



There's an elephant in the archive! Two 20th century reports of Pleistocene remains in the Rome area

Flavio Altamura *

Senckenberg Centre for Human Evolution and Palaeoenvironment, University of Tübingen, Schöningen, Germany

* Corresponding author, altamuraflavio@gmail.com

ABSTRACT - Two archival finds recounting the discovery of Pleistocene elephant remains in the Rome area are presented and analyzed. The first consists of two newspaper clippings kept in Filippo Passamonti's archive (now in the Monastic Archives of the Abbey of Grottaferrata); dated 1934, they report the finding of a "mammoth" skeleton in the Valle Marciana (a maar formed during the last hydromagmatic phase of the Latium volcano), near the town of Grottaferrata. The second is a letter sent to Alberto Carlo Blanc in 1959 and found in his personal archive; it relates the discovery of the remains of Pleistocene elephants in the Fosso Sant'Agnese area in Rome, along the present-day course of the Aniene river, not far from the other known fossil deposits of Saccopastore and Sedia del Diavolo. In this paper, these archival items are put into topographic, historical, geological and archaeological context, adding new elements to our knowledge of the presence of paleontological remains in the Roman Campagna.

Keywords: Pleistocene; Elephants; *Palaeoloxodon antiquus*; archival research; Roman Campagna; Grottaferrata; Valle Marciana Unit; Via Mascagni succession.

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1. INTRODUCTION

Archival research is a very useful tool for archaeologists and paleontologists. It can provide details on past studies, help piece together the history of collections, and sometimes highlight personal aspects of the scholars involved and their interactions with each other. Besides shedding often unexpected light on sites and materials of cultural interest investigated in the past, historical records are of great importance when assessing the archaeological and paleontological potential of a given territory and planning new scientific research.

Three archival items concerning the discovery of Pleistocene elephant remains in the Rome area in the 20th century (Fig. 1) are presented here. While there had been sporadic reports of remains of extinct proboscideans in this area since the 16th century, finds became more numerous, and their descriptions more accurate, in the 19th and 20th centuries. The large quantity of elephant remains discovered in recent decades in the Pleistocene faunal complexes of the area has been amply emphasized by paleontological and archaeological studies, as well as by the choice to highlight them at a few musealized sites (e.g., Cavarretta et al., 2001; Gioia, 2004, 2020). The archival items described here - put into topographic,

historical, and geo-archaeological context as much as possible - add two new pieces to a rich and complex mosaic. They also provide a good opportunity to briefly review our knowledge of the situation to date and can serve as starting points for future scientific research and for activities aimed at protecting the sites they refer to.

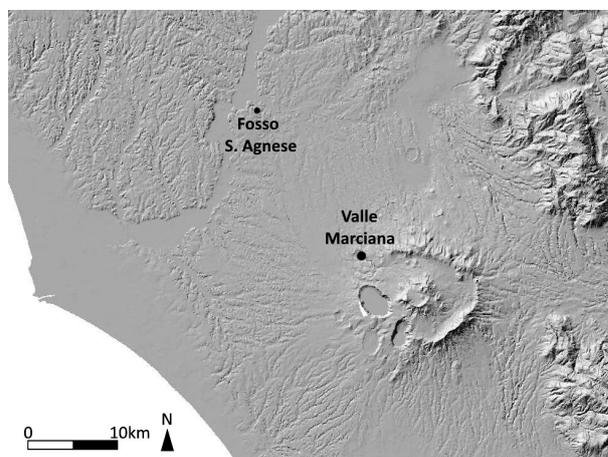


Fig. 1 - Location of the sites in question shown on a DEM map of Latium.

2. DESCRIPTION

2.1. THE GROTTAFERRATA MAMMOTH

Two newspaper clippings dated July 29, 1934, reporting the discovery of a fossil “mammoth” skeleton near the town of Grottaferrata, were found in the archive of local historian Filippo Passamonti, now in the archives of the Abbey of Grottaferrata.

Filippo Passamonti (1876-1940) was a grandson of Giovanni Passamonti, who had advocated for municipal autonomy, eventually becoming Grottaferrata’s first “priore” (i.e., mayor) in 1848 (at the time, the whole region was part of the Papal States). Filippo owned the main general store in town, and throughout his life promoted many civic, cultural, and economic initiatives. Passionately interested in the history and life of his community, he assembled many books on Grottaferrata, and for decades collected all sorts of local memorabilia, such as oral histories, documents, letters, postcards, invitations, and programs, telegrams, photographs, prints, and drawings, as well as newspaper clippings about local events. The greater portion of his archive, including the documents he had arranged and bound into scrapbooks, was gifted to the Abbey of Santa Maria di Grottaferrata, where it is kept to this day (Petta, 1994; Falcone and Roncaccia, 2000; Petta and Roncaccia, 2005).

The newspaper articles - one from *Il Messaggero*, the other from *La Tribuna*, both annotated by Passamonti - recount the discovery of portions of the skeleton of a large prehistoric animal in the Valle Marciana, a valley that lies just below the town of Grottaferrata (a few miles southeast of Rome), in a field belonging to Mr. Luigi Vinciguerra. The fossilized bones - some of which had been dug up in the same field the year before - included skull fragments, several teeth, two tusks (one of which was three meters long), and bones belonging to the front legs. Vinciguerra had immediately recognized the nature of the first finds, and this time had personally overseen his farmhands’ work in the hope of finding other parts of the skeleton, which were then laid out in a storage room he owned on the town’s main street. Both articles say that it was suggested that the remains might have been those of a mammoth.

In his comment to the *Il Messaggero* article, Passamonti notes that Vinciguerra’s father once gave him an exceptionally large bone, found at the same location, which he then gifted to the abbey’s Museum in 1910. In his remarks to the other clipping, he mentions that in ancient times the valley was filled by a lake.

Here are the transcriptions of the two newspaper clippings and of Passamonti’s handwritten remarks (Figs. 2 and 3):

“IL MESSAGGERO - Domenica 29 luglio 1934

Avanzi fossili preistorici di eccezionale grandezza rinvenuti in un campo di Valle Ma[r]ciana a Grottaferrata
Abbiamo da Grottaferrata, 28: Durante alcune escavazioni eseguite nel terreno di proprietà di Luigi

Vinciguerra, sito nella località chiamata di Valle Marciana, sono stati rinvenuti degli avanzi fossili animali di eccezionale grandezza. Il Vinciguerra raccolti questi avanzi li portava provvisoriamente nella propria cantina situata sul Corso di Grottaferrata. A giudicare dalla grandezza di questi fossili si deve pensare che si tratti di ossa di un colossale animale preistorico - qualcuno dice si tratti di un mammut. - Difatti queste ossa calcinate sono frammenti di una scatola cranica, zanne e vertebre. Il pezzo di scatola cranica misura uno spessore di oltre 3 centimetri, ed una zanna è lunga circa tre metri. Anche le altre ossa sono di eccezionale grandezza e tale che non si è lontani dalla realtà attribuendole ad un animale della famiglia dei mammut. Queste ossa sono state trovate ricoperte di sabbia, particolare questo che sembrerebbe avvalorare la credenza che a Valle Marciana esistesse anticamente un piccolo lago. Gli avanzi sono stati trovati a circa un metro e mezzo di profondità nel suolo. Già l’anno scorso il proprietario di Valle Marciana, il signor Luigi Vinciguerra, aveva constatato che, nel corso delle opere agricole, erano affiorate alcuni curiosi avanzi che, pur avendo l’aspetto del tufo, si rivelavano come grandi ossa calcinate. Gli avanzi vennero conservati e quest’anno all’inizio dei lavori stagionali, il signor Vinciguerra ha voluto personalmente sorvegliare i suoi contadini per vedere se fosse possibile ritrovare le altre parti dello scheletro di quello, che egli intuiva, doveva essere un bestione antidiluviano. L’opera di scavo è stata feconda di risultati e, gradatamente, sono tornate alla luce altre ossa e una specie di tronchetto il quale, probabilmente, è una zanna di mammut. Frattanto le ossa ritrovate sono state allineate nella cantina del Vinciguerra e si è cercato anche di ridare con esse una certa forma allo scheletro. Adesso il proprietario del fondo aspetta che qualche studioso vada ad esaminare i resti e pronunci una parola definitiva sull’essere cui essi appartennero.”

[Passamonti’s note] “Un altro osso di eccezionale grandezza (trovato nello stesso luogo) fu donato dal padre del Vinciguerra allo scrivente che ne fece dono al Museo della nostra Badia nell’anno 1910. Poco lontano dal punto dove sono state rinvenute queste ossa, esisteva nel 700 una Chiesa in onore di San Pietro Apostolo. Un tale Emanuele Vinciguerra nel fare lo scasso del terreno rinvenne un’Aureola di bronzo e il cugino del Vinciguerra di nome Giuseppe, vi trovo [trovò] un busto di marmo con la barba. Una colonna scanalata con capitello di peperino appartenente al portico della Chiesa si conserva nel Museo della Badia di Grottaferrata, ed altro tronco si vede in un angolo della casa Roncaccia (ultima in fondo al Corso) ed altri avanzi di queste colonne sono nel Cancellò della vigna Roncaccia presso il Borghetto. Fpassamonti”

(Archive of the Exarchic Monastery of Santa Maria di Grottaferrata, Passamonti fond, vol. 271, p. 199).

“LA TRIBUNA - 29 luglio 1934, Anno XII

Uno scheletro di mammut nelle campagne di Grottaferrata?

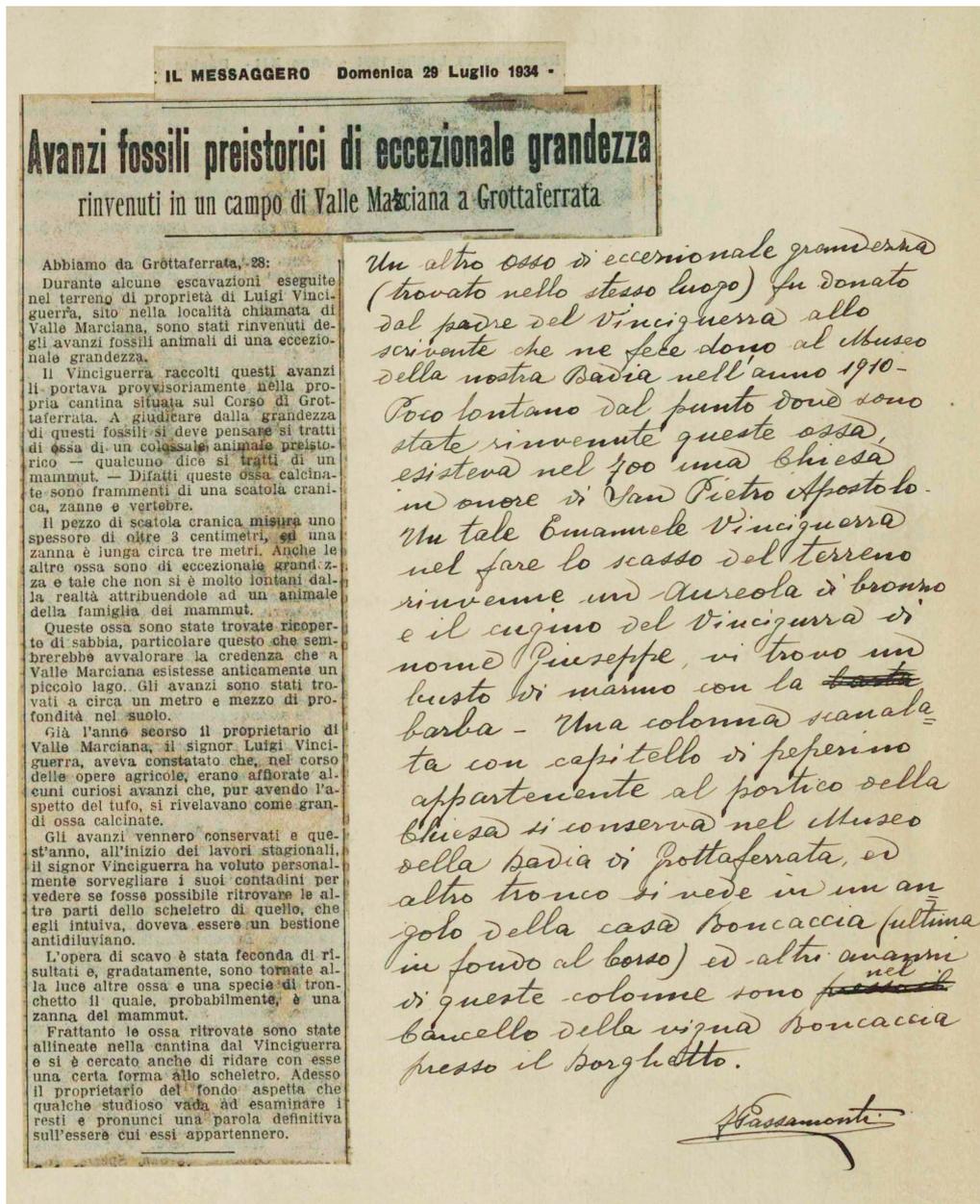


Fig. 2 - Newspaper clipping, and Passamonti's remarks, on the supposed finding of a mammoth near Grottaferrata (Monastic Archive of the Abbey of Santa Maria di Grottaferrata).

C'è una località, affatto lontana da Grottaferrata, che si chiama Valle Marciana, in memoria della bella padrona del tenimento, [o-o, handwritten symbol] la quale, in epoca lontana e probabilmente romana, riempi dei suoi ricordi tanta parte delle terre vicine alla sua villa da dar, poi, col suo nome, nome alle sue possidenze. E Valle Marciana è una terra interessante perché, dice ancora la leggenda, in essa si apriva un [8, handwritten symbol] laghetto della stessa origine, certamente, di tutti gli altri laghi che esistono ancora nei Castelli Romani. Quale fosse la vita intorno a Valle Marciana e in generale nelle campagne di Roma cinquecento o seicento secoli orsono non è facile davvero immaginare, ma non v'è dubbio che intorno all'uomo, il quale viveva nelle grotte e scheggiava

le pietre per farsene armi da offesa, si aggiravano torme d'animali selvaggi: cioè il leone e l'orso, la grande alce e il mammut. Ossia quel colossale elefante ch'era alto intorno ai cinque metri, che aveva le due grandi zanne assai più concave di quelle dei suoi attuali pronipoti e che aveva sulla pelle uno spesso strato di setole durissimo. Dunque, il mammut, anzi torme di mammut, si aggiravano per le campagne ch'erano paludose e ricoperte di una vegetazione imponente, tra le selve, lungo i fiumi, sulle rive dei laghi. Le loro possenti voci risuonavano terrifiche e gli uomini, che accendevano il fuoco dinnanzi alle caverne per sbarrare il passo alle fiere, forse avevano più paura del mammut che [del leone. Que]sto poteva essere assaltato con l'ascia e poteva ancora cadere nelle trappole,

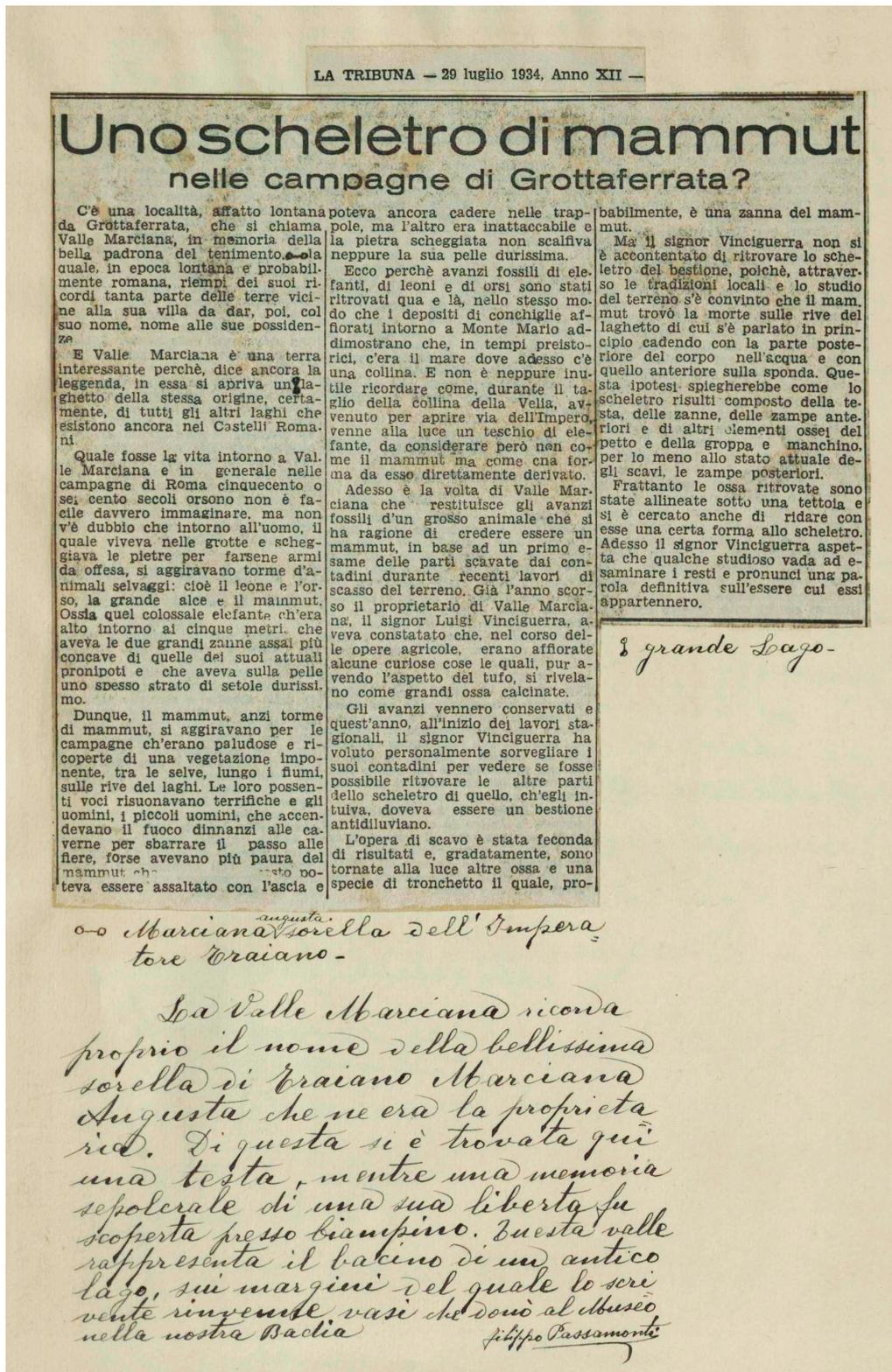


Fig. 3 - Newspaper clipping, and Passamonti's remarks, on the supposed finding of a mammoth near Grottaferrata (Monastic Archive of the Abbey of Santa Maria di Grottaferrata).

ma l'altro era inattaccabile e la pietra non scalfiva neppure la sua pelle durissima. Ecco perchè avanzi fossili di elefanti, di leoni e di orsi sono stati ritrovati qua e là, nello stesso modo che i depositi di conchiglie affiorati intorno

a Monte Mario addimostrano che, in tempi preistorici, c'era il mare dove adesso c'è una collina. E non è neppure inutile ricordare come, durante il taglio della collina della Velia, avvenuto per aprire via dell'Impero, venne alla luce

un teschio di elefante, da considerare però non come il mammut ma come una forma da esso derivato. Adesso è la volta di Valle Marciana che restituisce gli avanzi fossili d'un grosso animale che si ha ragione di credere essere un mammut, in base ad un primo esame delle parti scavate dai contadini durante recenti lavori di scasso del terreno. Già l'anno scorso il proprietario di Valle Marciana, il signor Luigi Vinciguerra, aveva constatato che, nel corso delle opere agricole, erano affiorate alcune curiose cose le quali, pur avendo l'aspetto del tufo, si rivelano come grandi ossa calcinate. Gli avanzi vennero conservati e quest'anno, all'inizio dei lavori stagionali, il signor Vinciguerra ha voluto personalmente sorvegliare i suoi contadini per vedere se fosse possibile ritrovare le altre parti dello scheletro di quello, ch'egli intuiva, doveva essere un bestione antidiluviano. L'opera di scavo è stata feconda di risultati e, gradatamente, sono tornate alla luce altre ossa e una specie di tronchetto il quale, probabilmente, è una zanna del mammut. Ma il signor Vinciguerra non si è accontentato di ritrovare lo scheletro del bestione, poiché, attraverso le tradizioni locali e lo studio del terreno s'è convinto che il mammut trovò la morte sulle rive del laghetto di cui s'è parlato in principio cadendo con la parte posteriore del corpo nell'acqua e con quello anteriore sulla sponda. Questa ipotesi spiegherebbe come lo scheletro risulti composto dalla testa, dalle zanne, dalle zampe anteriori e di altri elementi ossei del petto e della groppa, e manchino, per lo meno allo stato attuale degli scavi, le zampe posteriori. Frattanto le ossa ritrovate sono state allineate sotto una tettoia e si è cercato anche di ridare con esse una certa forma allo scheletro. Adesso il signor Vinciguerra aspetta che qualche studioso vada ad esaminare i resti e pronunci una parola definitiva sull'essere cui essi appartennero."

[Passamonti's note] "o-o Marciana Augusta sorella dell'Imperatore Traiano 8 grande Lago.

La Valle Marciana ricorda proprio il nome della bellissima sorella di Traiano Marciana Augusta che ne era la proprietaria. Di questa si è trovata qui una testa, mentre una memoria sepolcrale di una liberta fu scoperta presso Ciampino. Questa valle rappresenta il bacino di un antico lago, sui margini del quale lo scrivente rinvenne vasi che donò al Museo della nostra Badia. Filippo Passamonti"

(Archive of the Exarchic Monastery of Santa Maria di Grottaferrata, Passamonti fond, vol. 271, p. 202).

2.2. AN ELEPHANT IN THE SO-CALLED "AFRICAN QUARTER" OF ROME

A chance finding of prehistoric elephant remains in Rome is recounted in a handwritten letter sent to the renowned paleontologist and archeologist Alberto Carlo Blanc (1906-1960) in 1959 and kept by him in his personal archive, which is currently being cataloged and studied at his home in Rome (e.g., Altamura, 2020; Altamura et al., 2019, 2020, 2022).

Blanc's specific interest in the Rome area had begun in 1935 when, together with Henri Breuil, he discovered the second Neanderthal skull in the Saccopastore quarry,

along the Aniene River in a north-eastern section of Rome (Fig. 4) (Breuil and Blanc, 1935). It had deepened after he obtained the professorships of Ethnography, in 1939, and Paleoethnology, in 1940, at the University of Rome, and never waned for the rest of his life (Fig. 5), as attested to by his numerous publications on the geology, paleontology and archaeology of the Roman Campagna (Blanc, 1959).

The letter in question, which was kept by Blanc with all his other documents concerning this area, was written to him by a Mr. Manlio Propersi on February 23, 1959. A few days earlier, a high-school student had discovered the skull and tusks of a large prehistoric elephant at the construction site of the western section of Rome's new ring road (near a working-class suburban neighborhood called Montespaccato). The extraordinary finding of an *Elephas antiquus* (which eventually turned out to be a *Mammuthus trogontherii*) made the headlines, with most articles including some statements by Blanc (Fig. 6) (Palombo, 2020, p. 124-125).

Reading Blanc's comments had prompted Propersi to write to him, recounting how in the early 1920s, when he himself was still a student, he too had found and retrieved several large well-preserved pieces of fossil elephant bones and tusks uncovered during earthwork carried out in the Fosso Sant'Agnese area (in the eastern section of Rome) to make way for a railroad. Not wanting to delay the works, the construction company had not reported the finding of these remains, of which there had been many more than those young Propersi had been able to take away.

This is the transcription of Propersi's letter (Fig. 7):

"Manlio Propersi, Roma
Via G.M.Lancisi n.21
tel. 85.43.86
Roma, 23 febbraio 1959

Ill.mo Prof.
Alberto Carlo Blanc
Direttore dell'Istituto di Paleontologia
dell'Università di Roma

Ho letto le Sue dichiarazioni al "Tempo" circa il rinvenimento di resti fossili a Monte Spaccato.

Quando io ero studente (1921-1922) ebbi anche io occasione di rinvenire e raccogliere resti fossili analoghi. Si stava scavando il fianco di una collinetta per aprire la via al raccordo ferroviario anulare (che non è stato poi realizzato), e in località allora denominata Fosso di S. Agnese (oggi - pressappoco - in fondo, molto a sinistra, di viale Libia, in prossimità della ferrovia Roma - Firenze) si rinvennero molti resti, ben conservati. Ricordo che portai a casa due o tre vertebre, due pezzi di femore, e frammenti notevoli di zanne, di dimensioni superiori a quelle di un comune elefante.

Mi pare che il ritrovamento non fu denunciato (l'impresario dei lavori non voleva ritardi), e i frammenti da me raccolti lentamente si sbriciolarono.

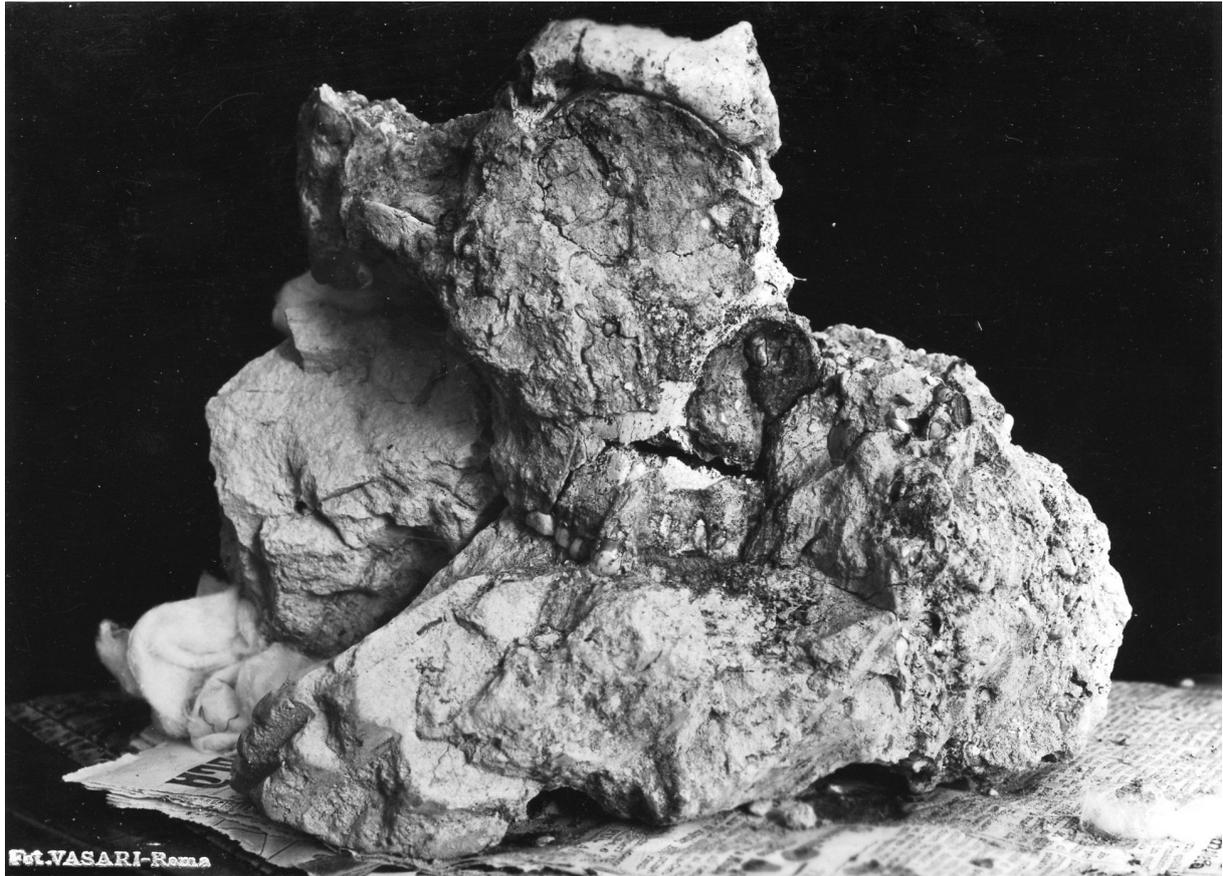


Fig. 4 - The second Saccopastore skull just after its discovery, still embedded in the deposit (Blanc-Aguet Archive).

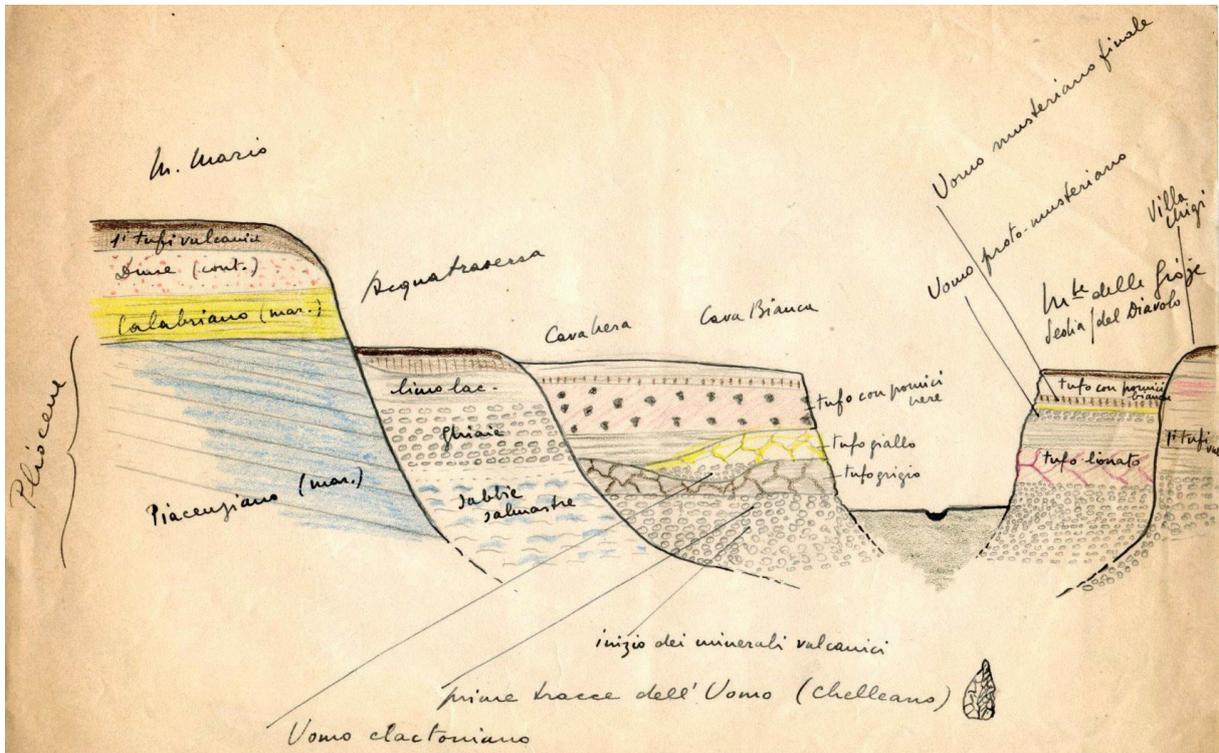


Fig. 5 - Stratigraphic notes by A.C. Blanc pertaining to the geology of the Rome area (Blanc-Aguet Archive).



Fig. 6 - Alberto Carlo Blanc examines the elephant remains at Montespaccato (from <https://primavalleinrete.wordpress.com/2017/04/10/il-mammut-di-montespaccato/>).

Se la mia informazione può interessarLe, sarò ben lieto di indicare il luogo esatto del ritrovamento. Lo scavo è rimasto pressappoco nelle condizioni in cui allora fu abbandonato.

Con ossequio

[signed] Manlio Propersi”

(Blanc-Aguet Archive, Rome)

3. DISCUSSION

3.1. THE GROTTAFERRATA MAMMOTH

To date, I have not been able to locate any of the remains found in the Valle Marciana in 1934. Nobody seems to know what happened to them; they may no longer exist, or they may have been stored away somewhere and forgotten.

As regards the bone Passamonti mentioned having donated to the abbey’s museum in 1910, I have not been able to find that either. We know that in 1930 one of the museum’s galleries hosted sundry minerals and “fossil bones” (Artioli, 1930, 49); perhaps that bone was among them. Two earlier descriptions of the museum’s contents - Father Antonio Rocchi’s book about the abbey (Rocchi,

1904), and the abbey’s monastic chronicle in its entries for 1907 - do not mention any fossil bones. Unfortunately, the chronicle does not record Passamonti’s gift in 1910 either (pers. comm. Paola Micocci). Nor has the consultation of the abbey’s inventories (drawn up by Hermanin and Pastina between 1914 and the early 1920s, cf. Fabian, 2005) yielded any results yet, though it is possible that fossils and minerals were omitted.

During World War II, the museum’s collection was put in storage for safekeeping. There definitely were no paleontological remains among the exhibits that were reinstalled after the war, nor have there been ever since (Fabian, 2005). There is a chance they may still be where they were put away in 1944, i.e. in the museum’s sealed storage boxes.

The Valle Marciana bones were found in the north-eastern part of the valley (Fig. 8), a depression that formed during the last hydromagmatic phase of the Latium volcano (<200,000 years ago) inside a monogenetic crater (or maar) about 1 km wide (Funciello and Giordano, 2008; De Rita and Giordano, 2009). I was able to determine the precise topographic location of Vinciguerra’s property (Fig. 9) thanks to the *Catasto rustico di Roma e Provincia*

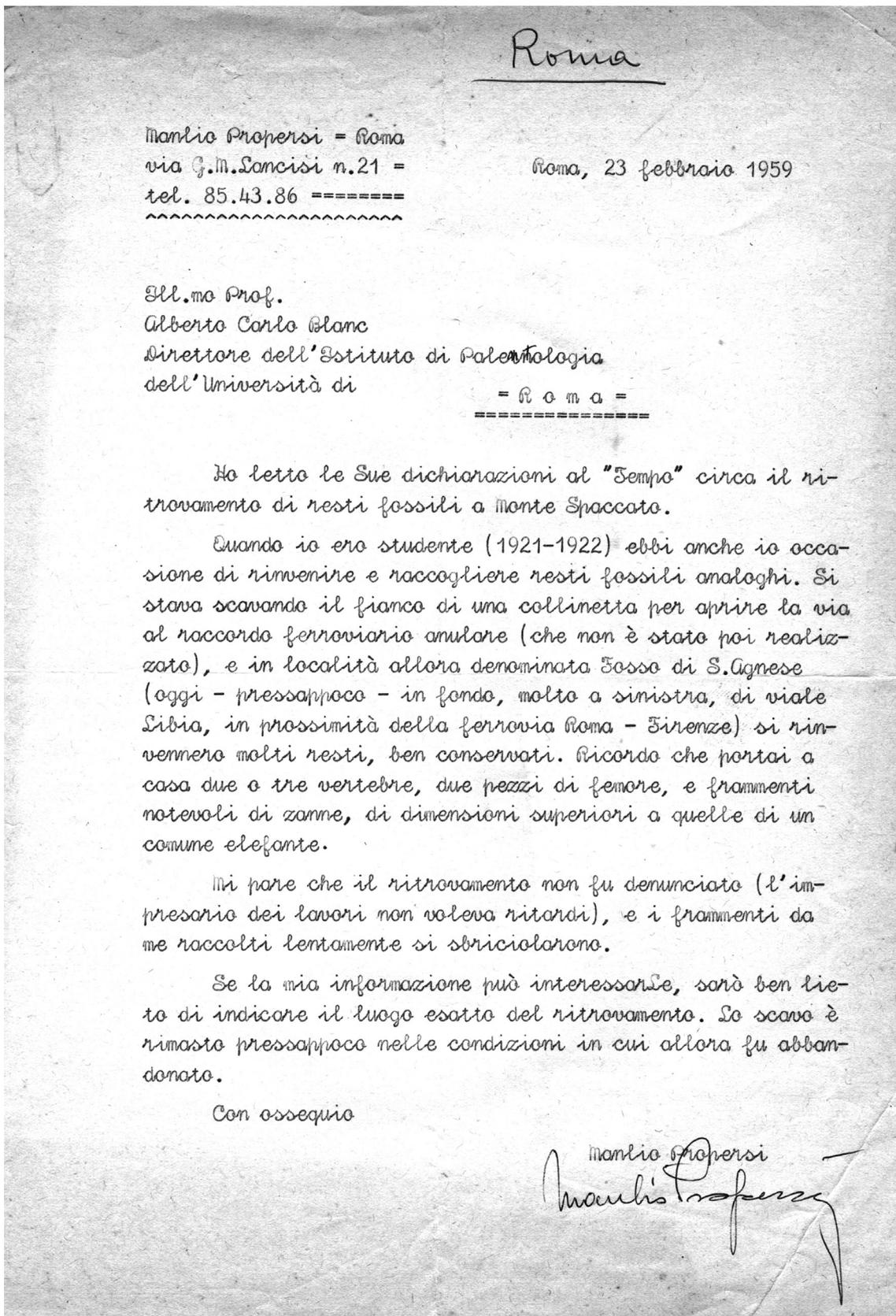


Fig. 7 - Letter from Manlio Propersi to Blanc, February 23, 1959 (Blanc-Aguet Archive).



Fig. 8 - The north-eastern sector of the Valle Marciana, Grottaferrata.

1870-1952, i.e., the old agricultural land register, now in the State Archives in Rome (State Archives of Rome, Revenue Technical Office, Grottaferrata, Cadastral map sheet no. XII, parcel no. 389). The 2,200 m² property - a vineyard that bordered the Marrana stream - had been bought by Luigi Vinciguerra from his father-in-law Angelo Tiburzi, who had owned it since 1909



Fig. 9 - Location of Vinciguerra's property in the Valle Marciana (Regional Technical Map of Latium, detail).

(State Archives of Rome, Revenue Technical Office - Grottaferrata, property ownership registrations, register no. 604, property registration no. 2832; Frascati tax office, property transfers series, envelope no. 346, Grottaferrata property transfers, transfer no. 237 of the year 1909). This location is indirectly confirmed by Passamonti's annotation, which says that the bones were unearthed close to where the medieval church of San Pietro Apostolo had once stood; recent studies place the church precisely in this sector of the volcanic depression, about 100 meters north of Vinciguerra's field (Dalmiglio, 2009).

The geological characteristics of the area include a pyroclastic deposit comprising layers of ash and lapilli. The deposit, with a maximum thickness of 30 m, has undergone partial reworking by hydrographic events occurring during and after its eruption. The volcanic sequence of the Valle Marciana dates from the Upper Pleistocene; in some places, it is covered by the products of the last two cycles of the Alban maar (De Rita and Giordano, 2009). Based on the chronology of the geologic deposits, it is likely that the supposed mammoth remains belonged to at least one adult *Palaeoloxodon antiquus*. At present, the volcanic sequence is exposed mainly along the northern rim of the crater. Along the valley floor, however, due in part to farming and urbanization,

there are no exposed geologic sections at all. Members of the Roncaccia family, who own farmland in the northeastern area of the valley, have told me that deep plowing for planting new vineyards revealed that under the layer of arable soil (which is about 0.5-1.5 meters thick) there is a tuff layer and an underlying paleosol, and volcanic sand layers a little more to the north (toward the Via Anagnina, near the Borghetto area).

The Valle Marciana has had a place in archeological literature on prehistoric and protohistoric contexts since the 19th century. Materials and remains of settlements dating back to late prehistory and protohistory were found in this area on multiple occasions (e.g., De Rossi, 1867, 1868; Gierow, 1964; Angle and Guidi, 1979; Alessandri, 2013). Geophysicist Michele Stefano de Rossi believed that, similarly to other hydromagmatic craters formed during the last volcanic phase of the Alban Hills, this valley had once been occupied by a lake; indeed, recent research has revealed the presence of lake deposits and terraces in the basin (De Rita and Giordano, 2009). The lake was probably fed by a few springs, some of which are still extant, and by the Acqua Mariana (or Marrana), a stream that starts at the foot of the nearby Monti Tuscolani ridge, runs through the valley and - until the Middle Ages, when it was artificially diverted into Rome - flowed into the Aniene River (Capelli, 2015).

One of the first scientists to explore the area, De Rossi discovered traces of pre- and protohistoric settlements at the north end of the valley and was told by a reliable source that piles of burnt charcoal - which he interpreted as ancient hearths - had been found under layers of peperino tuff and ash: “memoria certissima che [...] sono stati trovati sotto il peperino e la cenere mucchi di carbone arso indicanti chiaramente altrettanti focolari” (De Rossi, 1867, 41). However, this is not sure evidence of the presence of archeological remains dating to the Pleistocene. De Rossi tended to over-interpret certain data because he was mistakenly convinced that the last eruptive cycles of the Alban Hills had taken place during the Holocene, sealing settlements and necropolises dating from the pre-protohistoric and early historic periods. While recent research has proved that some Pleistocene paleosols containing Mousterian industry were indeed buried by the distal products of the volcano's last eruptive cycle (e.g., Giaccio et al., 2007; Altamura and Rolfo, 2019), it is very likely that in this case, De Rossi's interpretation was wrong, and that at the Valle Marciana any presence of carbonized matter beneath primary volcanic products is due to other geologic or paleo-environmental phenomena.

In the Alban Hills, imprints and carbonized or mummified remains of plants have often been found embedded in layers of primary volcanic products, especially in those pertaining to the volcano's last hydromagmatic phase (e.g., Clerici, 1888; Fornaseri et al., 1963; D'Amico, 1982-1983; Fornaseri and Cortesi, 1989; De Rita and Giordano, 2009; Bersani and Corda, 2011). For instance, I recently found, in a cave that is part of a complex of medieval cliff dwellings dug into the

northeastern slope of the Valle Marciana basin, a vacuum left by a tree trunk. About 12 cm wide and at least one meter long, partly cross-sectioned by the cave's ceiling for a length of about 55 cm, it is embedded in volcanic deposits at the interface between a thick layer of tuff and one of the coarse pyroclastics (Fig. 10).

Relatively less is known about the fauna that was present in the higher reaches of the Alban Hills (>100 m a.s.l.) during the Upper Pleistocene. We have number of 18th-century accounts of animal remains embedded in volcanic layers, especially in those pertaining to the Latium volcano's last hydromagmatic phase (Fornaseri et al., 1963; Trigila, 1995). These animals had frequented the vegetated habitats that formed on the fertile volcanic soil during the quiet phases - which sometimes lasted even 40 or 50 ka (Marra et al., 2009) - between one eruptive cycle and the other. In his book on the history of Ariccia and its area, published in 1796, Emmanuele Lucidi, a canon of the town's main church, recounted how, in 1786, the bones of a deer and the impression of its whole body, including its antlers, had been found between a layer of pozzolan and one of peperino tuff during the digging of a cellar under a mansion on the main square of Ariccia. Unfortunately, by the time he got there, the workmen had not only broken up the bones and thrown them away but had also almost entirely destroyed the impression (Lucidi, 1796, 48-51).

In the 19th century, chance findings of bones of various mammal species - of the genera *Bos*, *Cervus*, *Dama*,



Fig. 10 - Impression of a tree trunk embedded in the volcanic products of the Valle Marciana maar.

Equus, and *Canis*, among others - occurred in Frascati, Squarciarelli (near Grottaferrata), Marino and Ariccia; these remains were embedded in Alban peperino tuff layers and in the layers of products pertaining to the other eruption centers of the volcano's last hydromagmatic phase (Meli, 1889, 518-519; Torquati, 1987, 264-265). In 1889, farmhands digging trenches for a new vineyard near Frascati discovered the bones and well-preserved impression of a Eurasian griffon vulture (*Gyps fulvus*) embedded in a block of peperino tuff (Meli, 1889). The rock was retrieved and studied again in the past twenty years or so, and new casts were made of the impression: one in silicone (Manni et al., 2004), and a virtual one made using CT scan technology (Iurino et al., 2014). The results were astounding in both cases: a perfect image of the head and neck - including plumage, eyes, and tongue - of the bird, which had been suffocated by a pyroclastic cloud during the Upper Pleistocene.

The Valle Marciana "mammoth" was not the only find that occurred in the Alban Hills during 20th century. For instance, an *Equus hydruntinus* tooth was found in the environs of Albano Laziale (Fornaseri et al., 1963, 46), and in 2012 the bones of what may have been a cervid, embedded in a peperino layer, were brought to light during a preventive archaeological survey in the nearby township of Marino (unpublished find, pers. comm. Fabio Catracchia).

In the 1980s, several remains of *Palaeoloxodon antiquus* were donated to the City Museum of Albano (Fig. 11). A large tusk fragment (inv. no. C 3238; L 64 cm, \varnothing 8 cm; figure 11a) was cataloged as coming from the area of

Montagnano Campoleone, just below Albano (Chiarucci, 1988; Chiarucci and Gizzi, 1996: 59); this location is also the site of a substantial surface find of Mousterian artifacts (Chiarucci, 1979). A fragment of a lower molar tooth (inv. no. C 280; L 11 cm, H 13.5 cm; figure 11b) came from the garden of the Miralago hotel, located on the rim of the maar that contains Lake Albano, at the intersection between Via dei Cappuccini and Via Miralago; in this same area, later surface collections yielded stone tools dating from the Middle Paleolithic (Chiarucci, 1982, 16). The provenance of another tusk fragment (inv. no. C 3237; L 28 cm, \varnothing 12 cm; figure 11c) is recorded simply as "Alban Hills."

These three items could have apparently provided an excellent comparison for the hypothetical pachyderm remains from the Valle Marciana. However, after examining them at the museum, I have strong doubts about the actual provenance of the first two. The tusk purportedly from Montagnano Campoleone is partly encrusted with fragments of a sandy paleosol containing iron-oxide concretions and well-rounded limestone pebbles, while the spaces between the ridges of the tooth from Miralago are filled with sand cemented with limestone gravel. These geological features (i.e., limestone pebbles and gravel) are totally absent from the substrate of the places where these remains were supposedly found.

At Montagnano Campoleone, the deposits pertaining to the earlier volcanic phases of the Alban Hills (Villa Senni Formation, Madonna degli Angeli Formation; cf. De Rita and Giordano, 2009) obliterated any alluvial deposits that may have formed during the Middle Pleistocene before

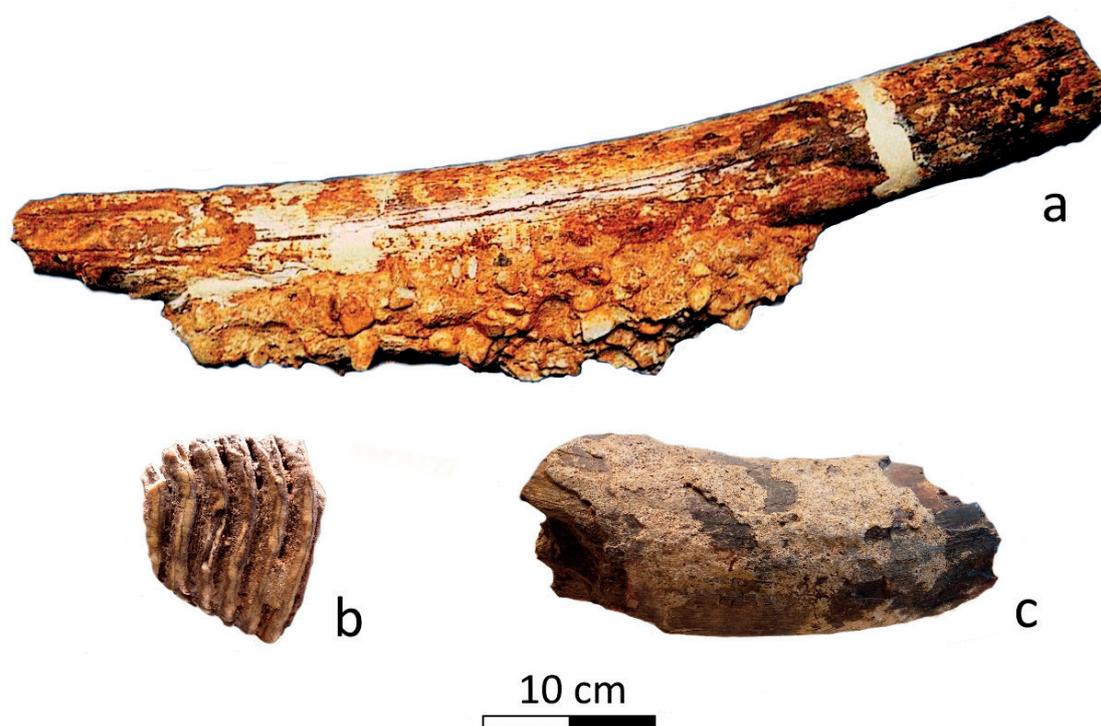


Fig. 11 - Fossil elephant tusks and molar in the City Museum of Albano Laziale.

the eruption activity started 600 ka ago and that may have contained limestone pebbles. The volcanic deposits here are so thick - from fifty to one hundred meters (Trigila et al., 1995, 40-41; De Rita and Giordano, 2009) - that their mere presence makes the retrieval of any sizable paleontological remains that may possibly lie underneath them implausible (moreover, there are no large quarries in the area where they could have been brought to light).

The same provenance problem is even more conspicuous for the Miralago molar, which was found right at the top of the rim of the Albano crater. First, there is no limestone gravel at all in the substrate, which in its upper portion consists of the eruption products of the Albano maar (Villa Doria Unit and Peperino Albano; cf. De Rita and Giordano, 2009; Giordano et al., 2010). Moreover, the peperino layer dates to the end of the Upper Pleistocene, which means that there is no chance that *Palaeodoxon antiquus* remains could have been originally located at the surface, or in an eroded area, of that site, nor could any Mousterian stone tools. In Italy, ancient elephants became extinct around 40,000 years ago, and the Mousterian industry stopped being produced around the same time. Hence, since the tooth and the artifacts are supposed to have been collected on top of more recent geological sequences, such as those of the last peperino cycle that outcrops in that area and has been shown by radiometric dating to have formed between 36 and 23 ka ago (Giaccio et al., 2007; De Rita and Giordano, 2009), they cannot possibly be reliably or validly assigned to any stratigraphy whatsoever.

At the most, if the recorded provenance is correct, the first tusk and the molar may be allochthonous, brought there by chance (perhaps in a load of inert material) from other locations far from the Alban Hills. It is also possible that the donors simply made a mistake and that they had been found somewhere else, for example in deposits in southern Latium or even southern Italy. For instance, the Albano Museum also owns a tusk fragment from Venosa, in the Basilicata region; its accession number (inv. no. C 279) immediately precedes the one of the Miralago tooth (inv. no. C 280).

The second tusk fragment, on the other hand, may truly come from the Alban Hills as indicated. Indeed, the gray incrustations that cover one side of it may pertain to a volcanic tuff. Unfortunately, in the absence of a more specific recorded provenance, it is impossible to attribute the tusk to any outcrop; moreover, the likelihood that it may come from other sites located at the foot of the Latium volcano or of the Roman Campagna cannot be ruled out.

Despite its seeming uniqueness among the finds unearthed in the Alban Hills, the Valle Marciana mammoth was never mentioned in any geological or paleontological study published in the years immediately following its discovery. Only Passamonti briefly recounted its finding in his book on the history of Grottaferrata (Ponti and Passamonti, 1939, 273).

Several years went by before the bones were finally seen

by an expert, the renowned geologist and paleontologist Gioacchino De Angelis d'Ossat, whose research focused on various areas of Latium, including Rome and its environs. In an article on the Ad Decimum catacombs (located a stone's throw from the Valle Marciana), published in 1942, De Angelis d'Ossat wrote that he had examined the many bone fragments found by Vinciguerra in the valley. Noting that they were covered by a thick layer of fine volcanic ash, he recounted that the only identifiable fragments he had seen were three broken teeth, a horn, and several pieces of skull bones, all pertaining to a bovid: "Presso il sig. Luigi Vinciguerra, a Grottaferrata, ho osservato molte ossa frammentarie, rivestite da uno spesso strato di sottile cenere vulcanica ed esumate da uno strato di lapilli grigi del fondovalle Marciano, quasi al confine col territorio di Roma. Con difficoltà, tra gli avanzi frammentari, ho riconosciuto tre denti mutili, un corno e porzioni di ossa craniali e appartenenti tutti ad un *Bos* [...] Del rinvenimento in Valle Marciana, con errata determinazione, fu data notizia sul giornale *Tribuna* e nella recente *Storia di Grottaferrata*" (De Angelis d'Ossat, 1942, 20).

Not a mammoth, after all. Only the remains of a bovid (probably a *Bos primigenius*, or aurochs), according to De Angelis d'Ossat, whose great experience leaves little doubt about the accuracy of his identification. However, the presence of a tusk three meters long, reported in Passamonti's clippings, is certainly difficult to relate to an aurochs. It may be that the journalists had been a bit too enthusiastic in their coverage of the discovery (the *La Tribuna* article included a very lively description of the fauna that roamed the area in prehistoric times), perhaps influenced by the great excitement caused in those years by the unearthing of elephant remains during the construction of the new avenue Via dell'Impero (now Via dei Fori Imperiali); coincidentally, the paleontologist who had studied those bones at the time was De Angelis d'Ossat (cf. Palombo, 2020). On the other hand, it could be that the remains from the Valle Marciana had initially comprised more than one mammal species and that some of the bones, including the tusk, had disintegrated, or gone missing by the time De Angelis d'Ossat examined them. Since their present whereabouts are unknown, this is the most that can be said of them to date.

As regards the context in which the bones were discovered, while the article from *Il Messaggero* said that they had been found under a layer of sand, De Angelis d'Ossat very briefly noted that they had been dug out of a lapilli layer. Hence, it would seem that they had been embedded in primary volcanic products, or in deposits formed during an eruption (lahar), rather than in paleosols or fluvial-lacustrine deposits formed after the volcano's activity (as for instance documented for the *Bos* footprints and remains found in the Upper Palaeolithic deposits of Tor Vergata, cf. Cazzella and Moscoloni, 1984; Cerilli et al., 2020). This stratigraphic context would be similar to that of the other sites in the Alban Hills where Pleistocene faunal remains have been found.

3.2. PROPERSI'S ELEPHANT

Propersi recounted that he had collected a couple of vertebrae, two femur fragments and several large tusk fragments; unfortunately, they had completely disintegrated over the years. The area where he found them is bordered today by Viale Libia/Via delle Valli, Viale Somalia and the Tangenziale Est beltway. The Fosso Sant'Agnese (which took its name from the nearby church of Saint Agnes Outside the Walls) was a small stream that flowed through the valley that lay between Villa Chigi and Sedia del Diavolo and into the Aniene River. As the area started to be built up, the stream was replaced by a sewer and covered by Viale Libia.



Fig. 12 - Location of the Monte delle Gioie (a), Sedia del Diavolo (b) and Saccopastore (c) sites, and presumed location of the site reported by Propersi (d), shown on a Touring Club Italiano map from 1925.

The lower valley of the Aniene contains numerous significant Middle Pleistocene successions with archaeological and paleontological finds. Starting in the mid-1930s, surveys, surface collections, and excavations were carried out by Blanc on the small hill known as Sedia del Diavolo and at Saccopastore, located on the left bank of the river, as well as at Monte delle Gioie, on the right one. Unfortunately, these sites have been completely destroyed due to extensive urbanization and infrastructure development (Blanc, 1938, 1948; Taschini, 1967; Gioia, 2004). At the time when Propersi collected the fossil bones, however, there were not that many buildings in the area, as shown by a Touring Club Italiano map from 1925 (Fig. 12) and several photographs taken by Blanc himself in 1938 (Fig. 13) (cf. Blanc 1955, Tav. III/1).

Although the suburban farmlands that once surrounded Rome have been rendered almost completely unrecognizable by urban expansion, recent studies make it possible to reconstruct the geological and paleontological context of Propersi's fossils. In his letter, he specified that he had found the bones in the vicinity and to the west of the far end of Viale Libia, where excavation work had cut through the side of a small hill. This is the area of present-day Via Mascagni, a street that borders the north-northeast side of the hill of Villa Chigi, running parallel to the curve of the railroad and of the Circonvallazione Salaria section of the beltway.

Starting in 1995 (Marra and Rosa, 1995), the stratigraphy of the area has been described in detail multiple times; it is considered a succession of reference set between the Aurelia Formation and the Vitinia Formation (Palombo et al., 2004; Marra et al., 2014, 2017, 2018). Along Via Mascagni, a cross-section intersects the

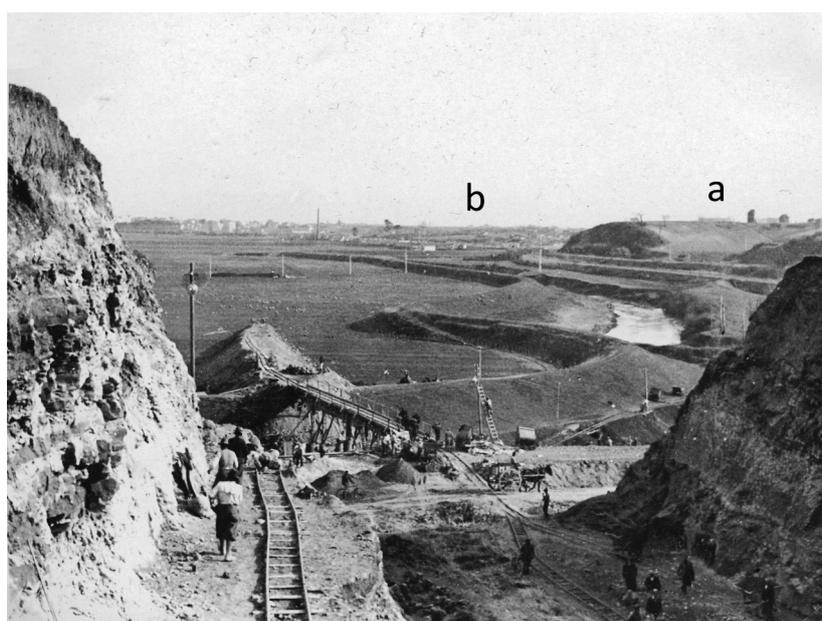


Fig. 13 - The Aniene River valley seen from the top of Monte delle Gioie in the direction of Sedia del Diavolo (a) and Saccopastore (b), in a photo taken by A.C. Blanc in 1938 (Blanc-Aguet Archive).

edge of the hill that separates the street from the beltway, revealing a sequence that is slightly over 30 meters thick. The succession begins at an elevation of approximately 10 meters a.s.l. with a bed of fluvial gravel, overlaid by a 15-m-thick deposit of "lionato" tuff (one of the tuffs produced by the Latium volcano in the Alban Hills area) dated to 356 ± 4 ka ago, which in its turn is covered by a 10-meter-thick layer of fluvial-lacustrine silts and sands pertaining to the Aurelia Formation (MIS 9). Above that, formed the succession of Via Mascagni, consisting of gravel (with faunal remains), sandy silts, tuffites, and a paleosol. The fossiliferous layer pertains to the MIS sub-stage 8.5, about 295-285 ka ago, because the succession is sealed by a layer of yellow Sacrofano tuff ejected by the Sabatini volcanic complex about 285 ± 2 ka ago (Palombo et al., 2004; Marra et al., 2017). Considering the other finds that have come to light nearby, it is extremely likely that the paleontological level found by Propersi is precisely this fossiliferous layer and is therefore correlated to other important deposits located in the vicinity, such as those at Monte delle Gioie and Ponte Mammolo, and to the upper gravel deposit at Sedia del Diavolo (Marra et al., 2018).

Because the fossil bones retrieved by Propersi had disintegrated by the time he wrote to Blanc, there is no way to determine exactly what species they belonged to. In his less-than-brief description he mentions tusk fragments, which would indicate the presence of *Palaeoloxodon antiquus*. The faunal complex at Fosso Sant'Agnese may have been similar to those found at the other sites in the area, such as Monte delle Gioie and Sedia del Diavolo (Caloi et al., 1980, 1998; Palombo et al., 2004; Petronio et al., 2011), and therefore have pertained to the Vitinia FU (Marra et al., 2018). Hence, it is possible that - like the nearby coeval site of Sedia del Diavolo - the fossiliferous levels along Via Mascagni contain human-related materials or hominin remains.

4. CONCLUSION

The two cases described in this paper are perfect examples of how archival research can be not only helpful but even indispensable for other types of investigation.

Regardless of what animal the Valle Marciana fossil bones belonged to, the very fact that they had been discovered has all but faded from memory. If a fellow researcher had not chanced upon those newspaper clippings and told me about them, that event would probably have remained for me just a bit of information mentioned in reference to Passamonti's book on Grottaferrata or to family stories handed down in the area.

As to the remains found at the Fosso Sant'Agnese, we do not know if Blanc took up Propersi's offer to show him the precise location. (The planned railway had not been built after all, and the site had remained practically unchanged since the works had been abandoned.)

While the presence of paleontological remains in that area is not surprising, if Blanc had not filed away

Propersi's letter, what is most likely the only first-hand record of their unreported finding a century ago would have been lost.

Clearly, quiet bookworms sometimes share their archival habitat with other species and need to keep on the lookout for the occasional trumpeting elephant!

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