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Archaeometric and gemmological analyses of a Roman imperial gold-and-sapphire jewel from Colonna (Rome, Italy)

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ABSTRACT

In 2011, an extraordinary piece of gold jewelry set with precious stones was found in a woman's tomb discovered not far from Rome and dating from the third century AD. Our examination and archaeometric analyses enabled us to identify the technique used to make the jewel and to characterize the nature and provenance of the gemstones. The analyses showed that all the stones were natural sapphires. Their inclusions and gemmological features indicate that they came from southern and south-eastern Asia, thus gaining insights about trade routes and the luxury-goods market during the Roman imperial period.

1. Introduction

1.1. The archaeological context

In 2011, a preemptive archaeological investigation was carried out at Pian Quintino, an area on the outskirts of the town of Colonna, on the north-eastern slopes of the Alban Hills, a few kilometres south-east of Rome (Fig. 1).

A good number of pre-protolithic and archaic evidences were discovered here in recent times. The archaeological investigations, in fact, led to the discovery of Middle Paleolithic and Bronze Age sites, as well as settlements and more than 170 burials dating back to the Iron Age [1–6].

Several settlement sites dating from the Roman republican and imperial periods have also been discovered; they were probably related first to *Labicum quintanensis*, and later, in the mid-imperial period, to *Ad quintanas* [7–9]. Both these towns are mentioned in ancient sources, e.g. Livy (*Ab Urbe Condita* 4, 47) and Strabo (*Geographica* 5, 237). They also appear on ancient maps: according to the *Tabula Peutingeriana*, for in-

stance, *Ad Quintanas* was located at the 15th mile of the Via Labicana [10].

The investigation carried out along a road named Via Valle della Chiesa led to the discovery of part of a necropolis (eleven graves) dating from the Roman imperial period [11]. The tombs were located alongside an ancient stone-paved road, probably the Via Labicana [9,12]. This funerary area included a monumental tomb which has been dated to the mid-third century AD [11]. It consists of a rather complex underground structure which may have been topped above ground by an altar. Without dwelling on the details, it consisted of a rectangular pit about 4.5 m deep (Fig. 2), at the bottom of which was a small chamber with brick walls faced with marble slabs and sealed with terracotta tiles. The chamber housed a white marble sarcophagus (Fig. 2B, C), probably Proconnesian [11]. The space above the chamber had been filled with stones mixed with earth and mortar to form the masonry core of the mausoleum.

The lid of the sarcophagus had cracked some time after the burial, allowing water to seep in and deposit layers of fine clay. A

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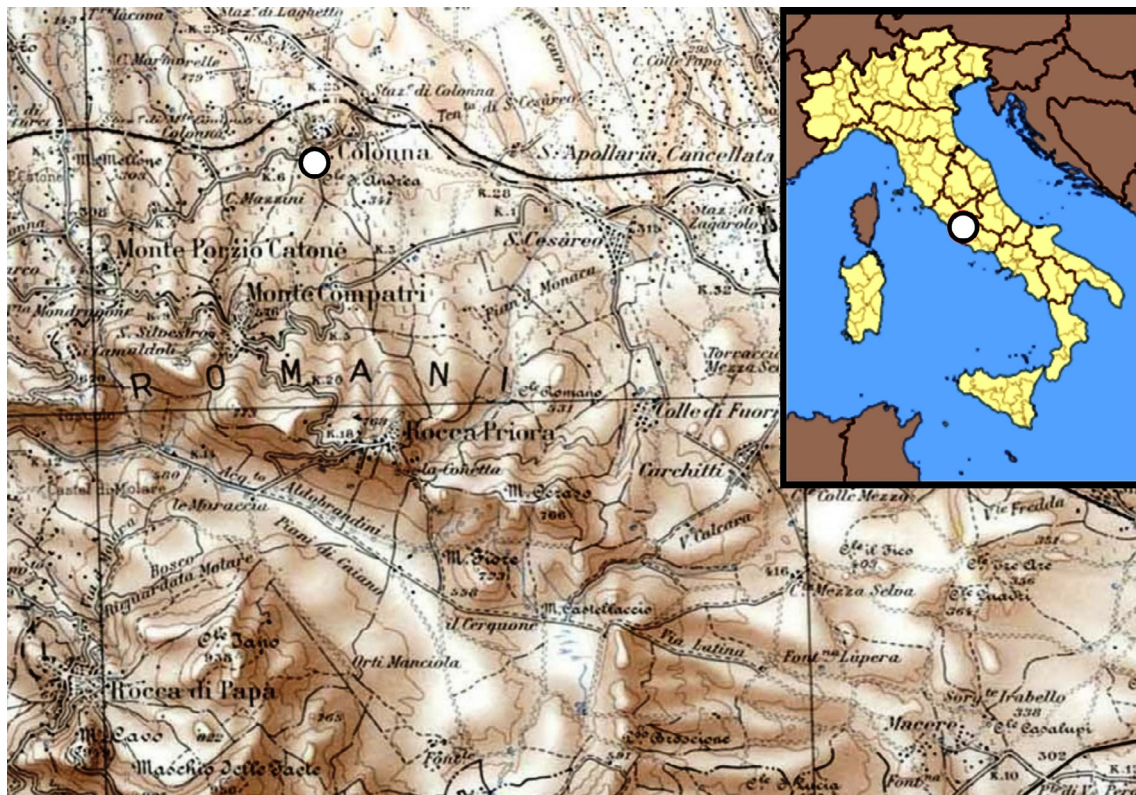


Fig. 1. Map showing the Alban Hills and the location where the jewel was found.

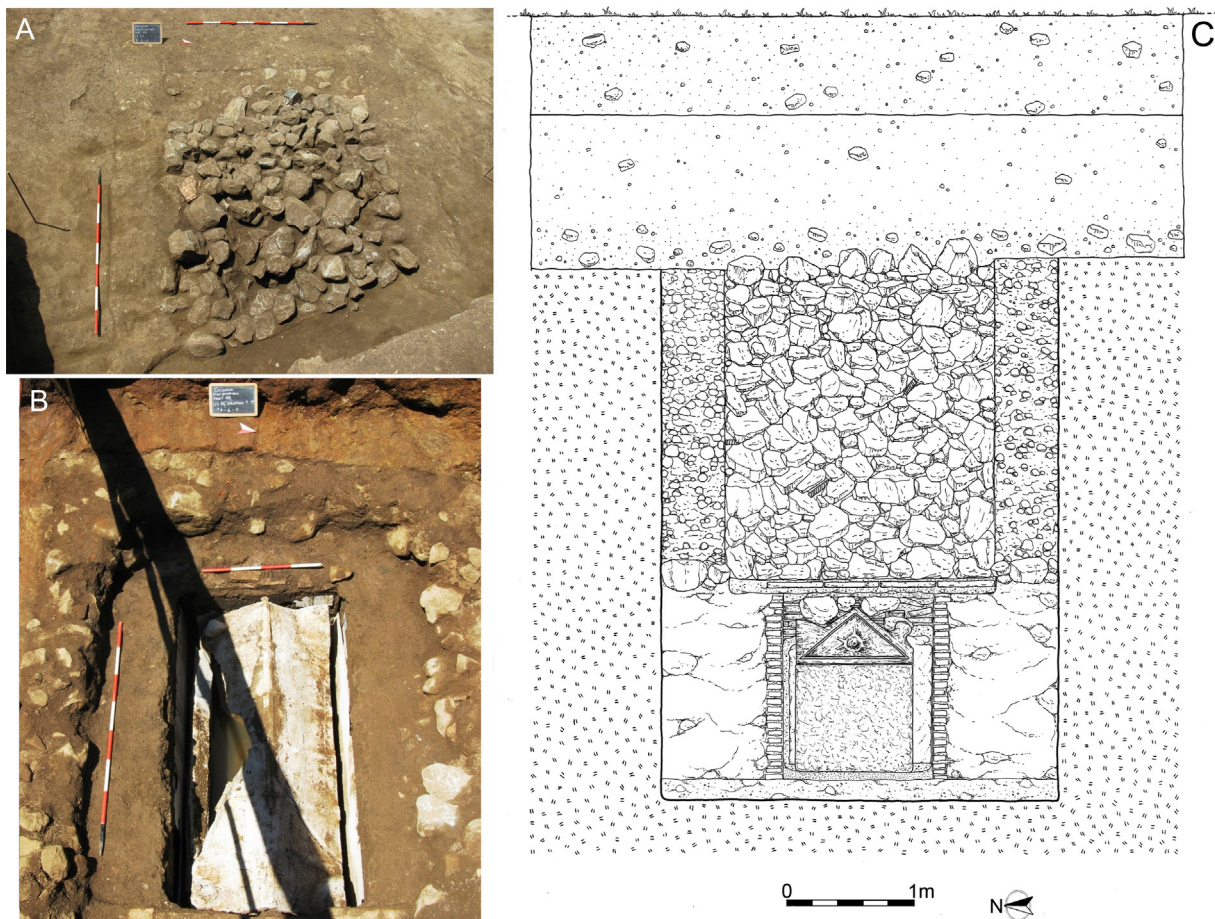


Fig. 2. The monumental tomb discovered in Colonna. A: Top of the masonry core, viewed from above. B: The funerary chamber and the sarcophagus inside it. C: North-south cross-section drawing of the tomb.

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