



Bioarchaeological approach to the study of the medieval population of Santa Severa (Rome, 7th–15th centuries)



Micaela Gnes^{a,1}, Marica Baldoni^{a,b,1}, Lorenza Marchetti^a, Francesco Basoli^c, Donatella Leonardi^d, Antonella Canini^d, Silvia Licoccia^e, Flavio Enei^f, Olga Rickards^g, Cristina Martínez-Labarga^{a,g,*}

^a Laboratorio di Biologia dello Scheletro e Antropologia Forense, Dipartimento di Biologia, Università degli Studi di Roma “Tor Vergata”, Via della Ricerca Scientifica n. 1, 00173 Roma, Italy

^b Laboratorio di Medicina Legale, Dipartimento di Biomedicina e Prevenzione, Università degli Studi di Roma “Tor Vergata”, Via Montpellier n. 1, 00173 Roma, Italy

^c Tissue Engineering Unit, Università Campus Bio-Medico di Roma, Via Álvaro del Portillo 21, 00128 Roma, Italy

^d Dipartimento di Biologia, Università degli Studi di Roma “Tor Vergata”, Via della Ricerca Scientifica 1, 00173 Roma, Italy

^e Dipartimento di Scienze e Tecnologie Chimiche, Università degli Studi di Roma “Tor Vergata”, Via della Ricerca Scientifica 1, 00173 Roma, Italy

^f Museo Civico di Santa Marinella “Museo del Mare e della Navigazione Antica” Castello di Santa Severa, Roma, Italy

^g Centro di Antropologia Molecolare per lo Studio del DNA antico, Dipartimento di Biologia, Università degli Studi di Roma “Tor Vergata”, Via della Ricerca Scientifica n. 1, 00173 Roma, Italy

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ABSTRACT

The present research utilizes archaeology and physical anthropology to reconstruct the demography, occupational stress markers and health conditions of individuals that lived during the medieval era in Santa Severa (Rome, Italy). The cemetery recovered during the restoration of the Castle of Santa Severa dates back to 1232 ± 40 BP (680–890 cal.)– 1004 ± 30 BP (970–1060 cal.), as regards *Casa del Nostromo*, and to 883 ± 40 BP (1040–1220 cal.)– 531 ± 35 BP (1380–1450 cal.) for *Piazza della Rocca*, according to ^{14}C analyses on four bone samples corresponding to the most superior and inferior stratigraphic levels.

This range of dates ascribes the burials to the transition period between the Early and Late medieval era.

The goal of the present research was to analyze one of the largest Italian medieval communities using a morphological approach to reconstruct its osteobiography.

The complex comprised a total of 455 individuals: 118 juveniles and 256 adults (M:F = 1.4). All age classes were represented, meaning that, even if the area were not completely excavated, the analyzed series could be considered representative of the population from which it comes.

The sample exhibited a high degree of biomechanical stress related to daily tasks, mainly affecting the upper limbs and involving both the shoulder and the pelvic girdle. Several pathologies were detected; the most common appeared to be degenerative and infectious diseases, though some cases of congenital disorders could also be observed. Regarding the dental pathology, low frequencies of caries, abscesses and *antemortem* tooth loss were detected in spite of a high prevalence of dental calculus. These results seem to suggest that subsistence was based on both agriculture and farming.

1. Introduction

The present research aims to investigate the osteobiography of the medieval population of Santa Severa (Rome, Italy), a small town 50 km north of Rome (Fig. 1). The Castle of Santa Severa was built during the medieval era on the site of the ancient settlement of *Pyrgi*, a well-known

harbour that handled a Mediterranean-wide scale trade for the Etruscan city of *Caere*, currently *Cerveteri*. The archaeological excavation, directed by Dr. Flavio Enei and the Soprintendenza per i Beni Archeologici dell'Etruria Meridionale (“Archaeological Authority of Southern Etruria”), took place between May 2003 and December 2009, on occasion of the restoration and reclamation of works conducted by

* Corresponding author at: Centro di Antropologia Molecolare per lo Studio del DNA Antico, Dipartimento di Biologia, Università degli Studi di Roma “Tor Vergata”, Via della Ricerca Scientifica n. 1, 00173 Roma, Italy.

E-mail addresses: gnesmicaela@gmail.com (M. Gnes), marica.baldoni@gmail.com (M. Baldoni), lorenza.marchetti@yahoo.it (L. Marchetti), f.basoli@unicampus.it (F. Basoli), leonardi@uniroma2.it (D. Leonardi), canini@uniroma2.it (A. Canini), licoccia@uniroma2.it (S. Licoccia), fenei@comune.santamarinella.rm.it (F. Enei), rickards@uniroma2.it (O. Rickards), martine@uniroma2.it (C. Martínez-Labarga).

¹ These authors equally contributed to this work.

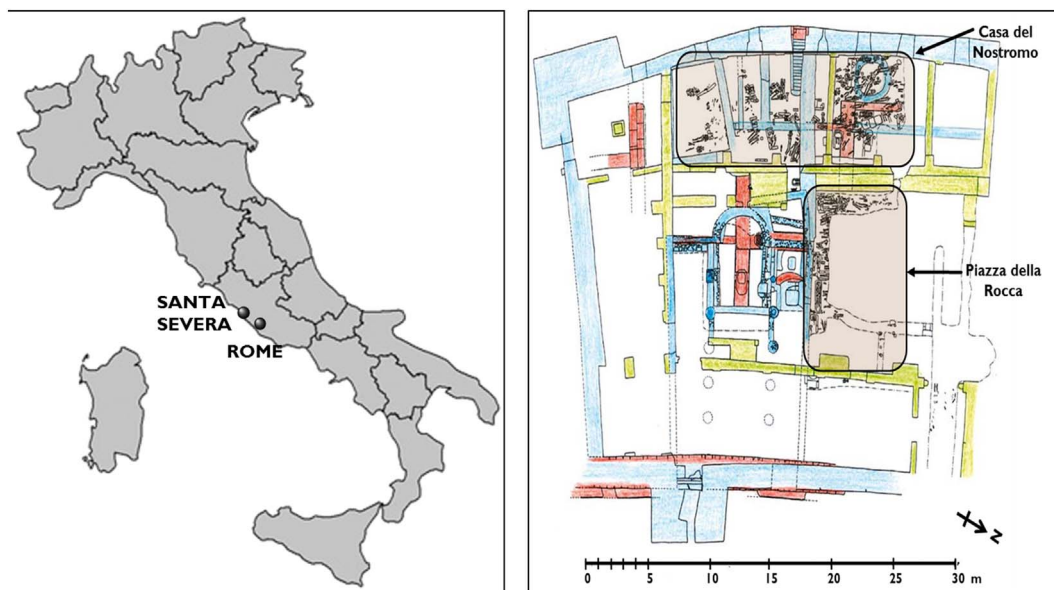


Fig. 1. On the right geographical location of Santa Severa, on the left the map of the Castle of Santa Severa.

Provincia di Roma (“Province of Rome”). It allowed researcher to shed light on some areas of the ancient human settlement. Archaeological artifacts bear witness to human communities in the area since the Neolithic, with traces of occupation in the Bronze Age (Enei, 2013). The settlement was first located by the sea, near an Etruscan plantation, then near a Roman one. That area, in fact, has some geographical and environmental traits (i.e. the presence of a natural landing place protected from winds and currents, as well as a considerable availability of freshwater flowed from the ditches still present in the area) that has made it suitable, since prehistoric times, for a landfall as well as for human communities. The medieval settlement lies on the remains of Roman infrastructures, with the subsequent change of name of the village itself from Etruscan *Pyrgi* to Santa Severa in honor of the saint's martyrdom around 297–298 BCE (her brothers, Calendino and Marco, were also martyred). As reported in “*Annali Ecclesiastici*” by Cesare Baronio, published between 1588 and 1607, *Pyrgi* was the site of her flagellation and burial; early Christians began venerating her and their worship gave rise to a Church *ad corpus* (Enei, 2013). During the excavation campaign, in fact, the early Christian Church was recovered. It represents, along with its baptistery, one of the first Christian testimonies on the coast north of Rome and Etruria.

On the ruins of the Roman buildings, a large cemetery in use during the transition between the Early and Late medieval era was discovered. To confirm and sustain the assumed chronological window, two ^{14}C calibrating dating devices from the sample recovered in the *Casa del Nostromo* cemetery area and two from *Piazza della Rocca*, corresponding for both cemetery areas to the most superior and inferior stratigraphic levels, were performed at the Center for Diagnostic and Dating (CEDAD) of the University of Salento. The samples were dated 1232 ± 40 BP (680–890 cal.) (LTL4138A)-1004 ± 30 BP (970–1060 cal.) (LTL4140A) and 883 ± 40 BP (1040–1220 cal.) (LTL4137A)-531 ± 35 BP (1380–1450 cal.) (LTL4136A) respectively for *Casa del Nostromo* and *Piazza della Rocca* (Enei, 2013), confirming that the cemetery area was in use from the 7th to 15th centuries CE. Even if the excavation brought to light two close cemetery areas, there has been no archaeological evidence indicating a clear distinction between the two. Accordingly, the individuals were considered collectively as a sample.

The burials overlap each other; most simply involved earthen graves but, in some cases, sarcophagi built with tuff stones, culled from the demolition of existing Etruscan and Roman buildings, were found. The bodies were buried with their heads facing east, sometimes protected by small tuff or brick stones (Enei, 2013). Evidence of grave goods was

found only in some non-adult burials; nothing was found for the adults. Many burial sites were reused and some were disturbed by different construction and restoration works over the centuries. The only exception is the individual buried in a sarcophagus “US 321”, whose atypical burial has been the subject of much speculation. The burial itself appears different from the others, represented by simple earthen graves that may be delimited by some re-used materials. Moreover, in the sarcophagus it is possible to see a cross and a cushion made of stone (Fig. 2). Despite these features, the individual was found face-downward with extended lower extremities and crossed feet. Although prone burials were considered a means of ensuring that undesirable members of society didn't disturb the living (Hirst, 1985), the present case contrasts with the features of the burial itself. It is plausible that the anomalous position of the body is a consequence of a theft, and that this individual was initially buried in a standing position (Enei, 2013).

The aim of the present research was to reconstruct the paleodemographic dynamics to provide information about the mortality patterns and life conditions of this medieval population but also to investigate musculoskeletal stress markers and perform paleopathological and odontological evaluations.

2. Materials and methods

The analyzed series consists of 455 individuals, both adults and non-adults, recovered between May 2003 and December 2009 in two cemetery areas within the property of the Castle of Santa Severa (Rome, Italy). Some field reports, as well as photos, were provided by the archaeologists during excavation.

First of all, the skeletal remains were cleaned and—when possible—fragments were conjoined. When fragile bones such as the cranium, *os coxae*, and ribs were absent or fragmented, the preservation index was calculated following the method proposed by Walker et al. (1988). For each individual some bone fragments were preserved for biomolecular analyses.

Age at death was estimated on the whole sample available. The estimation for adult individuals (from ca. 18 years old) followed methods based on morphological changes in the auricular surface of the ileum (Lovejoy et al., 1985), in pubic symphysis (Todd, 1920a, 1920b; Brooks and Suchey, 1990), and in the sternal end of the fourth ribs (İşcan et al., 1984, 1985). Moreover dental wear (Brothwell, 1981; Lovejoy, 1985) and the obliteration of the cranial sutures (Meindl and Lovejoy, 1985) were observed.

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