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Casal de' Pazzi, excavation notes

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ABSTRACT - Forty years after the discovery of the prehistoric site of Casal de' Pazzi, the protagonist of those "roaring" years has been repeatedly asked to recall the stories, hardships, and frustrations, but also the success of that historic excavation campaign. Indeed, that daring adventure, in an era when the Sovrintenza Archeologica di Roma was making its first attempts to control and protect the territory of Rome, marked an epoch. The importance of the site and its artifacts, highly regarded by the prehistoric official of the time, Anna Paola Anzidei, allowed for extensive excavations of a large portion of the deposit and subsequently established its conservation and protection. The collaboration between institutions then enabled the Capitolina Superintendence of Rome to carry out musealization interventions, which, thanks to the tremendous efforts of some experts in prehistory, transformed the archeological site into a nationally significant museum. In the text we summarize, through a direct and valuable testimony from one of the authors, the reconstruction of the history of the site and the initial research activities. It is a vivid and detailed narrative that reveals Massimo Ruffo's deep involvement: memories, reflections, observations, self-criticism, and uncertainties are the underlying themes of these valuable notes. At the same time, through the description of methodological strategies and depositional processes, the intention is not only to inform but also to accompany the reader right during the excavation of that time, aiming to make them partake in the issues of the research that allowed us to contemplate today Casal de' Pazzi's preserved stretch of fluvial landscape, evidence of our deep past.

Keywords: Casal de' Pazzi excavation; Sovraintendenza Archeologica di Roma; Anna Paola Anzidei; Pleistocene fluvio-lacustrine deposits; conservation and protection; excavation methods and strategies.

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1. INTRODUCTION: THE IMPORTANCE OF SOURCES

Every archeologist and historian recognizes the indispensable value of sources in reconstructing the past, as this value is conveyed to us from the earliest notions in primary school. Teachers educate us about the difference between material, written, visual, and oral sources.

Those who study ancient prehistory constantly draw upon material sources, and less frequently, other types of sources. In this case, we have been fortunate to have access to an oral source from a strictly modern era (!), which has been transcribed to be disseminated and transmits a testimony that aids us in the important reconstruction of the early discovery and research activities at the Casal de' Pazzi site.

It is a particularly vivid and detailed narrative that reflects a deep engagement with the events, gifted to us by one of the main protagonists of the excavation at the Casal de' Pazzi site, colleague Massimo Ruffo.

Massimo Ruffo was appointed as an expert in prehistoric Archeology and paleontology by the then Official and Scientific Director of the Sovraintendenza Archeologica di Roma, Anna Paola Anzidei, to manage the unexpected and extremely delicate excavation of the recently discovered site. On November 5, 1981, they went to the site, along with Piero Cassoli, and recovered the first tusk (number 0). It did not take long to identify other remains embedded in the excavation profiles exposed by the bulldozers (Fig. 1). This was initially supposed to be a quick rescue fieldwork campaign because the feverish construction of a new neighborhood loomed all around, continuing for at least the following three years. The "Dry River," to use Massimo's expression, turned out to be one of the last Pleistocene "fluvio-lacustrine terraces," not yet completely erased by urban expansion, as had already

Fig. 1 - View of the excavation site - November 1981.

Fig. 2 - Demonstration of digging a *Palaeoloxodon antiquus*' tusk.

happened to other significant deposits in the northeast quadrant of Rome, such as Monte delle Gioie, Sedia del Diavolo, or Saccopastore. The geological framework was supervised by Aldo G. Segre, and as interest grew, the Dipartimento di Biologia Animale e dell'Uomo of Sapienza Università di Roma became involved through the figure of Prof. Amilcare Bietti (Bietti, 1985), followed by Prof. Pietro Passarello and a young Giorgio Manzi who, along with Loretana Salvadei, would study the human fragment discovered two years later (Passarello et al., 1987). In those days, an exhausting bureaucratic and practical battle began on the site aimed at extending the excavation, preserving a part of the intact deposit, and finally creating a protective covering for the site. This effort and the initial results of the excavation led to Casal de' Pazzi being included in the major exhibition "The First Inhabitants of Europe," held at the L. Pigorini Prehistoric Ethnographic Museum in Rome in 1983 (Anzidei, 1985).

Massimo Ruffo had clear objectives from the beginning, as stated in his excavation journal. In addition to the emergency recovery of faunal and lithic artifacts, he aimed for a meticulous study of the geological, geomorphological, and stratigraphic context not only of the site but also of the broader territory, which was undergoing numerous construction projects at the time. Therefore, he spent the following years "exploring" an area of approximately 4,250 square meters and stratigraphically excavating about 1,200 square meters, sieving sediments to collect as much data as possible. This was a complex task since he was, and would remain, the only expert on the site, the *genius loci*. The experience was extremely challenging, especially because the workforce consisted of personnel without specific training, which was almost incompatible with the delicate activity of excavating a complex geological, paleontological, and archeological context. Even when a qualified company specializing in public works took over the construction site, Massimo Ruffo had to train the workers from the historic Di Piero Company, experienced in archeological excavations but certainly not Pleistocene ones. They would become his companions on this adventure, the "veterans" (Fig. 2).

Massimo writes: "Identification and envy were the feelings that accompanied me during the years spent on the 'Dry River.' Torrid like only deserts can be, frigid like the steppes exposed to the NE quadrants," and further adds, "in the sands of this desert, thousands of stone artifacts are found, belonging to people who frequented its banks: undeniable evidence of favorable possibilities for a human-scale existence." Fossilized faunal remains were discovered daily and immediately recognized and preserved on-site to prevent deterioration. The larger tusks were plastered and reinforced for safe transportation (Fig. 3). All graphic and photographic documentation was meticulously prepared with great skill and care. By combining data from geotechnical core drilling and exposed sections, Massimo produced a stratigraphic correlation profile that encompasses the entire new neighborhood (Fig. 3). "In 1983, as often happened, I remained at the excavation site even after working hours; magical hours of silence and wholesome contemplation..." reads his memoirs.

Massimo Ruffo, born in 1944, had a strong and versatile personality always leading him to distance himself from the world of academic studies and dedicate himself to a deeply personal exploration of research in the field of

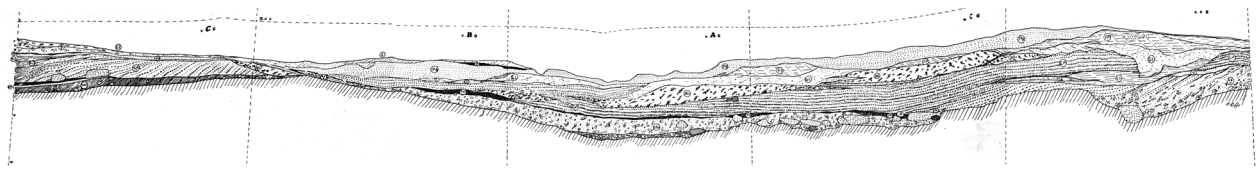

Fig. 3 - Stratigraphic profile.

prehistory. Thanks to this dedication, he reached levels of knowledge and expertise that are rarely matched. He was a mentor to many of us, and some were fortunate enough to learn from him directly in the field, acquiring techniques of archeological surveying, excavation documentation, stratigraphic interpretation, casting excavation surfaces, and carrying out proper treatment and protection of paleoanthropological artifacts. Massimo was also going to become the first expert to establish contact with the community of residents by organizing the first "site visits" also with the press (Fig. 4). Last but not least, we should remember that he was also the one who discovered the fossil human parietal bone at Casal de' Pazzi (Fig. 5).

What follows is a brief glimpse of this experience, narrated and revised by the protagonist himself. It is a detailed and involved account, with emotional and personal passages, along with technical descriptions that demonstrate the utmost precision of the investigations and stratigraphic observations. Those who have managed excavations in urban contexts, even many years later, will surely find themselves reflected in this text.

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Fig. 4 - Public tour of the fieldwork.

Fig. 5 - Human parietal fragment found in 1983.

2. MEMORIES OF THE EXCAVATION CAMPAIGN

Imagine fifty construction sites, all concentrated in frenzied activities of various kinds. The deafening noise reverberates in your core, resembling that of a disco, while waves of debris, both terrestrial and non-terrestrial, generated by blind mechanical monsters of various shapes and sizes, try to bury you as you desperately try to find a safe place, leaping like a kangaroo. That's how Casal de' Pazzi was when I arrived in the area, where I had been sent by Dr. Anna Paola Anzidei, the zoning inspector of the Sovraintendenza Archeologica di Roma, to recover a piece of elephant tusk, only a compromised fragment, quite damaged by the same mechanical equipment used to unearth it. Sandy concretions of volcanic origin still adhered to the artifact, and sedimentary structures of the same origin provided us with sufficient data to establish that we had ended up in the midst of a fossiliferous fluvio-lacustrine deposit - of pyroclastic origin - in the process of being dismantled. I will never forget that day spent - together with Piero Cassoli, a paleontologist of undeniable experience sent by the Pigorini Museum - (I dare say euphemistically) "rummaging" through the debris and the excavation fronts opened by the bulldozers in a frantic attempt to awaken from a bad dream. The Sovraintendenza Archeologica partially managed to stop the work; partially because despite the various prohibitions, destructive raids occurred in that area even during the preliminary phases of the investigations (see the general plan and the excavation journal).

Under the scientific direction of A.P. Anzidei, the excavation fronts were cleaned up. Those surfaces, adorned with long sequences of "signs," would have aroused envy in graffiti artists worldwide. At that time, we did not have any "Rosetta Stone" at hand to help us decode those "hieroglyphics," which were certainly filled with valuable information. The geological framework, roughly outlined by Prof. Aldo G. Segre from the Istituto Italiano di Paleontologia Umana (Anzidei et al., 1984), although valuable, could not serve as a valid support for a systematic and detailed investigation that also considered the selective processes originating from different flow regimes (Fig. 6). The identification of these processes would have greatly facilitated the taphonomic analysis of the specimens, some of which had already been identified during the cleaning phases.

Thanks to the various excavation interventions on the "most ancient" sites of the Aniene Valley - now forever disappeared - we have obtained comprehensive stratigraphic, geomorphological, faunal lists, and photographs, but little information about the research methodologies in those contexts.

It should be noted that the most important findings that made some of these deposits famous - such as the one in Saccopastore (Sergi, 1929), to mention one - did not come from systematic excavations but from chance discoveries. Casal de' Pazzi was probably one of the last opportunities to gather the most data that only a

Fig. 6 - Potholes (top) and ripple marks (bottom) on the riverbed.

meticulous systematic investigation could provide. We absolutely couldn't miss that opportunity.

At this point, allow me to digress about how certain methodological strategies were adopted, which, for intrinsic reasons, seemed to be the most appropriate at the time. Someone might argue that in such a complex context as Casal de' Pazzi (CDP), the constant presence of a geologist would have been necessary. This statement is sensible, but extremely irritating to me, as this "support" never materialized.

Therefore, with great distress, I was forced to cross the somewhat poorly defined "boundaries" between prehistoric and geological disciplines.

Before delving into the discussions about the most appropriate excavation methodologies for such a unique context as CDP, it is important to remember that the evolutionary processes of sedimentation in a river system are caused by continuously changing dynamic forces. The action of the current transports usually heterogeneous materials: sands, pebbles, boulders, and in our case, animal bones and lithic industries as well.

These activities can shape the riverbed, forming pre-depositional structures where the flow runs and other structures are formed as a result of the deposition of suspended materials. This commingled depositional process occurs gradually and unevenly until the deposit becomes stable (post-depositional) unless the entire sedimentary package can be further displaced and remixed, altering the characteristics of the previous sedimentation and creating new structures. Many other events can rework a deposit multiple times after its formation and burial, and these events can be influenced by both chemical and physical processes, such as earthquakes and bradyseisms.

Therefore, it is crucial - when conducting systematic investigations in such contexts - to establish a framework that allows us to distinguish between these exogenous processes - as mentioned earlier, generated by different flow regimes - and attribute them to each individual sedimentary structure. Since each structure occurring in a depositional succession is always the result of a specific dynamic disturbance, we decided to establish a reliable "pattern" that could be used as a reference throughout the planned research. Of course, it is almost impossible to establish clear and well-defined classifications of phenomena with highly variable characteristics - such as sedimentary inputs from a river flow - let alone trying to confine these phenomena to schematic grids. However, it was possible to identify and establish "fixed points" of these structures, such as geometric references, layer boundaries, surface delimitations, sedimentation units of different types, variability of laminations in a rhythmic sequence, and other classification categories. To simplify the data recording system as much as possible, these phenomenological parameters were identified using the derived initials of their most salient characteristics, allowing us to recognize and follow them in each case.

The area designated for the investigation was divided into a grid of 5x5 meters. The corner of a nearby building still under construction was chosen as the main reference point. A providential high-tension lattice, also placed at a reasonable distance, had its absolute altitude above sea level stamped at the base of the pillar, which was used as the "0" level for the stratigraphic data collection and the planimetric positioning of the finds. I emphasize that the lack of more defined data is primarily due to my own limited memory, but also to the fact that I no longer have access to the "old" excavation documentation from that time. There was no trace of theodolites around, so all the measurements were taken in the traditional way: using stakes, measuring tapes, plumb lines, drawing pins, and whatever else was needed for acceptable manual surveying. A Pentax camera (mostly slide films) completed the modest field equipment for documentation. In this regard, I want to humorously mention that some panoramic photos of the excavation area were obtained thanks to the collaboration of a cooperative crane operator from an adjacent construction site, who, with his masterful skill and the providential crane, made me "fly" comfortably in a bucket for cement pours (Fig. 7). The produced graphic and photographic documentation was delivered to the SAR (Sovraintendenza Archeologica di Roma) for official registration. The sediments obtained from the investigations were sieved from the very beginning using a large tilting sieve with millimeter-sized mesh. The sieving results were analyzed by myself before being discarded. The osteological or lithic finds discovered during the sieving process were labeled with only the square and

Fig. 7 - Aerial view of the fieldwork.

US references. For those found in situ and intended to be removed later in the course of the investigations, once they were measured and positioned in the stratigraphic plan using coordinates, the references were transcribed onto a wooden support attached to the find. Many osteological elements, due to their intactness, were identified during the excavations, including species and anatomical region (for example, *Bos sp*., distal metacarpal portion), which supplemented the find's references. On other osteological elements, which showed obvious fragility, a diluted 3/5% "Paraloid" solution was applied to the compromised surfaces. These operations were kept to a minimum, as the treated finds would have been rendered unsuitable for potential laboratory analysis.

3. EXCAVATION TECHNIQUES APPLIED

3.1. EXCAVATION BY ARBITRARY PREDETERMINED CUTS

Initially, a square was approached using what is known as "arbitrary predetermined excavation" (Wheeler, 1954), which involved removing sediments in cuts or levels of approximately 20 cm thickness in our case. Apart from the arbitrary decision to determine a specific volume of ground to be removed, which is inconceivable, this methodology, perhaps dictated by limited financial resources at the time and therefore restricted time availability, proved to be impractical. It seemed to be an outdated approach.

3.2. CHESSBOARD EXCAVATION

To expedite the process, it was decided to alternatively investigate the depositional succession in squares, creating a chessboard pattern of excavated and non-excavated squares. However, this method did not prove particularly effective for several reasons: A) Difficulty in establishing a consistent stratigraphic recording due to the intermittent nature of the excavation. It made the graphical representation of the Matrix recording methodology by Harris (Harris, 1979), which I intended to use, especially impractical or at least complex. B) Continuous verifications were required to establish the definite relationships between different stratigraphic sequences, and the non-excavated squares often concealed gradual lateral transitions of unique sequences that could vary spatially and therefore not be detectable in the subsequent sector designated for investigation. C) There were instances of finding large osteological remains such as elephant tusks that, when surfaced in a particular square, could extend beyond the limits of neighbouring squares, entering deposits that were not intended for research. This made the retrieval of the artifact problematic. D) In case of rain, the excavated squares quickly turned into dangerous deep pools, and there was no system to drain them except manually, resulting in further loss of time. It's worth imagining the logistical burden required to make such a rugged area accessible and, above all, safe.

For the above reasons, this inadequate investigation method was abandoned for a site like this. During this period, to optimize the recording of excavation data, I employed cumulative, occasional, and primarily interpretive wall drawings.

3.3. EXCAVATION BY BROAD LINES OR EXTENSIVE EXCAVATION

It goes without saying that it was methodologically obligatory to follow the limits and natural morphology of the layers and their mineral components (coarse sands - more or less resistant - with an abundant presence of augite, analcimized leucites, biotites, manganese coatings), and whatever else the succession of different river regimes had classified in those volcanic products. This approach went beyond Wheeler's method (Kenyon, 1961). I consider it unnecessary to elaborate on the advantages of extensive excavation (Barker, 1981), especially because finally, this approach was followed until the end - that is until the brilliant idea of preserving the portion of the paleochannel that we have the pleasure of visiting today was realized.

2.3.1. Appendix 1

The sedimentary structures listed below, identified during the investigations, constitute the identity of the climatic events that shaped the genetic profile of the

sedimentary-fossiliferous deposit of CDP, i.e., transitional current structures of low regime, high regime, continuous, alternating, erosive, and depositional nature, consisting of imbricated pebbles and blocks.

- Translation structures: graded gravitational episodes, in which coarse particles could be observed chaotically distributed among finer materials. These and other current structures could, in turn, be characterized by multiple types of laminations: deformed laminations, where the lower sequence is abruptly truncated by the overlying one; disturbed, chaotic, continuous parallel, undulating parallel, inclined parallel, crossed laminations, sometimes with poorly defined contacts.

- Current bedding - tractional current deposits: concave intersecting laminations, intervals, and resumptions of sequences; over-inclined laminations, which helped determine the direction of the current; sigmoidal laminations (concave or convex), intersecting undulating laminations, lateral and vertical transitions between different forms of lamination.

- Finally, ripple marks and scours are produced by vortices (see potholes) (Fig. 6).

- And then biostructures, traces of organisms, footprints, etc. (Ricci Lucchi, 1980).

To this pedantic list, we can add the numerous interferences attributable to various human activities, such as those found south of the excavation area, now located under the corresponding current entrance of the CDP museum, where the fossiliferous deposit had been partially disturbed by agricultural practices. A final examination of the Casal De' Pazzi deposit was carried out by myself between 2000 and 2001 during preliminary investigations in the area now used as a parking lot, which is also adjacent to the museum (Fig. 8). On this occasion, I intercepted some marginal remnants of the deposit - apparently intact - but further investigation was not allowed. On the other hand, the aforementioned agricultural activities continued to persist and expand. Furthermore, even in ancient times, episodes of disturbance affected this "tormented" sedimentary deposit. Hydraulic works, presumably from the Republican era, not only intercepted the Pleistocene fluvial sediments but actually penetrated them completely when constructing a well with masonry walls, complete with footholds for potential inspections.

Fig. 8 - The excavation area and its balks.

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