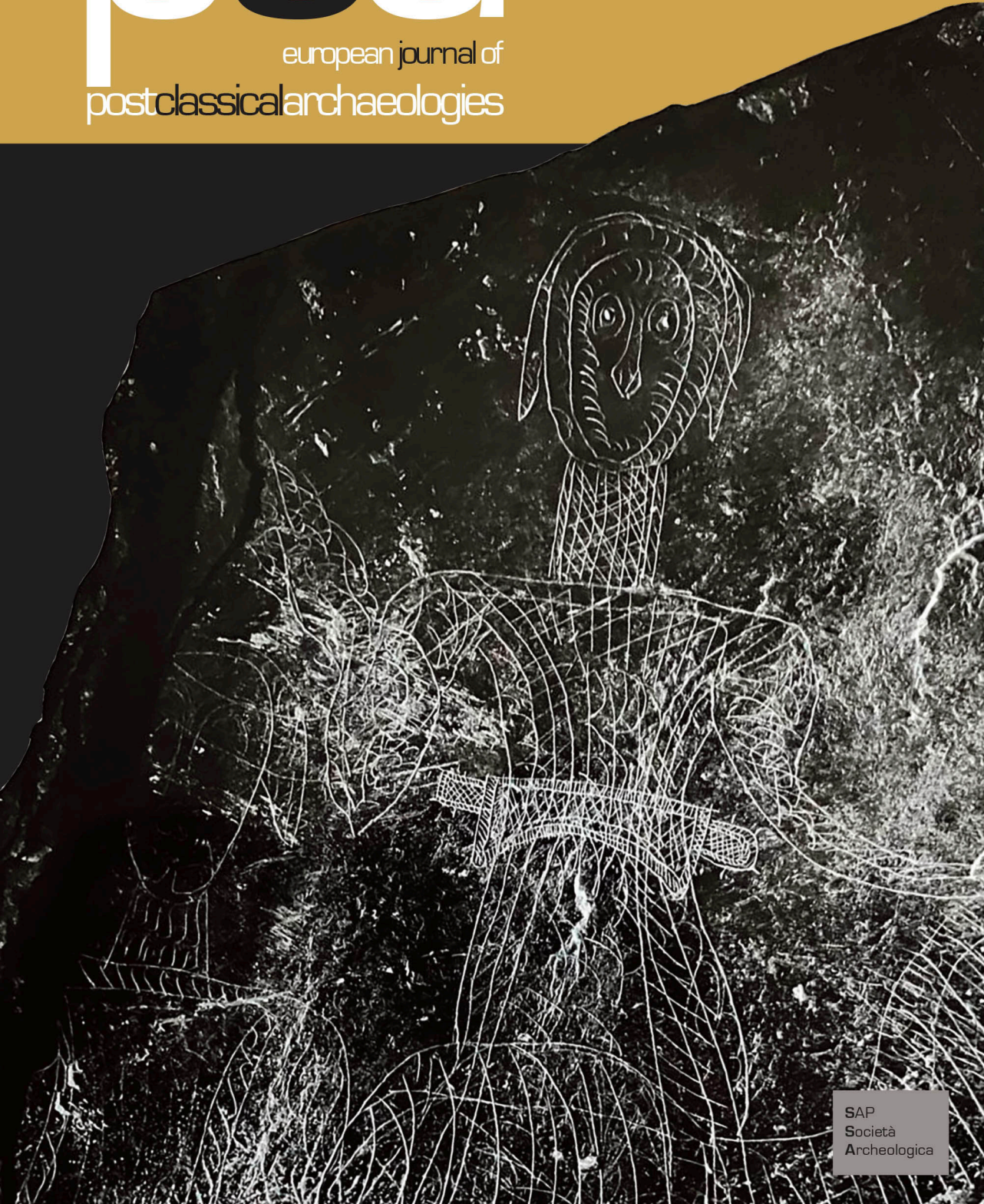


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The servile body: funerary archaeology and social stratification in Roman Sicily. The Early Imperial necropolis at Cuticchi (Assoro, Enna)

1. The project

The Early Imperial settlement of Cuticchi, in the territory of Assoro (Enna), initially identified during a Preliminary Archaeological Evaluation in 2008 (Nicoletti 2012), underwent complete excavation between 2020 and 2024 thanks to the RFI project of doubling the Palermo-Catania-Messina railway line, an integral part of Corridor 5 “Scandinavian-Mediterranean (Helsinki-La Valletta)” of the Trans-European Transport Network (TEN-T)¹. The investigation phases related to the VPIA included surveys, preliminary stratigraphic test pits along the railway line, and, following the identification of the settlement, an extensive excavation leading to the uncovering of a residential area, the necropolis which we will discuss in more detail below, and a sacred area.

The fortunate opportunity to investigate the complete life context of this small rural community settled in central Sicily between the 1st and 3rd centuries AD², enabled us to correlate data from the residential area with those from the necropolis,

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¹ The project is by RFI (Italian Railway Network, FS Group) with project management by Italferr. Over the years, the archaeological investigations have been conducted under the scientific direction of the Superintendency of Cultural Heritage of Enna, by the Superintendents Arch. Nicola Neri, followed by Arch. Angelo Di Franco; by the Head of the Archaeological Unit Arch. Carla Mancuso; and by the archaeologist officers Angela Merendino, Michela Ursino and Francesca Valbruzzi. For a more detailed discussion of the investigation phases related to the first phase of VPIA, see VALBRUZZI *et al.* 2025.

² For a more detailed discussion of the investigation phases related to VPIA, see VALBRUZZI *et al.* 2025; MERENDINO *et al.* 2025.

and to enhance our understanding further through the discovery of an area dedicated to animal sacrifices and votive offerings. This provided a tangible pathway from the quotidian sphere to the sacred, culminating in the transition to the afterlife.

2. The residential area

The settlement is situated within the Dittaino River valley³, a right-bank tributary of the Simeto River traversing the Catania plain. It extends near the former Agira/Raddusa railway station, on a low-lying hill south of the river, where the 18th-century Masseria Cuticchi remains still stand, likely incorporating sections of the ancient site through the reuse of its brick and stone components. The small village very likely bordered one of the earliest inland routes, now aligned with the SS 192 motorway, which, crossing the river's alluvial plain, facilitated communication between the eastern littoral and the mountainous interior.

The residential area occupies the eastern flank of this low-lying elevation, while the necropolis stretches along a broad swathe from south to north, encompassing the summit and the western slope. A buffer of about 70 meters separates the westernmost structures of the inhabited area from the initial row of tombs (fig. 1).

The excavated residential area consists of several building complexes, notably a central atrium *domus* with an L-shaped ambulatory and surrounding rooms⁴. This *domus*, displaying the mixed functionality typical of rural structures, features a large warehouse/stable along its south side⁵. West and south of this *pars dominica*, further complexes, characterized by rougher masonry and identifiable as servant quarters or *pars fructuaria*, suggest residential and/or productive functions. Artifacts confirm the mixed nature of these spaces⁶: fine Italic, Gallic, and African *terra sigillata*, thin-walled pottery, and high-quality glass tableware, alongside signed artistic and artisanal items, contrast with kitchen and storage ceramics and amphorae. Fragments of fine marble are found in association with ceramic, lava stone, pumice, bronze, lead, and iron tools related to agriculture, livestock, and wool processing. Consequently, aligning with

³ Geographical coordinates: 4°6'32,483"E 37°22'16,547"N.

⁴ A more detailed description of the structures discovered during the first phase of investigations along the route of the track to be built (a residential complex consisting of 11 rooms, named Complex C) has been presented by Eleonora Draia and Ghiselda Pennisi, the archaeologists responsible for the excavation, in MERENDINO *et al.* 2025, pp. 131-143. A general interpretation of the inhabited spaces is given in ARENA *et al.* forthcoming.

⁵ I thank Dr Marco Manenti, the excavation supervisor of this area, for the information provided.

⁶ A preliminary study of the materials found during the first phase of the investigations was conducted by Grazia Palazzolo, who gives an account of it in MERENDINO *et al.* 2025, pp. 148-152 and in ARENA *et al.*, in press.



Fig. 1. Site plan (drawings by Giancarlo Filantropi and Rocco Nella).

broader findings, the settlement, with its evident agricultural and pastoral nature, housed the *domus* of a *dominus* or, more likely, an administrator (a *villicus* or *conductor*). This individual, though a slave, having been appointed estate manager, amassed sufficient resources to procure luxury goods, distinguishing himself and his family from the rest of the rural populace.

3. The burial area: topography

The necropolis⁷, mirroring the residential area, offers a remarkably congruent portrayal of a small, rural community, a discrete context dominated by a few prominent individuals. Having been almost fully explored – with 168 burials investigated to date – it enables a comprehensive reconstruction of the social structure, elucidating aspects of ritual practices, living conditions, occupational activities, and role differentiation, including gender.

⁷ The necropolis also had its preliminary publication, limited to the first 38 tombs discovered along the railway track, edited by the author in MERENDINO *et al.* 2025, pp. 143-147. A wider description has been given in ARENA *et al.*, in press.

The comprehensive study of this context confirms that, as in other instances, the necropolis mirrored the settlement, existing in a state of both separation and proximity, embodying the other face of the same reality. This reflected image of the inhabited area replicated its topographical arrangement and social hierarchies.

The ample space available to the inhabitants for the city of the dead facilitated a dispersed burial distribution, seemingly random, yet revealing, as we shall see, an organized arrangement dictated by social factors and possibly familial affiliations. Except for tombs 4 (N/S) and 114 (W/E), a consistent east-west orientation, with crania positioned eastwards, was observed. The presence of a potential funerary monument, perhaps an altar, and a burial enclosure implies pre- and post-interment ceremonies and pathways, of which no discernible traces remain. Recent intensive agricultural use of the topsoil has undoubtedly impaired the preservation of occupation layers and, consequently, ritualistic evidence. However, the possibility that, given the settlement's rural character, markers consisted of ephemeral materials should also be considered.

4. The burial rites

Among the social indicators identified and analysed within this necropolis, we believe we should give priority to the burial practices adopted.

The limited evidence of cremation rites in this necropolis includes the direct example of tomb 14, a *bustum* (fig. 2a), and three indirect instances: tomb 16, containing a marble cinerary urn (fig. 2b,c and fig. 6); tomb 47, with remains in a vase (fig. 3b); and tomb 43, where cremated remains were found within a *cap-puccina*, overlying the legs of an inhumation (fig. 3a). Additionally, traces within the southern funerary enclosure suggest the presence of an *ustrinum* (fig. 4). These few instances of cremation contrast starkly with the prevalence of primary inhumation⁸ (164 out of 168 burials). This marked disparity between burial practices prompts several reflections. Latin authors (Cicero, *De Legibus*, 2, 56. Plinius, *Nat. Hist.*, 7, 187) indicate that inhumation was initially the Roman burial custom, later superseded by cremation, termed *mos Romanus* in contrast to burial according to Greek custom. While both rites coexisted and were considered equivalent by the 5th century AD, cremation dominated during the Republican period, with inhumation re-emerging gradually in the Hadrianic era, gaining prominence by the 3rd century.

⁸ Exceptions to this practice are represented by tomb 22, in which, along with a primary deposition, a secondary one with skeletal reduction was found; by tomb 29, which housed a primary deposition and the skull of a second individual; and by tomb 66, in which 4 depositions were superimposed at different times.



Fig. 2. a) Tomb 14, *bustum*; b) tomb 16, and c) marble cinerary urn.



Fig. 3. Tomb. 43, *cappuccina* containing an inhumation and cremated remains.



Fig. 4. Funerary enclosure (left) with an *ustrinum* (right).

Cuticchi, in this regard, appears to predate the general trend. However, if we accept Nock's hypothesis (Nock 1932, pp. 321-359), which attributes the rise of inhumation to a Hellenophilic fashion adopted by aristocratic circles for emulation or acculturation (see also Morris 1992, pp. 53, 59-61, 67-68), our local context may require a reversed perspective, considering the underlying cultural substrate and local traditions. Specifically, we should examine the *suburbanitas* of Sicily and the limited extent of Roman assimilation, particularly in the inland regions, and whether this process only affected individuals with specific roles and elevated social status. Consequently, it can be posited that in Sicily, akin to other Eastern provinces with strong Hellenistic influences, the *Graeco more* inhumation practice symbolized ideological resistance to Roman cultural impositions, accepted solely by those holding particular roles and positions. This form of autochthonous conservatism was likely more entrenched in rural areas than in urban centres, demonstrating the absence of religious constraints despite Augustus's homogenization efforts.

Nevertheless, certain individuals exhibited a marked inclination towards *mos Romanus*, potentially at the expense of, or in opposition to, the prevailing population: this choice, by a minority, to diverge from a deeply rooted and widely accepted funerary tradition, in this instance clearly reflects a conscious will to emerge from the rest of the inhabitants and align with the dominant social *strata*. Consequently, while the interpretation of the coexistence of these two practices in other funerary contexts has been contentious, with debates surrounding religious, ideological, or social motivations, the Cuticchi case demonstrates un-



Fig. 5. Gold ring from the *bustum* (tomb 14).



Fig. 6. Marble cinerary urn from tomb 16.

equivocally that the preference for cremation by a select few, compared to the broader community, carried a distinct social connotation, serving as a status symbol for those who had ascended the social hierarchy.

The rite, in fact, attested as we said in only 4 instances, is notably associated with displays of significant affluence in at least two cases. This wealth is exemplified by the *bustum* – a practice rare in Sicily and indicative of a highly privileged social status – containing a burial assemblage of five necklaces and two rings crafted from gold and precious stones and (fig. 5); and by a precious marble cinerary urn bearing the inscription ‘CHIO MAGMAG / PEC VIX AN XXXV / HESYCHUS DISP / FECIT’ (fig. 6). This inscription provides crucial information, including two names and, more importantly, two roles: Chio(s) or Chius, the urn’s recipient and *magnus magister pecoris*, and *Hesychus*, the donating *dispensator*. These names, non-Roman and of Greek origin, strongly suggest slave status, as evidenced by the absence of Latin *tria nomina* and the retention of their allogeneic form. Nevertheless, these individuals held significant roles, likely serving as *conductores* acting on behalf of a possibly non-resident *dominus* or one residing in a nearby urban center. The *magnus magister pecoris*, far from being a mere shepherd, was a figure of considerable importance, possessing both flock management and veterinary expertise, his role comparable to that of a *villicus* (Varro, *Rerum Rusticarum*, 1, 2, 14). The *dispensator*, as historical sources indicate⁹, was a literate servant entrusted with financial administration, enabling

⁹ GAIUS, *Instit.* I, 122: “unde servi quibus permittitur administratio pecuniae, dispensatores appellati sunt”.



Fig. 7. Tomb 122. Funerary stele with inscription.

him to accumulate substantial *peculia* in the form of money, servants, or property. According to Petronius (*Satyricon*, 30,9), the *dispensator* represented the pinnacle of slave achievement within a household or enterprise. Many *dispensatores* ultimately obtained manumission.

Another individual, Helpis, an 18-year-old girl with a Greek name, was honoured with a unique funerary monument: a base supporting a stone stele bearing an inscribed dedication (ΗΕΛΠΙ' / ΧΡΗCΤΑ ΧΑΙΠΕ / ΕΤΩΝ ΚΗ) (fig. 7). This exceptional treatment mirrors that afforded to the individual interred in the *bustum*.

While the two cremation burials, one direct and one indirect, clearly denote elite selection seemingly limited to two or three individuals, even among the 164 inhumations exceptions to the prevailing simple practice of earthen pits covered with tiles can be identified.

Specifically, we have documented pits distinguished by a distinct covering system: a roughly hewn, binderless, quadrangular stone base. This covering/ marker concealed various tomb types, including simple earthen pits (tombs 22, 44, 59, 71, 74, 75, 122, 160), stone-lined pits with terracotta slab coverings (tombs 13, 42, 53, 59), simple *cappuccina* tombs (tombs 43, 45, 72), and more complex variants. Examples include tomb 15, enhanced with lateral shoulders formed by terracotta slabs, and tomb 73 (fig. 8), surmounted by multiple layers of flat tiles and terracotta slabs, culminating in a terracotta *tubulus* serving as a symbolic libation conduit.



Fig. 8. Tomb 73.

The aforementioned burials are distinguished not only by their typology and covering/marker types but also by their significant topographical placement, aligned along a hypothetical north-south axis, potentially representing a demarcation line formed by a road that also functioned as a buffer between the residential area and the necropolis. These 'monumental' tombs, therefore, are situated closest to the living area and are most visible to those traversing the road.

Social factors likely influenced the placement of certain tombs in a semicircular arrangement around the stele of Helpis, a scenographic configuration (fig. 9) suggesting a form of reverence and aggrandizement for this young woman, about whom we know only her age and a final salutation, '*XRESTA XAIRE*' (re-joyce in good things).

The remaining burials extend behind and around this initial line facing the residential area, becoming more dispersed and less concentrated with increasing distance. These burials, representing the majority, consist of single-body inhumations in dorsal decubitus, typically covered with tiles positioned transversely across the pit (fig. 10). This burial type, exhibiting minor variations in tile arrangement, signifies the simplest form, intended for the non-privileged populace: the numerically dominant group, encompassing what can be termed the *plebs rustica*, including both servile and freed individuals.

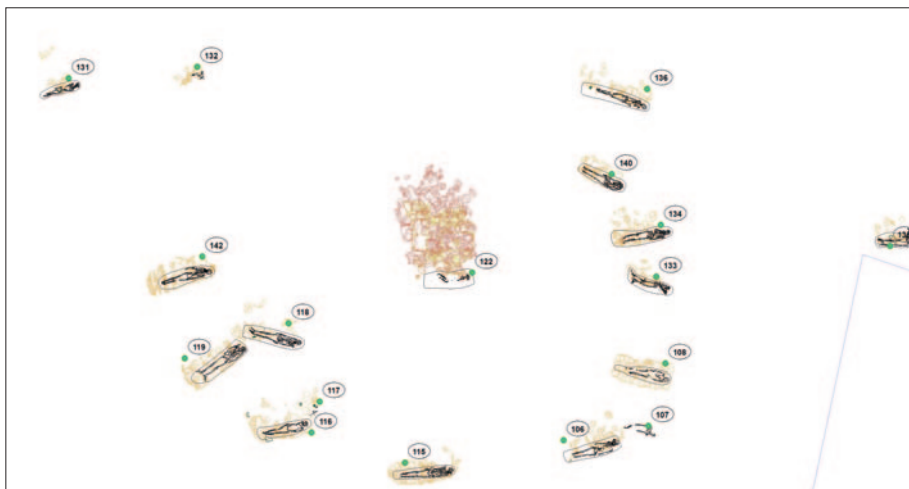


Fig. 9. Semicircular arrangement of tombs around the stele dedicated to Helpis (tomb 122) (drawing by Arch. Rocco Nella).



Fig. 10. Simple burials covered with tiles.

5. The burial goods

With the clear exception of the exceptionally valuable *bustum* assemblage, the division between burials with grave goods (42) and those without (124) does not, in our assessment, constitute a primary indicator of social stratification. Rather than economic factors, as will be discussed, the inclusion of grave goods appears to stem from ideological and cultural considerations. This explains the discrepancy between the monumentality of certain tombs, which lack grave goods, and the presence of rich grave goods in simple earthen pit burials with tile coverings.

The social and cultural backgrounds of the deceased may also have played a significant role. The very absence of grave goods in more elaborate tombs, which would have entailed greater family expenditure, suggests a deliberate ideological or cultural choice, potentially influenced by Augustan sumptuary legislation and a return to *mos maiorum*, rather than economic constraints. This segment of the population appears to have been influenced and shaped by Roman culture, seeking to differentiate itself from the wider community.

However, focusing our analysis on burials with grave goods allows for a further distinction between privileged and non-privileged individuals, based on the interpretation of object use in their lives – veritable social indicators *stricto sensu*.

The majority of burials contain between one and four objects. Lamps, primarily from the *Proklos Agyrion* workshop, and monochrome single-handled jugs are the most common finds in both male and female interments. Objects associated with personal grooming and female adornment – hairpins, glass *unguentaria*, and pumice stones – clearly differentiate the genders. Male tombs predominantly feature tableware related to convivial practices, such as cups, amphorae, and jugs. Two male burials yielded studs, rings, and bronze chains, potentially indicative of equestrian activities. Notably, adult males in tombs 22 and 77 were interred with bronze rings, possibly symbolizing power.

While the economic value of the grave goods varies, certain assemblages merit further semantic analysis due to their inclusion of objects with high symbolic value and social significance.

We focus, in particular, on the grave goods from four female burials, detailed below.

Tomb 56¹⁰ contained the remains of a young woman, aged 20 to 30 years. At her feet, within a wooden container (traces of which were found), were placed three glass *unguentaria*, four eyed bone needles, and a clasp with a bone pin.

¹⁰ We thank Dr Eleonora Draïà, the excavation supervisor of this burial, for the information she provided.



Fig. 11. Transparent glass pin with twisted ends and crochet hook from tomb 121.

Tomb 121 contained the remains of an adult woman, aged 30 to 40 years, accompanied by a hairpin, a small plate, a monochrome terracotta jug, a polished pumice stone, and four bone pins. Notably, the tomb also included a 20 cm long, transparent glass pin with twisted ends and a square-sectioned central portion (fig. 11). One end exhibits a double-hooked curve. Given the fragility and precious nature of glass, we interpret this object as a symbolic reproduction of a common, practical tool. The square central section likely served as an ergonomic handle, while the upper end resembles a crochet hook for manipulating thread in wool textile production. Its size also corresponds to contemporary crochet needle dimensions. If this interpretation of the glass pin is correct, the presence of the polished pumice stone at the base may be related to wool processing. While pumice stone is known for its use in personal hygiene as an exfoliant and for depilation, its presence has also been documented in textile processing areas. Ancient sources mention the use of abrasive materials to smooth wool surfaces, enhancing their softness (Plinius, *Nat. Hist.*, XXIX, 10).

A similar line of reasoning can be applied to the pins found in the tomb, some of which, due to their thickness, may represent spindles.

Tomb 141 (fig. 12), containing the remains of a woman of indeterminate age, included two hairpins (one bone, one glass) near the skull, and a wooden box (traces of which remain) placed near the right foot together with a miniature blown glass amphora, a small cylindrical bone container (possibly a cosmetic box¹¹), and a set of 16 needles and pins (some bone, some glass) including eyed needles (5), elaborately decorated bone hairpins¹², and finely chiselled glass needles. The latter exhibit spatula or lanceolate heads, for which interpretations range from cosmetic and surgical uses to writing implements.

Finally, Tomb 156 (fig. 13), containing the remains of an adolescent, included a small cylindrical bone container (possibly for cosmetics), a blown glass amphora, and a marine gastropod shell of the species *Cypraea lurida*. The use of this shell in female burials, documented from the Iron Age to Romanization, is in-

¹¹ Find comparisons with similar artefacts preserved at the J.J. Winckelmann Museum of Antiquity, inv. 18015 and 18914 S.830 at <https://museoantichitawinckelmann.it/wp-content/uploads/06-18915-s.830-scaled.jpg>.

¹² For comparisons see HALL, WARDLE 2005.



Fig. 12. Funerary assemblage from tomb 141 (photos by Grazia Palazzolo).



Fig. 13. Funerary assemblage from tomb 156 (photos by Grazia Palazzolo).

terpreted as apotropaic and propitiatory for fertility, given the resemblance of its shell opening to the female pudendum (Cherici 1999, p. 177; *ibid.* previous bibliography). The tomb also contained a set of 10 bone needles and pins.

The analysis of the grave goods from these burials allows us to formulate observations regarding gender and the social roles of women within this small community. While most women likely represented the non-privileged segment of society, with the exception of one or two high-status individuals (the owner of the necklaces and rings in the *bustum*, and the young Helpis), the presence and interpretation of certain objects of high symbolic value provide insights into the specific roles these women played within this rural economic system.

Beyond the typical *mundus muliebris* items associated with grooming, cosmetics, and hairstyle, many of the aforementioned finds are likely *instrumenta textilia*. This includes eyed needles and certain glass objects, which appear to be symbolic representations of spinning-related work.

The presence of such elaborate and precious glass objects, clearly commissioned for funerary use rather than everyday purposes, suggests that these women held a specific role in one of the *fundus*'s primary activities, namely wool spinning. This interpretation aligns with the site's characterization as a farm focused on animal husbandry and pastoralism. Furthermore, the pumice stones, rather than being solely cosmetic items, may have served as tools for wool processing. Similarly, the gastropod shells, with their smooth and durable surfaces, could have been used for scraping, cleaning, and finishing textiles¹³. It is also noteworthy that several marine shells, including murex specimens (from which purple dye for colouring fabrics was extracted), have been found in the residential, productive, and sacred areas of the site.

As J.P. Wild (1999, p. 29) has argued a significant portion of textile production in the Western Roman Empire occurred in rural areas rather than urban centres, a phenomenon he terms 'agri-business'. Indeed, as Lena Larsson Lovén also highlights, Roman agrarian sources depict rural estates as production units where, among other things, textiles or raw materials for textile manufacture were produced. These texts commonly associate women with such processes, describing them as 'specifically female activities' (Columella, *Res rustica* 12, 3, 8). The work is described as 'organized with slave girls working under the supervision of the *vilica*', or the woman at the top of the rural work hierarchy, who, as supervisor and *lanipenda*, was responsible for all the activities of the farm that took place indoors, where all the slave women had the obligation to perform many work activities (Larsson Lovén 2021, p. 291).

¹³ The presence of this type of shell in other burials containing objects that have recently been linked to weaving activity could support this interpretation. See, for example, Tomb 6 of Villa Benvenuti in Este (PD), or Tomb 269 from the Spianà Necropolis in Verona in BUSANA *et al.* 2021, table IV, 1 and pp. 270-271, fig. 5, where, however, no hypotheses are advanced regarding a possible practical use of the shells.

The presence of these grave goods within the 'simple' burials, in contrast to the more elaborate and 'monumental' ones, and the presence of objects likely related to the deceased's occupation, suggests that these women held a distinct social role and were recognized as prominent figures within the servile population. These *instrumenta textilia* represent not only a primary female task in the domestic sphere but also denote the social importance of the *mulier lanifica*, that virtuous woman worthy of her social role, celebrated throughout Roman society, particularly following the renewed emphasis on traditional values promoted by Augustus and the Flavians¹⁴. Thus, in our case, despite the probable belonging of the deceased to a socio-economic class subordinate to those buried with luxury objects or in monumental tombs, the emphasis on *virtus muliebris*, as represented by objects interpretable as status symbols, creates a distinction within the lower social strata, setting these individuals apart from the general *plebs rustica*.

Regarding the male burials, the presence of what are commonly termed *clavi caligarii* warrants particular sociological observations. Traces of these small nails indicate that the shoes to which they belonged were either worn or placed beside the deceased's feet. Some instances document both deposition methods, suggesting a symbolic value attributed to the shoes. However, it is unlikely that these were true *caligae*. These, during the 1st century BC and the following century, were used exclusively in the military context and issued as standard equipment to soldiers. For a time, they also served as a marker distinguishing the Roman population from indigenous groups resisting Romanization. If these were indeed *caligae*, we might cautiously hypothesize that the individuals interred with them were either non-indigenous or, again, individuals in some way closer to Roman culture and customs (Cuzzolin 2021-2022, p. 33).

Other shoes with nails covering the entire sole area are certainly documented among the finds. In these cases, the type may be identified as *carbatinae*, another type of footwear socially significant for us, as it was worn, from the 1st to the 3rd century AD, by those engaged in heavy labor. While the soles of these shoes were not always nailed, some specimens exhibit this reinforcement for increased durability (Goldman 2001, p. 114).

In conclusion, the material modesty of most burials, which clearly assigns the deceased to the lower social classes of this small society – namely servants and peasants serving the *fundus* – requires a more nuanced analysis that considers the symbolic meaning of certain objects. While the majority of the interred individuals were indeed of servile or freed status, the analysed data allows us to distinguish certain individuals, including women, who held specific roles within the estate.

(R.N.)

¹⁴ On the deep connection between spinning and wool processing and feminine virtue, see in particular LARSSON LOVÉN 1998, pp. 85-95 and Id. 2000, pp. 235-240; Id. 2007 pp. 229-236.

6. Preliminary bioarchaeological and demographic assessment of a sample of 127 individuals from Cuticchi

The burial site under examination is distinguished by its uniqueness from a bioarchaeological point of view. The geomorphology of the territory, with the location of the necropolis in an elevated area compared to the surrounding alluvial plain, and the chemical-physical composition of the deposit have largely promoted the decomposition of organic materials in a predominantly anaerobic environment (Einsele 2013). However, the presence of aerobic degenerative processes in alternating phases cannot be excluded.

One hundred and twenty-eight tombs out of the excavated one hundred and sixty-eight (128/168), plus one out-of-context burial, were analysed. Of these 128 tombs, 120 had skeletal content within them for a total of 126 individuals, amounting to 127 with the out-of-context burial. The individuals were studied using standard anthropological methods (Brothwell 1981) both for adults and non-adult individuals as collected respectively by Buikstra and Ubelaker (1994) and Cunningham *et al.* (2000) in order to obtain a biological profile. The sample was also subdivided into 8 age classes modifying the original Vallois classification (Vallois 1960). Palaeopathological considerations were made following the diagnostic criteria found in Buikstra (2019).

In total, as mentioned above, 127 individuals were found. Most tombs were single burials, while Tombs 14, 22, 29 turned out to be graves with double depositions and Tomb 66 contained four individuals in it, hence classifying these tombs as multiple burials. Tombs 3, 19, 31, 44, 45, 50, 51, 71, 118 were found empty. The remains found out of context belong to a single individual.

Of the 127 individuals in the sample, 52 are males (40.95%), 46 are females (36.22%), 29 are not determined (both adults and non-adults) (22.83%). Thus, the *sex ratio* of 1.13 male for every woman (fig. 14).

As far as this population's age at death is concerned (fig. 15), 6.3% of the population is represented by infants and children (0-12 years), 7.9% by adolescents (13-19 years), 20.5% by adults aged 20-29 years, 22% by those aged 30-39 years, 15% by those aged 40-49 years and 8.7% by senile individuals aged 50+ years. For some individuals their age at death could not be estimated or their sex be determined, while in others neither of them could be assessed. As for individuals whose age at death could not be precisely estimated but whose sex is known, 1.6% are mature adults, 3.1% are adults. Regarding, instead, individuals whose sex is known but whose age at death could not even vaguely be estimated, they amount to 4.7% of the population. Moreover, adults (as a generic category) whose sex could not be determined amount to 0.8% (i.e. one individual). Finally, for 12 individuals (9.4%) neither sex nor age at death could be established – cf. the following figures for a more detailed presentation of these data.

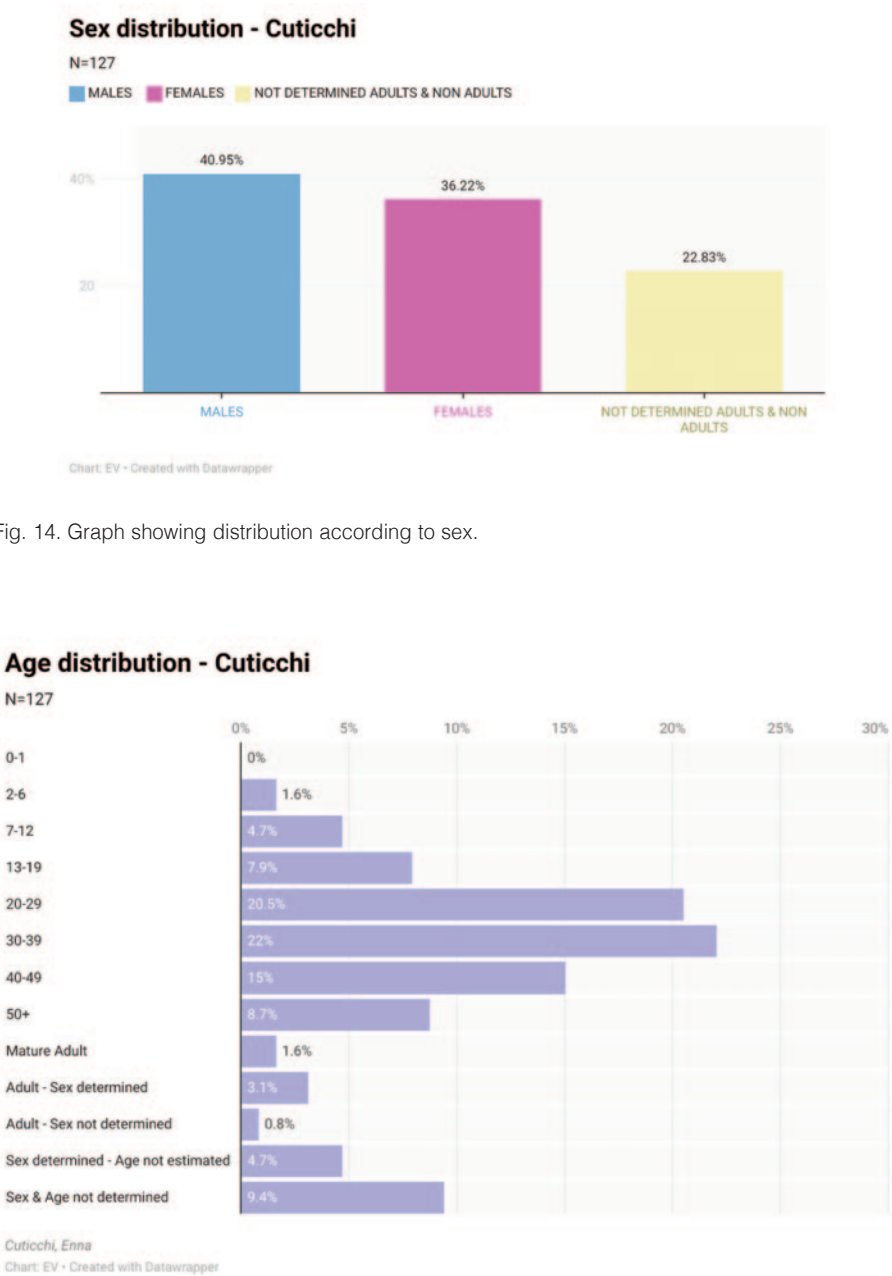


Fig. 14. Graph showing distribution according to sex.

Fig. 15. Graph showing distribution according to age at death.

The basic anthropological and preliminary palaeopathological study of a necropolis such as that of Cuticchi has already provided important results regarding the 'funerary' population housed in the necropolis. From these initial data, it is clear that this sample of 127 individuals generally passed through the delicate phase of childhood into adulthood and even senility, which was normally less represented in ancient times. Infant mortality rates considered 'physiological' in the pre-contemporary era estimate a high percentage of non-survival during the first five years of life. In this case, most of the children passed the critical period of early childhood, a sign of a possible good health status of the individuals.

The pathologies found recur within the sphere of common stress indicators (*cribra cranii*, *cribra orbitalia*, periostitis, dental enamel hypoplasia), indicative of morbid events, avitaminosis, famine, which occurred during the individuals' childhood and then passed, but there are also degenerative osteoarticular conditions such as hernias and arthrosis, linked both to age and to the type of work carried out during the individual's life; dental diseases such as caries, presence of calculus, abscesses, *intra vitam* tooth loss; accidental fractures that both occurred to the tibias of two individuals, in one case long before death, in the other shortly before death. Moreover, the presence of a possible tumour (probably a meningioma in its initial phase) and of an oval lesion within the cranial plateau of one individual, compatible with a cyst, is noted: both lesions can be identified by means of palaeoradiological analysis, which will enable a more precise differential diagnosis to be made. Finally, marked enthesopathies were observed, located predominantly in the upper and lower limbs, with particular attention to the femoral area, presumably attributable to repetitive work activities (Brothwell 1981). From these preliminary data, it can be hypothesized that the population under examination was not subject to significant stress related to particularly harsh living conditions, suggesting a relatively good standard of living. However, the analysis of the data seems to indicate a division of the group into two bands: a more affluent and privileged population, with less musculoskeletal stress, and a group more affected by living conditions and work activities that were presumably more rigid, with impacts on both the metabolic and skeletal systems (Larsen 2015). These results are supported by the low mortality rate in the most vulnerable age groups and the high mortality rate during adulthood. Senile individuals are also represented, without highlighting particular signs of deleterious lifestyles.

The anthropological study will be enriched by other analyses, such as those relating to musculoskeletal markers, anatomical variants of the skull, teeth and post-cranium, macromorphoscopic features, anthropometric measurements, which will allow for the calculation of indices. Particular attention will be paid in the future to the detailed analysis of enthesopathies, in order to reconstruct the work activities and the possible social divisions within the group. A comprehensive palaeopathological study of these individuals will also focus on their health

and disease burden. Moreover, palaeoradiology will be applied to assist the differential diagnostic process and to produce 3D reconstructions; chemical tests (e.g. isotopic studies) could additionally provide data on the population's diet and origins; finally, biomolecular investigations could help clarify the kinship and ancestry of the studied individuals.

(E.V., R.F., F.M.G.)

7. Conclusions

The excavation of the Early Imperial settlement of Cuticchi has offered the rare opportunity to study a rural community in its entirety – residential, productive, sacred, and funerary areas – within a single, coherent context. This holistic perspective makes it possible to approach the lives of non-privileged populations not as an abstract category, but as a tangible set of individuals whose daily activities, social roles, and cultural choices can be reconstructed.

The funerary evidence reveals a community largely composed of servants, freed individuals, and rural labourers, in which social hierarchies were nonetheless clearly articulated. The coexistence of inhumation and cremation, the presence of monumental markers for a few individuals, and the distribution of tombs across the necropolis all point to strategies of distinction by which some sought to set themselves apart from the majority *plebs rustica*. At the same time, the modest but symbolically significant grave goods – particularly those associated with female burials – demonstrate that even within the lower strata, roles such as textile production or household management could confer recognition and status.

The bioarchaeological study of 127 individuals complements this picture by grounding it in the biological realities of health, work, and mortality. The relatively low infant mortality, the presence of senile individuals, and the pattern of stress markers indicate that the community as a whole enjoyed a degree of resilience uncommon in rural contexts of the period. Yet within this general framework, osteological evidence highlights a clear differentiation between a more affluent segment, less exposed to physical strain, and a majority burdened by repetitive labor and harsher living conditions.

Taken together, the archaeological, cultural, and anthropological data from Cuticchi underscore the value of a multidisciplinary approach for understanding inequality in the Roman world. This case study demonstrates that social differentiation was not only expressed through architecture, ritual, and material culture, but was also embodied in health, diet, and patterns of labor. The Cuticchi community thus exemplifies the subtle but significant ways in which power, economy, and identity intersected in rural Sicily between the 1st and 3rd centuries AD, providing a model for future research on non-privileged populations in other Roman provincial contexts.

Abstract

The excavation of the Early Imperial rural settlement at Cuticchi (Assoro, Enna) in Sicily offered an exceptional opportunity to investigate residential, productive, sacred, and funerary contexts within a single site. Between the 1st and 3rd centuries AD, this community was composed largely of servants, freed individuals, and rural laborers, with social differentiation visible in both burial practices and osteological evidence. Out of 168 tombs, 127 individuals were analyzed: 41% male, 36% female, and 23% undetermined. The population displayed relatively low infant mortality and the presence of senile individuals, suggesting resilience unusual in ancient rural contexts. Nonetheless, osteological markers revealed a division between more affluent individuals, less exposed to physical strain, and the majority burdened by repetitive labor. The modest but symbolically significant grave goods – particularly those linked to women and textile production – highlight the recognition of specific roles within the servile population. Cuticchi thus provides a valuable case study of inequality and social dynamics in Roman provincial Sicily.

Keywords: Roman Sicily, rural settlement, funerary archaeology, bioarchaeology, social inequality.

Lo scavo dell'insediamento rurale a Cuticchi (Assoro, Enna) in Sicilia ha offerto un'opportunità eccezionale per studiare i contesti residenziali, produttivi, sacri e funerari all'interno di un unico sito. Tra il I e il III secolo d.C., questa comunità era composta in gran parte da servi, liberti e braccianti rurali, con una differenziazione sociale visibile sia nelle pratiche funerarie che nelle testimonianze osteologiche. Su 168 tombe, sono stati analizzati 127 individui: il 41% maschi, il 36% femmine e il 23% indeterminati. La popolazione presentava un tasso di mortalità infantile relativamente basso e la presenza di individui anziani, il che suggerisce una resilienza insolita nei contesti rurali antichi. Tuttavia, i marcatori osteologici hanno rivelato una divisione tra individui più abbienti, meno esposti a sforzi fisici, e la maggioranza gravata da lavori ripetitivi. I corredi funerari modesti ma simbolicamente significativi, in particolare quelli legati alle donne e alla produzione tessile, evidenziano il riconoscimento di ruoli specifici all'interno della popolazione servile. Cuticchi fornisce quindi un prezioso caso di studio sulla disuguaglianza e le dinamiche sociali nella Sicilia romana provinciale.

Parole chiave: Sicilia romana, insediamento rurale, archeologia funeraria, bioarcheologia, disuguaglianza sociale.

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Diet and health in Roman and Late Antique Italy: integrating isotopic and dental calculus evidence

1. Introduction

In the Roman world, diet was not merely a physiological necessity or a matter of subsistence but also a fundamental lens for understanding the social, cultural, and identity-related dimensions of human life.

A diverse corpus of literary, iconographic, material, and bioarchaeological sources provide valuable insights into ancient foodways, though critical reflection is needed to evaluate the nature of this evidence and the segments of the population it represents (Garnsey 1999; Wilkins, Hill 2006; Montanari 1993; King 1999; Killgrove, Tykot 2013).

In recent years, Roman archaeology has increasingly adopted a critical perspective, aligning itself with the broader field of people-centred archaeology (see, for example, Acconcia 2021; Pitts *et al.* 2015). This approach seeks to reconstruct everyday practices and material conditions, shifting the focus from institutional history to everyday experience. In this context, methods such as material culture studies, particularly object biographies, consumption studies, and the archaeology of identity (Miller 1987; Gosden *et al.* 1999; Pitts 2007), alongside bioarchaeology, household archaeology, and biological sex and childhood studies, have been employed to provide a voice for groups who are often overlooked in written records, such as slaves, women, children, workers, and migrants who are frequently excluded from elite narratives (Laurence 2011; Revell 2009; Hope 2007).

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Alongside these important advances, a key line of research has focused on the bioarchaeological reconstructions of diet, although this field continues to face significant challenges. Some of these challenges are intrinsic to the subject itself: the Roman Empire encompassed a vast array of ecological settings, food traditions, natural resources, and cultural practices. Rather than a single “Roman diet”, a multiplicity of local dietary regimes existed, which must be examined through rigorous methodology and careful historical and regional contextualisation.

This review is based on published isotopic and dental calculus data from archaeological sites across the Italian peninsula. The sites were selected because they provide published human bone collagen $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ data and/or published dental calculus analyses. They also report sufficient contextual information to allow cross-site comparison, such as the site's location (urban or rural) and whether it is coastal or inland. The rationale for the selection, the search strategy, and the inclusion and exclusion selection criteria are detailed in the ‘Materials and methods’ section below.

In this regard, stable isotope analysis and dental calculus analyses have constituted a genuine methodological breakthrough in the reconstruction of ancient diets. The analysis of stable isotopes, particularly the combined use of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values, provides direct evidence of dietary composition. This enables the distinction between marine and terrestrial protein sources, detects the contribution of C_3 and C_4 plants, and highlight dietary patterns linked to socioeconomic status, biological sex and geographical origin (Prowse *et al.* 2004; Müldner *et al.* 2005). These data have proven particularly useful in shedding light on the dynamics of social inequality and mobility within Roman populations.

In turn, the analysis of dental calculus has made food categories and practices that were otherwise invisible in the isotopic record accessible. Microremains, including starch granules, phytoliths, plant fibres, proteins and secondary metabolites, have documented the consumption of cereals, fruit, domestic plants, dairy products and spices. They have also provided evidence of technological practices such as grinding, cooking and fermentation (Radini *et al.* 2019; Hardy *et al.* 2009; Henry *et al.* 2011).

Archaeozoological assemblages (e.g. mammal bones, fish remains) and archaeobotanical finds (e.g. charred cereals, fruit pits) provide an independent and essential line of evidence for reconstructing dietary practices, shedding light on agricultural regimes, animal husbandry, fishing strategies, and food processing (King 1999; Albarella 2007; O'Connor 2013). This review does not systematically address these categories of evidence, as such data are not consistently available for all the sites considered. The main objective is instead to evaluate the potential of dental calculus studies, integrating stable isotope and microremain analyses, and to assess their respective strengths, limitations, and possible inconsistencies when applied to the same biological matrix.