methods for assessing and measuring the human body, in order to discriminate differences (A. Ion 2014). The defining concept of understanding variety was race, though it should be noted that the definition of race was not uniform; among the most influent theories were those of J. Deniker (1852-1918), W. Z. Ripley (1867-1941), and H.F.K. Günther (1891-1968) (M. Turda 2006, p. 4).

establishing constitutional types[5] (Ș.M. Milcu 1954, p. 9). Regarding the study of archaeological specimens there is just the contribution of M.G. Obedenaru (1839–1885), who presented in 1874 his analysis of 3 skulls to the Société d'Antropologie de Paris, one being ascribed to the "dacian" type (M. Turda 2010, p. 5).

The majority of these studies were racial studies, considerations on the biological makeup of the diverse ethnicities on the territory of Romania: in 1919 and 1927 E. Pittard published two such studies ("Recherches anthropologiques sur les Roumains de Transylvanie" and "Etude sur l'indice cephalique en Roumanie"), the sociologist and anthropologist I. Chelcea (1902–1991) published in 1935 "Tipuri de cranii românesti din Ardeal (Cercetare antropologică)" [Types of Romanian crania from Ardeal. Anthropologic research], Petru Râmneanțu (together with P. David) "Cercetări asupra originii etnice a populației din sud-estul Transilvaniei pe baza compoziției serologice a sângelui" [Research on the ethnic origin of the population from the southeastern Transylvania based on the serological composition of the blood], and the anatomist V. Papilian also published two studies on the Transylvanian ethnic groups" (Studiul indicelui cranian vertical și transverso-vertical pe craniile de români și maghiari" [The study of the vertical cranial indices and transverse-vertical indices on the Romanians and Magyars crania], and "Cercetări antropologice asupra românilor ardeleni" [Anthropological research on the Romanians from Transylvania]) (M. Turda 2006, p. 419-420; 2010, p. 7). At first limited to craniological studies, followed by serologic and morphologic ones, these researchers were trying to record the height and cephalic index of the population, and to establish the racial characteristics of Romanians and of other ethnic groups living in the country. There are a number of contemporary studies that have reviewed the foundations and the theoretical premises of these works (M. Bucur 2005; M. Turda 2006, 2007a, 2007b, 2008), highlighting the intrinsic link between the assertion of the national state, the development of anthropological theories and even some eugenic ideas (as was the commission established in 1943 "to defend the biological capital of the nation, close to the Antonescu government ... proposed to establish an Institute of ethnoracial biology ... to determine the biological value of people") (Ș.M. Milcu 1954, p. 18).

The growing interest in the anthropological perspective was also marked by a gradual institutionalisation of the discipline, with the establishment of the first research centres or dedicated courses. In 1909 the geographer S. Mehedinti (1869–1962) introduced a class in anthropogeography and ethnography (M. Turda 2010), and the first anthropological departments were founded during the 1930s: a department of anthropology and paleontology at the Faculty of Natural Sciences in Iași (director I.C. Botez, and then O. Necrasov), an Anthropological Society in Cluj (1933), the Demography, Anthropology and Eugenic Section of the Statistics Institute was established by S. Manuilă in Bucharest (1935), and given to I. Făcăoaru in 1941 (Ș.M. Milcu 1954; M. Turda 2010). In June 1940, through the efforts of F.I. Rainer the Institute of Anthropology was founded in Bucharest (see A. Ion 2014), with the role of studying from an anthropological point of view the Romanian people. The studies conducted here will focus on craniology, osteology, ancient or contemporary studies of populations, such as the residents of several mountain villages where Rainer undertook a series of field campaigns between 1927 and 1932 (Ș.M. Milcu 1954, p. 17; F.I. Rainer 1937). In these campaigns, F.I. Rainer applied R. Martin's anthropometric methods, 13 measurements on which he calculated 13 indices (Ș.M. Milcu 1954, p. 17). Moreover, from his initiative the seventeenth edition of the International Congress of Anthropology and Prehistoric Archaeology was hosted in Bucharest in 1937. In 1942 was held the first course in anthropology at the University of Bucharest, taught by F.I. Rainer. But for a long enough period of time, the anthropological studies focused on contemporary populations and less on archaeological materials, exception being the study of Cioclovina Paleolithic skull[6] (F. Rainer, I. Simionescu 1942), an analysis of a Scythian skull (A. Donici) and of some remains from the Bronze Age (Ș.M. Milcu 1954).

[5] He wrote that "*the functioning of this glands…we believe that they will explain one day the differences between individuals…They play an important role…in the formation of the physiological personality and therefore the psychological personality of the individual*" (Ș.M. Milcu 1954, p. 9).

[6] F.I. Rainer was familiar and interested in the archaeological discoveries of human fossils. In his diary, he notes in September 1911 about his trip to Dresda: "this morning we visited the prehistoric and ethnographic collection. There are also some very interesting casts executed by a company from Bonn. The most beautiful is the reproduction of the skeleton from Aurignac, exactly in the attitude that it had been found in the sand of the cave. It would be a nice acquisition for the Antipa museum... there is no reproduction of the remains found at Krapina in Croatia. Though I read that nowadays it is believed that at Krapina, where they also found skeletons fragments of the more primitive (from Moustier), which is believed to have appeared in Europe about 40,000 years ago, and

◈ From the "natural" body to the anthropological body

By studying F.I. Rainer's journal, his notes, classes and conferences, one can observe how the anthropological body was built around three key terms: form, type, race. As I will show in what follows, this body was literally constructed by a series of scientific procedures, through several mediation technologies, each of the three concepts being embedded in a different stage. What resulted was a set of mutable inscriptions (in terms of M. Lynch 1985, 1988).

To start with, similar to other physical anthropologists of the time (R. Martin, R. Vircow), Rainer's method was an empirical one, focused on collecting facts. His background was that of an anatomist and dissector, therefore his understanding of a human being was through the lens of the direct investigation of the body. He employed an empirical method, through the keen ocular inspection in the material layers of the body and started making connections between the morphologic appearance of this materiality and aspects defining an individual's identity - pathology, sex, race.

In the same time, he became interested in human variability, identifying the differences between various types[7]. In this line, each body became a case study, illustrative of a wider series: the more cases he could have, the better understanding he could get. For example, in order to prove to his colleagues an unknown disease of the superior vertebral articulations, Rainer brought two crates of documents comprising of 5020 studied cases (S. Dumitrescu, M. Stîrcea-Crăciun 2000, p. 26). In his own notes he also wrote "the plasticity of the human form is highlighted by a number of observations and one needs to carefully gather as much material as possible" (A. Majuru 2013, p. 217).

To get back to the analysed Paleolithic skull, this underwent a process through which a human body was translated from the "natural domain" into becoming an anthropological object. By following the devised methodology, through several levels of mediation (that of instruments and concepts), it was turned into a series of visual representations, inscriptions and numbers. The resulted representations were not just an annex of the text, but epistemic images, "essential for the way in which the scientific objects and the ordering relationships are revealed and made analyzable" (M. Lynch 1988, p. 201). Based on an inventory of the Institute of Anthropology (Document June 28th 1940) and the analysis presented in the article, one can retrace the steps and instruments involved in constructing the anthropological body.

Thus, the first step in the anthropological analysis addressed form. F.I. Rainer applied the anthropometric methodology as devised by R. Martin (1914), a standardized method for analyzing human bodies. From his journal we know that he refined these methods while visiting R. Martin in 1921; he noted: "he showed me how is best to hold the sliding calipers", or "this morning I saw the placing of the skull in position for goniometry. Martin explained the problem with the point [...]" (F. Rainer 2012, p. 127). As a result of this trip, he ordered a Th. Mollison anthropometry kit and craniometric forms.

At first, he placed the skull in the horizontal plane, a fixed standardized position which would make the obtained data comparable with other individuals' similar bones. For this, F.I. Rainer must have used the Martin and Saller cubic craniophor (fig. 4), an instrument for holding and orienting bones. Such an instrument would have "properly orientated, and held in the jaws, within a skeleton cube, so that it presents the six normae and thus may be drawn or photographed in any of them" (H.H. Wilder 1920, p. 20). This instrument, along with the Martin dioptograph, turned the skull from the natural order and placed it in a plane of mathematical coordinates. In the same time, from a three-dimensional object it was transformed in a two-dimmensional contour. Furthermore, on this contour, several measurements were taken: through the use of calipers and a goniometer (an instrument used for measuring angles, figs. 5-6), the form was broken down in several landmarks, and the distances between them recorded. This is how the indices, arches and measurements presented in the article were produced.

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of the much more intelligent man from Aurignac - would have happened one of the clashes that took place between the two races and the consecutive acts of cannibalism whose traces are visible on the bone" and "But what makes me very happy is that I have also gained some strong notions about the fossil man and the experimental heredity" (F.I. Rainer 1911, Manuscript from the Francisc I. Rainer" archive).

[7] The element which he deemed the best for studying human variability was the skull or the brain: in one of his classes he mentions that "the brain makes us part of mammals, but also the cortex distinguishes, defines us", and that the most important factor from an evolution point of view is "not the hand, but the skull, because it is the shelter of the brain. The most important organ. The hand evolved only in relation with the brain. It expresses the evolution of the brain" (Ş.M. Milcu 2006 apud A. Majuru 2013, 216).

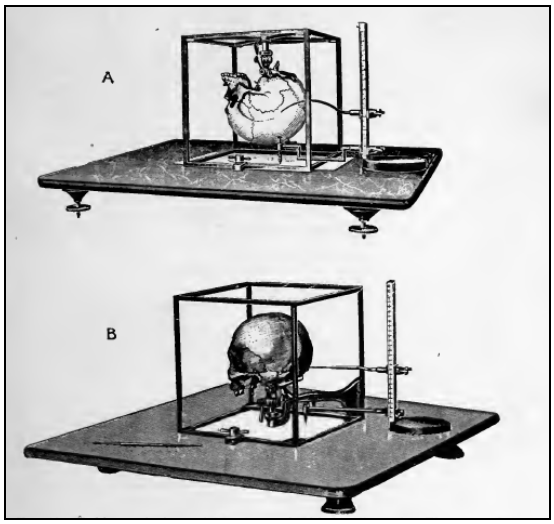


Fig. 4. Cubic craniophore of R. Martin (after H.H. Wilder 1920).
Craniofor cubic Martin, folosit cu diagraf (după H.H. Wilder 1920

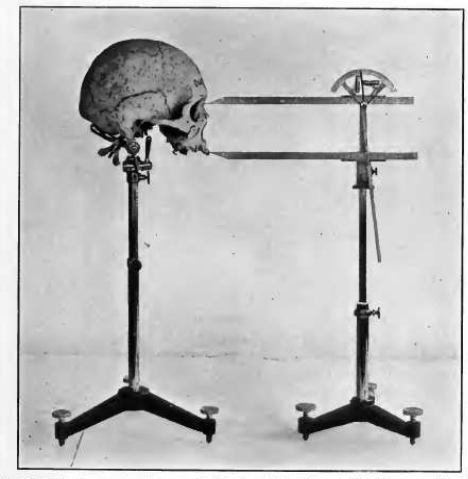


Fig. 5. Stationary goniometer of Martin (after H.H. Wilder 1920).
Goniometru staționar Martin (după H.H. Wilder 1920).

As a result, he obtained the images presented in the article: photographs, drawings and numbers. In this case, "photography was conceived as a form of measurement that, when carried out under sufficient control, could be transformed into statistical data" (A. Morris-Reich 2012, p. 53). Regarding the drawings, what resulted through such a transcription was an overlay between the natural and mathematical orders. Because what one sees is related to how one sees, these drawings created a particular type of relationship between the different aspects of form that become diagnostic features: curves, angles, certain landmarks, shape. Therefore, what is created is a visual explanation of the human type (*Homo sapiens diluvialis* in this case), and a relationship between this individual's form(s) and the standard norms/measurements, quantified as mathematical properties. Hence, the skull is diagnosed as being: "dolichocranic", "orthocranic", "metriocranic" (F. Rainer, I. Simionescu 1942, p. 498). The qualities chosen to define the thing represented are those related to mathematics, and are translated through two-dimensional lines. In the same time, these images are considered the proof of the correct identification of a human type, and a series of measurements placed in association with them are deemed as being conclusive, proving the homogeneity of the group of the 5 compared human fossils: the length, circumference, and transversal/median arch of the skulls (F. Rainer, I. Simionescu 1942, p. 496).

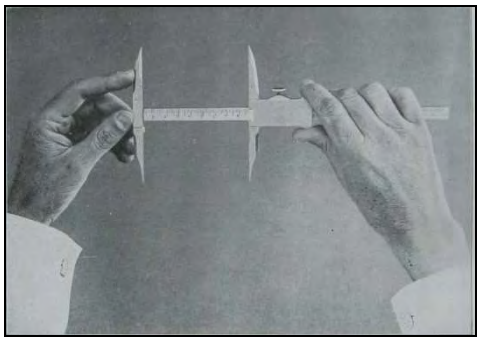


Fig. 6. Martin callipers (after R. Martin 1914 - the copy from among F.I. Rainer's papers).
Șubler Martin (după R. Martin 1914 - exemplar din arhiva lui F.I. Rainer).

All these procedures were founded on the concept of form as developed by J.W. Goethe (1749-1832). Several quotes of J.W. Goethe from F.I. Rainer's notes or from the three lectures he devoted to the "great man" ("Goethe: the superior man", "Goethe - the man of science" and "Goethe and Science"; F.I. Rainer 2012, p. 237-243) highlight the importance of morphology in his own perspective. J.W. Goethe had proposed a morphological understanding of the organic forms of life, equating form with the ultimate cause, its drive - *Bildungstrieb* (R.H. Brady 1987). Hence, from a static classificatory element as it has been for the human taxonomy of C. Linnaeus, J.W. Goethe focused on the functional properties and development of form, its transformations (R.H. Brady 1987; T. Lenoir 1987). In the same time, he was interested in observing the relationships existing between different parts of the same organism, believing in an ideal universal form, the archetypal form, which is present in any part of an organism. Thus, the elements of the morphotype were to be studied in different organisms in order to establish relationships, which led to the development of comparative anatomy. Therefore, J.W. Goethe's phrase "geprägte Form, die lebend sich entwick elt" ("the framework of the form which being alive develops") translated into F.I. Rainer's motto: "anatomy is the science of the living form".

However, F.I. Rainer took this conception further, and this is illustrated by the second stage of the anthropological process: the creation of a series of drawings, in which the Cioclovina skull was superposed with other fossil human skulls. Through this, F.I. Rainer tried to establish a type, by comparing several specimens. For F.I. Rainer the organisms were historical beings, "successive forms with successive variants" (F.I. Rainer 1942). He was not merely interested in form, like J.W. Goethe, but also in how this structured itself, being influenced by the works in developmental mechanics of E. Wiedersheim and by the studies of W. Roux[8] in functional anatomy ("Substanța vie" 1944, F.I. Rainer 2012, p. 280): "the living form is closely connected with structure and this with function; it is thus the expression of the functional structure" (O. Vlăduţiu, apud M. Sevastos 1946, p. 49). In the same time, he moved away from the idea of a universal, ideal "type" under the influence of Darwinian theory and the laws of experimental heredity proposed by G. Mendel. Thus, morphology becomes understood as the result of a long evolution, the way in which the internal medium (the genotype) responded to the external factors, "the potentialities versus what is actually enacted". Therefore, he interpreted the morphological aspects of the Cioclovina skull in a causal key, the anatomical configuration being defined as the result of external adaptations- a specific phenotype. As F.I. Rainer would write, "the individuality of each of us is an evolutive element" (A. Majuru 2013, p. 216). In this line, human variability becomes the key element which needs to be investigated in order to understand what he called "The biological phenomena HUMAN".

As a consequence, he also compared the drawings of the skull with four other Neanderthal individuals from Predmost and Krapina. Between shapes, landmarks and individuals were established morphological relationships, interpreted as temporal dynamics: succession, simultaneity, proximity, so that the anthropologist can group and build a narrative regarding the evolution of men. Finally, what he obtained was a standardized "map" of these relationships, a series of static relationships. In this case, it was the Homo type (see fig. 7 for similar perspectives).

[8] Who supported the idea that "any living organisms executes the specific fundamental functions of life (preserving, growing, reproduction and development)" (F.I. Rainer 2012, p. 280; see also V. Toma 2010).

Lastly, the all encompassing concept under which he placed the study of the variability of historical beings was "race". Race had been an important classificatory concept in the anthropological studies of the late 19th - early 20th century. There were many understandings of race, but in general it "was thought to represent a natural category with unique features that defined the essence of that category" (R. Caspari 2003, p. 66). This was a concept borrowed from the natural sciences where it designated a subdivide of species. In F.I. Rainer's view[9], race was used as the concept which explained the visible different morphological traits, the manifestation of genetic aspects in different environmental conditions: as he would write, "der Wesen der Rasse liegt in der Erbmasse" (the essence of race lies in heredity). In this line, anthropology became the science which "deals with the hereditary distinctions between people" (F.I. Rainer 1942), and it could only develop "by focusing on the racial anthropological studies, which creates the materialistic basis of any science about man. They need to be interpreted in their historical evolution, as processes of becoming" (A. Majuru 2013, p. 217).

This particular anthropological understanding is revealed in the text on the Cioclovina skull, in which the biological body is seen as a historical body. As we can read from F.I. Rainer's notes, he talked explicitly about "evolution variable in human form" and "the historical variability of the primate type" (F. Rainer 1942). What he did was to take the concepts developed in biology and to move the focus on history – the body as a historical artifact. Therefore, he incorporated archaeology, paleoanthropology and geological data in his anthropological method, in order to explore the historical dimension of humanity. In his lessons from 1942, designed to reveal the organisation of the living form, he talked about: "the identity of the construction plan in vertebrates and especially in mammals", "the historical variability of the mammal organisation", where did humanity appear, the factors of mutations, ambiance versus heredity, as well as the use of images showing "the human ovum and sperm/the alogenic map of the tertiary old world, images with twins placentas, of flowers, of monkey embryos, of glaciers and the Herder charts of the human cultures, and the evolution of the anthropus-homo sapiens" (Homo faber, homo sapiens, anthropos phase, sapiens fossilis phase) (F.I. Rainer 1942). In another course, human variability was to be studied through the topics of "phenogenesis, vitamin and hormone theory, neurologic individual theory - Riese Goldstein, physiologic hereditary theory, human types: sexual, constitutional, racial types", with the first lesson on: the factors of mutations "segregation, climate, soil, vitamins, hormones", "human typology-to what degree they are the result of the hormones and vitamins", or "sexual types- lesson designed to be illustrated through images of experimental and human monsters" (F.I. Rainer 1943).

◈ Conclusion

The purpose of this article was to explore how the anthropological understanding of the body was created in the beginnings of the Romanian discipline. In the same time, this study highlighted that even though the body, as it appears in the analyses of physical anthropologists, seems to be a natural and universal one, this is not the case. As the article on the Cioclovina skull showed, even the "biological" body can be defined through various concepts – in this case, form, type and race-, and certain aspects of it to be brought into view and made available through mediation technologies.

In this case, what F.I. Rainer did was to define humanity in terms of abstract and mathematical relationships, addressing form, as a morphological variety that has a functional determination. In this line, anthropology became the science of form, the past and otherness became morphological varieties, whose identity lied in the material. The aim was to find the links in the evolution of the human species as he imagined it. Thus, humanity appears as a sum of morphological variations, while culture is only a superstructure: "any idea of life derived from biology is sub-human,

[9] We can see how F.I. Rainer describes the traits defining a race in his "problem of human races" conference from 1934 (F.I. Rainer 2012, p. 190): "the egyptian people: middle stature, a little above the mean, elongated head, elongated face, curly, dark and never wooly hair, the forehead a little over the eyes, big eyes. The angle from the inside of the eye is rounder than the exterior one. The lips are a little too full…the chin is thick and square…a particularity of proportion. The forearms are proportional, longer than the arms and the legs are longer than the thighs". In the same time, in contrast to other of his contemporary colleagues, he did not believe in pure races- every individual is a mix of races. Among the races he mentioned are the: "Mediterranean, oriental races, the negroid and the armenoid elements" (F. Rainer 2012, p. 190). Thus, he distanced himself from the eugenics movement - in his 1943 class notes he explicitly mentions his disapproval of the work of the eugenics Al. Carrel (1873 –1944).

but no idea of life should conflict with biology" (F.I. Rainer apud Ș.M. Milcu *et alii* 1947, p. 15) and "today, general biology is the wellspring that can rise us above the level of everyday life" (F.I. Rainer 2012, p. 78). Therefore, he thought about people in terms of categories, of sexual types, constitutional types, and racial types. Such a perspective leaves no room for agency or subjectivity, as human beings seem to be primarily the result of morphological evolution in a particular context.

In essence, the concept of anthropology was just an extension of an anatomical vision, dealing with the inherited differences between people: "variability presents major degree levels: one can study it as part of a race, of a species, of a gender ... the largest form in the animal kingdom, seen at the realisation in an infinite variety of form of the same fundamental tendencies of life" or "anatomy is the study of ontogeny, and ontogenesis is only an excerpt from phylogeny" (see the theories of E. Haekel) (F.I. Rainer 2012, p. 54). For him, the anthropological study of humanity subsumed the study of all human forms, and made no difference between the study of an ovum or embryo, a fossil or a contemporary living being, as they all occupied different steps in the evolution of humanity: "the organism we have before us is in a curve phase of evolution, a trajectory which starts with a tiny part of a living substance, the ovum, and ends with the state of the organism for natural death. The title of "human" does not refer to one of this states, but to all, hence the necessity to know and compare all of these phases of evolution of the human organisms" (F. Scobaiu, mss). Thus, what mattered was to understand and describe the human species.

For this reason, in this anthropological paradigm the osteoarchaeological analyses (the study of human remains discovered in archaeological sites) were not a side-project, but lay the very foundations of the anthropological understanding, as they helped to understand the earlier stages of the contemporary man. As he mentions in some manuscripts, he was influenced by S. Tschulok's works (pioneer of cladistics), and the genealogical tree as imagined by H. Weinert[10]. Illustrative for this conception is the layout of F.I. Rainer's anthropological course from 1942: "Introduction. Man defined through the philogenesis of the nervous system; short view of the historical realization of the mammal organisation; the transformationist conception; the cytological basis of the heredity, mendelism, mendelism and anthropology, the importance of mutations. Human typology, constitutional types. Antropus phase. Primigenius phase. Homo sapiens fossilis phase. Human races. Presentation of European races". So, one can see the preeminent place of past human materialities in his lectures.

In this universe of concepts built inside the medical paradigm, the body-as-biological body occupied the center stage in defining (and classifying) individuals. He constructed an interesting paradigm, focused around the human body and which brought under the heading of "Anthropology" several disciplines: anatomy, evolutionary theory, history and anthropology. Understanding the way in which such a paradigm came into being is of relevance to the contemporary practitioners, physical anthropologists and archaeologists alike, as it invites to a reflexive attitude towards the methods and concepts we have inherited, and the implications of applying them.

a. b.

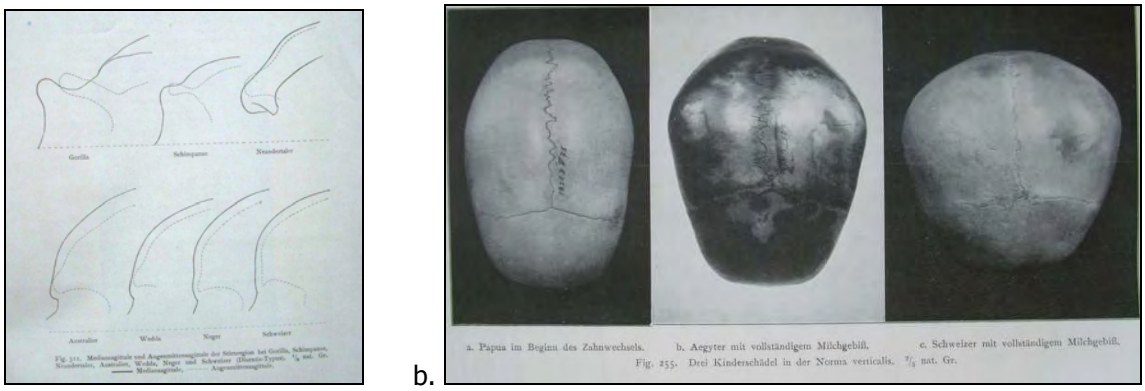


Fig. 7. a-b. Images of different cranial elements and three children skulls compared against each other "in vertical norm" (after Martin 1914).
Imagini ale diferitelor elemente craniene și trei cranii de copii comparate între ele "în normă verticală" (după R. Martin 1914).

[10] German scientist interested in the origin of the human species.

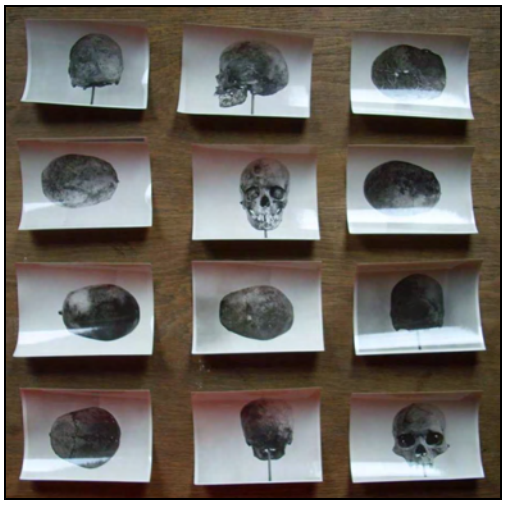
a.  b. 

Fig. 8. a-b. Skulls of osteoarchaeological specimens. Images from the "Francisc I. Rainer" archive. Cranii ale specimenelor osteoarheologice. Imagini din arhiva "Francisc I. Rainer".

◈ Acknowledgments

This work was supported by the strategic grant POSDRU/159/1.5/S/140863, Project ID 140863 (2014), co-financed by the European Social Fund within the Sectorial Operational Program Human Resources Development 2007 – 2013. I wish to express my gratitude to Director Dr. Cristiana Glavce for giving me permission of studying the "Francisc I. Rainer" archive of the Institute of Anthropology.

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ABREVIERI

ACMIT	Anuarul Comisiunii Monumentelor Istorice, Secţia pentru Transilvania, Cluj-Napoca
AIGR	Anuarul Institutului Geologic al României, Bucureşti
AJA	American Journal of Archaeology, Boston
AJPA	American Journal of Physical Anthropology, New York
Aluta	Aluta, Sfântul Gheorghe
AMIAP	Anuarul Muzeului de Istorie şi Arheologie Prahova, Ploieşti
AMM	Acta Musei Meridionalis, Vaslui
AMN	Acta Musei Napocensis, Cluj-Napoca
AMP	Acta Musei Porolissensis, Zalău
AMT	Acta Musei Tutovensis , Muzeul "Vasile Pârvan" Bârlad
AnB	Analele Banatului S.N., Timişoara
AO (SN)	Arhivele Olteniei (Serie Nouă), Craiova
ARCIFE	Academia RSR, Centrul de Istorie Filologie şi Etnografie, Seria Antropologică, Craiova
Argessis	Argessis, Studii şi comunicări, Piteşti
Apulum	Apulum, Alba Iulia
ArchB	Archaeologia Bulgarica, Sofia
ARCS	Annals of The Royal College of Surgeons, Londra
ArhMold	Arheologia Moldovei, Iaşi-Bucureşti
ArheologijaSofia	Arheologija. Organ na Arheologičeskija Institut i Muzej, Sofia
ARMSI	Academia Română. Memoriile Secţiunii Istorice, Seria III, Bucureşti
AS (IMP)	Archaeological Series (International Monographs in Prehistory)
B(M)SAP	Bulletin et Mémoires de la Societé d'Anthropologie de Paris, Paris
BA	Biblical Archaeologist, Atlanta
BAI	Bibliotheca Archaeologica Iassiensis, Iaşi
BAR	British Archaeological Reports, Oxford
BAR (BS)	British Archaeological Reports, British Series, Oxford
BAR (IS)	British Archaeological Reports, International Series, Oxford
BF	Before Farming, United Kingdom
BFSC	Buletinul Facultăţii de Ştiinţe, Cernăuţi
BiblThr	Bibliotheca Thracologica, Bucureşti
BMA	Bibliotheca Musei Apulensis, Alba Iulia
BMG	Bibliotheca Musei Giurgiuvensis, Giurgiu
BMN	Bibliotheca Musei Napocensis, Cluj-Napoca
BMJT	Buletinul Muzeului Judeţean Teleorman, Alexandria
BMJTA	Buletinul Muzeului Judeţean "Teohari Antonescu", Giurgiu
BMSAP	Bulletins et Mémoires de la Société d'Anthropologie de Paris, Paris
BRGK	Bericht der Römisch-Germanischen Kommission des Deutschen Archäologischen Instituts, Frankfurt am Main
BSA	Annual of the British School of Archaeology at Athens, Atena
BSPF	Bulletin de la Société Préhistorique Française, Paris
BSSC	Buletinul Societăţii Ştiinţifice din Cluj, Cluj-Napoca
CA	Cercetări Arheologice, Bucureşti
CAANT	Cercetări Arheologice în Aria Nord-Tracă, Bucureşti
CCDJ	Cultură şi Civilizaţie la Dunărea de Jos, Călăraşi

CI	Cercetări Istorice, Iaşi
CIAAP	Congrès International d'Anthropologie et d'Archéologie Préhistoriques, Bruxelles
Cronica	Cronica Cercetărilor Arheologice, Bucureşti
Dacia (NS)	Dacia (Nouvelle Serie). Revue d'Archéologie et d'Histoire Ancienne, Bucureşti
DocPraeh	Documenta Praehistorica, Ljubljana
Drobeta	Drobeta, Drobeta Turnu-Severin
EJA	Journal of European Archaeology, London
ERAUL	Etudes et Recherches Archéologiques de l'Université de Liège, Liège
Eurasia	Eurasia Antiqua, Berlin
IJO	International Journal of Osteoarchaeology, Wiley Interscience.
IJNA	International Journal of Nautical Archaeology, London
INA	Institute of Nautical Archaeology, Drawer
Izvestija	Izvestija na Arheologiskija Institut, Varna
IzvestijaVarna	Izvestija na Narodnija Muzej (Izvestija na Varnenskoto Arheologičesko Družestvo), Varna
JAS	Journal of Archaeological Science
JEA	Journal of European Archaeology, London
JFS	Journal of Forensic Sciences, West Conshohocken
JMA	Journal of Mediterranean Archaeology, London
JWM	Journal of Wildlife Management, Texas
Materiale	Materiale şi Cercetări Arheologice, Bucureşti
MAU	Materiali z Antropologij Ukrajni, Kiev
MCA (SN)	Materiale şi Cercetări de Arheologie (Serie Nouă), Bucureşti
MemAnt	Memoria Antiquitatis, Piatra Neamţ
MM	Mesolithic Miscellany, Wisconsin
MNIT	Muzeul Naţional de Istorie a Transilvaniei
OJA	Oxford Journal of Archaeology, Oxford
PA	Probleme de Antropologie, Bucureşti
PA – ND	Pervobitnaja Arkheologhija – Naukova Dumka, Kiev
PBF	Prähistorische Bronzefunde
PMMB	Publicatiile muzeului municipiului Bucuresti
PNAS	Proceedings of the National Academy of Science of the USA, Washington
PRIA	Proceedings of the Royal Irish Academy, Irlanda
PTRS	Philosophical Transactions of the Royal Society of London, Londra
PZ	Prähistorische Zeitschrift, Leipzig-Berlin
RDAC	Report of the Department of Antiquities, Cyprus, Lefkosia
RSP	Rivista di scienze preistoriche, Firenze
SAI	Studii si articole de istorie
SCA	Studii şi Cercetări de Antropologie, Bucureşti
SCIV(A)	Studii şi Cercetări de Istorie Veche (şi Arheologie), Bucureşti
SE	Sovetskaja Etnografia, Moscova
SP	Studii de Preistorie, Bucureşti
StudPraeh	Studia Praehistorica, Sofia
Tor	Tor. Tidskrift för arkeologi – Journal of Archaeology, Uppsala
VAH	Varia Archaeologica Hungarica, Budapesta

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