

The medieval church of San Biagio in Cittiglio (Varese, Northern Italy). Archaeological and anthropological investigations of the cemeterial area

Marta LICATA¹, Silvia IORIO², Chiara ROSSETTI³, Giuseppe ARMOCIDA¹,
Adelaide TOSI¹, Francesco MUSCOLINO⁴, Antonio CELLINA⁵,
Roberto MELLA PARIANI⁶, Ilaria GORINI¹, Melania BORGO¹, Paola BADINO⁷

Abstract. *The old medieval church of San Biagio in Cittiglio (Varese, Northern Italy) is one of the oldest religious buildings of Valcuvia. Since 2006, the interior of the church has been under investigation to acquire historical data and to reconstruct the archaeological site. These excavations yielded a series of discoveries, such as a significant number of tombs and pictorial elements. During our first field season, we exposed several architectural phases of the church, from the 9th to the 15th century. Inside the church, a funerary atrium was discovered and it was fascinating to find several tombs placed on different chronological layers. In particular, two of these tombs are remarkable. A tomb containing the skeletal remains of a young male showed three perimortem cuts on the skull. The other one kept the bones of a woman with a spearhead at the level of the ribs. We also observed another aspect, the conspicuous presence of childhood graves. In order to better investigate the paleodemography, we needed more osteoarchaeological data. Therefore, we focused our attention on the funerary area (7.5 m North-South × 18 m East-West) immediately outside the church. The archaeological excavation, which started in March 2016, brought to light several burials. During this phase, we discovered five overlapping archaeological layers, which testified an important funerary context. In the superficial layer, we recovered fragmented human bones, coins and numerous metallic artefacts. In the underling layer, we found tombs with coins, which allowed us to date it back to the Renaissance period. Square stones of different dimensions delimited the tombs of adults, while dead infants and fetuses were buried inside shingles. In the same layer, we also recovered archaeological findings such as an iron key, an iron knife, bronze buckles and bronze rings. The anthropological data for this cemeterial phase also documented the high infant mortality together with findings of pathological indicators such as arthrosis, dental diseases and traumatic injuries.*

¹ Department of Biotechnology and Life Sciences, University of Insubria, via O. Rossi, 21100, Varese, Italy. Corresponding author: marta.licata@uninsubria.it

² Department of Molecular Medicine, Unit of History of Medicine, Sapienza University of Rome, Italy.

³ Department of Medical and Surgical Specialties, Radiological Sciences and Public Health, University of Brescia, Italy.

⁴ Official in the Lombardy Archaeological Heritage, Milano, Italy.

⁵ Coordinator of Association of "Amici di San Biagio, Cittiglio, Varese, Italy.

⁶ Archeo Studies Bergamo – Society of Archaeological Researches, Bergamo, Italy.

⁷ Department of Biotechnology and Life Sciences, University of Insubria, via O. Rossi, 21100, Varese, Italy. Corresponding author: paola.badino@yahoo.it.

Rezumat. Biserica medievală medievală San Biagio din Cittiglio (Varese, nordul Italiei) este una dintre cele mai vechi clădiri religioase din Valcuvia. Din 2006, interiorul bisericii a fost cercetat pentru a obține date istorice și pentru a reconstrui situl arheologic. Aceste săpături au dat naștere unei serii de descoperiri, cum ar fi un număr semnificativ de morminte și elemente picturale. În timpul primului nostru sezon de teren, am descoperit mai multe faze arhitecturale ale bisericii, din secolul al IX-lea până în secolul al XV-lea. În interiorul bisericii a fost descoperit un atrium funerar și a fost fascinant să găsim mai multor morminte așezate pe diferite straturi cronologice. În special, două dintre aceste morminte sunt remarcabile. Un mormânt care conține resturile scheletice ale unui tânăr de sex masculin a arătat trei tăieturi perimortem pe craniu. Celălalt conține oasele unei femei cu un vârf de lance la nivelul coastelor. Am observat și alt aspect, prezența vizibilă a mormintelor de copii. Pentru a investiga mai bine paleodemografia, am avut nevoie de mai multe date osteoarheologice. Prin urmare, ne-am concentrat atenția asupra zonei funerare (7,5 m nord-sud × 18 m est-vest) imediat în afara bisericii. Săpăturile arheologice, care au început în martie 2016, au adus la lumină câteva morminte. În această fază, am descoperit cinci straturi arheologice suprapuse, care au furnizat un context funerar important. În stratul superficial, am recuperat oase umane fragmentare, monede și numeroase artefacte metalice. În stratul inferior, am găsit morminte cu monede, ceea ce ne-a permis să-l datăm în perioada Renașterii. Pietre pătrate de dimensiuni diferite au delimitat mormintele adulților, în timp ce copiii și fetele morți au fost îngropați în țigle. În același strat, am recuperat și diverse obiecte, cum ar fi o cheie de fier, un cuțit de fier, cataramă de bronz și inele de bronz. Datele antropologice pentru această fază de înmormântare au evidențiat, de asemenea, mortalitatea infantilă ridicată, împreună cu constatările indicatorilor patologici precum artroza, bolile dentare și leziunile traumatiche.

Keywords: San Biagio, medieval church, anthropological data.

Introduction

The medieval church of San Biagio in Cittiglio (Varese, Northern Italy) (Figure 1) is one of the most ancient religious buildings of Valcuvia (Figure 2). It is an example of the Romanesque art that dominated the architecture scene in Northern Italy during the High Middle Ages⁸. The church is located approximately 200 meters from Cittiglio Station and it is placed on a hill, which overlooks the village. From the church courtyard, it is possible to see the Lake Maggiore and the Alpine Mountain of Monte Rosa. The religious complex, including the adjacent church square, is part of the parish properties of San Giulio di Cittiglio, Diocese of Como (declaration issued by the relevant office of the Curia of Como in 27 February 1990). Several documents kept in the Episcopal Como Archive describe bishops' pastoral visits to the Cittiglio church during these centuries. Two notarial deeds, drawn up on 11th June of 1235, and now preserved in the Milan State Archive, are the oldest documents known today which

⁸ FINOCCHI 1966.

talk about the church. The contents of these two parchments were published in 1989⁹. By the analysis of these writings, it is clear that the church was dedicated to St. Biagio and St. Andrea and was built “*in Castro Cittiglio*”, a fort called “Cittiglio”¹⁰. We do not have knowledge of other documents that mention the fort again. The function of the fort gradually vanished and, during the centuries, structures of the castle were converted to other uses. Today it is still possible to recognize some vestiges of the old castle in some houses’ walls placed in the highest part of the village of Cittiglio, near the church.

The original church of San Biagio was a castrense church, a private chapel of the castle and probably a property of the family who held the feud: the rich family of De Cittiglio, which was replaced by De Morsiolo and then by the Besozzi family.

The architecture of the church consists of a single nave (5.50 m x 14.80 m), which is accessible by a central door on the East side; there are two windows on the North side of the building. The roof, at two pitches, is made of tiles and is supported by four beautiful wooden trusses, which are visible from the inside of the building and that characterize the entire environment. The high altar, leaning against the West wall, dates back to the 18th century and it is shaped to insert the altarpiece, specifically designed for this church. The altar is enriched by a frontal tripartite datable to the early 18th century, showing an almond in the centre with a representation in white of San Biagio Bishop which is inserted just below the coat of arms of the Besozzi family. The new nave floor, realized after the restoring works, is made of terracotta, with portions of transparent glass slabs on a steel frame in order to display the archaeological ruins. The Milano Monuments Heritage in agreement with the Lombardy Archaeological Heritage approved this arrangement.

In 2006, the restoration works allowed to show archaeological findings brought to light with the excavations. In particular, there are two archaeological sections: the first, at the present entrance, which highlights the significant architectural and iconographic evidences of underlying medieval presbytery; the second, near the current presbytery, shows a very interesting sequence of tombs, probably those of the ruling family members.

Methods

Archaeological investigations

Stratigraphic sequence diagrams of the identified units (inside and outside the church) were made in order to reconstruct several archaeological phases.

Residues of activated carbon (burning torch or generic) and significant organic remains, present in the environment, were sampled. The elevations of structures and artefacts were

⁹ PEREGALLI, RONCHINI 1989.

¹⁰ POZZI 1986; PERPENTI 1849.

measured. Archaeological artefacts were catalogued and delivered to the Lombardy Archaeological Heritage.

Bone remains were transferred for anthropological investigations to the Centre of Research in Osteoarchaeology and Paleopathology of the Insubria University.

Anthropological investigations

The identification of the “biological profile” on skeletal material consists of the determination of sex¹¹, race¹², age at death¹³, body size, stature¹⁴ and pathological conditions. Sex estimation was carried out using standard pelvic and cranial morphological indicators according to methods given by Buikstra and Ubelaker¹⁵. The dimorphic characteristics of the pelvis comprise the aspect of the ischiopubic ramus and presence or absence of the ventral arch and subpubic concavity. For each skull, the following features were observed: nuchal crest, glabella, supraorbital margin, mastoid process and mental eminence¹⁶. Age at death of adult subjects was determined from the degree of degeneration of the pubic symphysis¹⁷ and of the facies auricularis of the pelvic bones¹⁸. The degree of suture closure was also assessed¹⁹ together with the sternal rib modification²⁰. The age of juvenile individuals was estimated based on tooth eruption and development²¹, the degree of ossifications centers and the measurements of the diaphyseal length. Intra vitam body stature was calculated using the length of long bones, in particular that of the femur²².

All skeletons were analysed for the possible presence of the common pathological changes discovered in osteoarchaeological material.

Radiological investigations

To investigate pathological conditions X-ray and CT scans were performed on the same scanner (16-layer Hitachi Eclis 16 X-ray equipment).

¹¹ GILES 1963; MALL *et al.* 2000.

¹² BIRKBY 1966.

¹³ GALERA *et al.* 1995.

¹⁴ TROTTER, GLESER 1952.

¹⁵ BUIKSTRA, UBELAKER 1994.

¹⁶ KROGMAN, ISCAN. 1986.

¹⁷ BROOKS, SUCHEY 1990.

¹⁸ LOVEJOY *et al.* 1985.

¹⁹ MEINDL, LOVEJOY 1985.

²⁰ ISCAN *et al.* 1984.

²¹ UBELAKER 1989.

²² TROTTER, GLESER 1952.

The archaeological investigation inside the church

Since 2006, the interior of the church has been under investigation to acquire historical data and to reconstruct the archaeological site. These excavations yielded a series of surprises, such as a significant number of graves and pictorial elements. The excavation recognised 14 archaeological phases, all related to building development.²³

The first church, 8th century

The origin of the church has been attributed to the last third of the 8th century. To the earliest phase the building was a single court of modest dimensions with a semicircular apse. The hemicycle, identified under the present facade, found its structural development outside it, in front of the current entry. The excavation allowed us to explore the apse and structures that could belong to this original high medieval building and that were destroyed by an extended fire.

The second church, 9th century

The Romanesque church may be the result of a planned enlargement of the early medieval building through the demolition and reconstruction of the Southern side and of the original facade of the Western courtroom. The foundation of the new Romanesque facade was brought to light by excavations with its central access portal, its monolithic threshold and two steps. The construction of the bell tower, inside the nave in the South-East angle, was concomitant to the enlargement of the Romanesque building. It is a cusp bell tower with lithic slivers, without architectural partitions and windows or louvers, except for the bell chamber opened on three sides by straight lancet windows with small columns adorned by archaic capitals. Perhaps, during this phase, two-wall ends of the apse were removed in order to adapt it to a perfect hemicycle.

The realization in the presbytery of an important cycle of frescoes dates back to this building phase, near the 9th century. Of great interest is the discovery of large tracts of painted plaster of the lower register of a figurative cycle. In particular, on the left side of the presbytery, the picture of a *velarium* represents a rare medieval iconography of the Chimera (Figure 3). This three-headed monster (lion, goat and serpent) breathing fire, the daughter of Typhon, is a clear heritage of the classical tradition. This representation could be part of a larger figurative cycle of fantastic *bestiaria*, transmitted by the iconography of the monastic codes. A similar *velarium* was recently found in a near church, the Romanesque church of San

²³ MELLA PARIANI, LORENZI 2006.

Michele al Monte in Porto Valtravaglia²⁴. A second fresco on the Northern wall was realised during the late phase of the Romanesque period. It represents a small winged dragon, lying on his back, in the act of being pierced by the lance of a holy warrior.

Funeral atrium, 11th-13th century

A massive stone block was built in front to the facade. It is an atrium (or exonarthex) for funerary uses reserved to family descendants of the original chapel's founder. The facade of the new avant-corps had hence become the new external facade of the church, emerged from the building restoration of 1980 and still visible from the back sacristy. The facade is hut shaped, with a large arched central door in local tuff. The original pillar, preserved in the upper part, shows the remains of a Renaissance fresco centrally representing a bishop, probably San Biagio.

The presence of natural rock determined the rising of the threshold of the previous entry facade in the new flooring atrium. Only in the Northern area of the atrium, where the rocky declivity is too deep, the inumatoria practice was allowed. In this place, the deposition of the oldest privileged burials began. The archaeological investigation revealed 22 burials of individuals, from birth to adulthood (Figure 4).

The privileged burials inside the funeral atrium of the church indicate that they were probably members of De Cittiglio family. The absence of the grave goods and the architectural structure of the burials, such as anthropomorphic shape characterized by square stones, which limited the burial site, complicated the dating, probably between the 11th and 13th century (Figures 5-6).

Closure of funeral atrium, 14th century

In 14th century, the wall aperture of the first Romanesque facade in the church was dismantled in order to obtain a new and more spacious courtroom for liturgical use. This intervention led to the closure of the funeral atrium. Following the realisation of a number of floors, the first made of mortar, then of brickwork tiles, demonstrated the initial maintenance of original orientation of the building with the apse located to East.

New alignment of the church, 17th century

In 17th century, the apse was demolished to build a new facade. On the West side, the new altar was built against the internal wall of the old atrium facade, closing the central door.

²⁴ FRIGERIO 2004.

Dating back to the same time is an ossuary inside the church, beyond the central line of the altar, almost leaning against the Northern wall. The opening of the ossuary consisted of a trapdoor made of a quadrangular stone, its perimeter framed by four flat stones. The first trap door, in the existing floor level, conceals a second ossuary, closed by a stone, which gives access to the burial chamber (estimated 2.5. m high and about 1x1.5 m in width) and which contains several human bones not yet analysed. The ossuary is mentioned in historical visits of Como bishops during centuries.

The significant findings related to the numerous liturgical objects, in addition to 12 bronze and silver coins that mark the stratigraphy of the church, have allowed delineating the key moments of the civil and devotional history of this ancient community.

The archaeological investigation outside the church

The archaeological investigation conducted in 2016 involved the area nearest to the hemicycle of the early medieval cemetery (size: 8 m North–South, 6 m East–West). The small area available for cemeterial use is limited to North by the side slope, to South by the rocky dorsal and to West by the church. The cemetery is characterised by an overcrowding of burial sites, superimposed laterally and vertically. We also noticed the phenomenon of reuse of existing burials. All buried showed a Western orientation of the head, as was the altar of the ancient medieval church, with the exception of the Tomb 25.

The stratigraphic analysis of the archaeological deposit has allowed discovering five progressive chronological phases of human activity in this area through the centuries (Figure 7).

Masonry with floor level, early 14th century

Immediately outside the church, near the existing medieval semicircular apse (US 133-134) a large stone wall was built to East–West. On the South side the wall is in connection with a floor in grout (US 297).

Cemetery, early 14th century

The cemeterial phase was testified by the presence of a great burial also closed and not investigated for structural reasons (Tomb 37), and by the remains of a wall (US 244a) erected in order to contain the embankment of the cemetery.

Cemetery 14th-15th century

A series of anthropomorphic tombs, some of which could be reusing the previous burials, indicate an increase in number of inhumations. Among the tombs, the oldest is the number 32, an anthropomorphic tomb containing an adult with head to West side, which was deposited an obol of coins. The coin is made of silver, wrought issued from the Mint of Milan, probably to Azzo Visconti, Lord of the city between 1329 and 1339. In the same cemeterial phase, we discovered tombs with one-individual deposition, tomb 31, 33, 35, 38 (remains in tomb 38 were not removed) and two burials in plural deposition: tomb 23 with three progressive depositions of adult individuals in wooden coffin and tomb 34 with three overlapping adult subjects.

Cemetery, 16th-17th (1630) century

Under the superficial layer of tomb 23 a fourth adult was retrieved. In the same layer were documented tombs 28 and 29, the latter preserving a bronze ring. Of great significance is the tomb 30 because of the recovery of a coin of Ludovico Sforza (Duke of Milan between 1494 and 1499) near the hands. In this phase tomb 39 was not removed from the site and documented in section. In the same layer, three neonatal burials (tombs 26, 27 and 36) emerged.

Cemetery, 17th (1630)-18th century

The most recent burials, found at an upper level, were destroyed by following structural interventions due to funeral disuse. Hence, in this layer (US 243) numerous scattered bone fragments were recovered outside the burial perimeter. In the same period, a floor (US 233) and the remains of the tomb 25 date back.

Paleodemographical investigation

The goal of paleodemographical investigations is to reconstruct the structure of ancient population dynamics, their spatial distribution, processes of formation and evolution over the time and to provide important osteoarchaeological data: demographic parameters (infant mortality, differential mortality by sex and age, fertility etc.), such as paleopathological features, and cultural and economic partners. Before talking about the results of the research conducted on the skeletal remains of Cittiglio, it is necessary to emphasize the poor representativeness of the osteological sample, a common problem in the majority of anthropological studies. In our case, the absence of a complete sample is mainly attributable to the fact that the necropolis area has not been fully investigated.

During the first excavations, 22 tombs were discovered but it was possible to investigate only 17 tombs and 18 individuals were identified. In each grave skeletal remains belonging to

an individual were deposited, with the exception of tomb 4 in which a foetus was laid together with a subadult near 6–8 years of age. The good preservation of the skeletal remains allowed us to proceed with the anthropological investigations. We would like to highlight that about 67% of the individuals belonged to the subadult population, and that about 45% of cases were under 3 years of age. Skeletal remains of six adult individuals were studied (4 males and 2 females), aged between 21 and 55 years with a height of around 163–167 cm and 150–155 for males and females, respectively (Table 1).

The second period of excavation made it possible to uncover 17 tombs, only 14 were investigated. These tombs presented a very different situation from those investigated in the first archaeological campaign, because several were reused during the years, and inside a single burial site was possible to find more than one individual. The excavation exposed bones belonging to 39 individuals: 14 sub-adults (35.9%) and 25 adults (64.1%). In this cemeterial phase, the infant mortality rate is well represented, with 70% of the subadults under the age of three years. Contrarily to the 11th–13th century tombs only few remains of each subadult were discovered, mixed with other adult skeletal remains. The tomb 27 and 36 were only used for the burial of two foetuses, both contained in a shingle. It has been possible to detect and identify sex, age and height of 11 adult individuals (8 males and 3 females), whereas, because of the poor conservation of the remains, it was not possible to proceed with a complete identification of the other 14 adults. The estimated age ranged from 18–24 years (3 males) to more than 60 years (one male and one female). The stature for males ranged between 165 and 176 cm, while for females between 150 and 155 (Table 2).

Paleopathological investigation

The main pathological changes diagnosed in our osteoarchaeological material are arthrosis, dental diseases and traumas²⁵.

Arthrosis

Arthrosis is a degenerative disease determined by the gradual wear of the articular cartilage and it is manifested through erosive lesions, hard to find in osteoarchaeological material, or with proliferative bone formation²⁶. The most involved district is the spine. We have not noticed a difference in the male and female population with regard of incidence of the disease. For subjects over 40 years of age, we have observed the presence of arthrosis, especially on the lower thoracic and lumbar traits²⁷.

²⁵ LICATA *et al.* 2014a; LICATA *et al.* 2015.

²⁶ ROGERS *et al.* 1987.

²⁷ LICATA 2017a

Dental disease

Teeth are one of the best indicators of the individuals' lifestyle, as they provide information on the age at death, sex, any nutritional stress and diseases related to eating habits and general standards of living and health conditions²⁸. In our sample, especially for the adult subjects, the most frequent dental diseases are caries, tartar, dental wear and loss of teeth, principally for molar and premolar²⁹. Caries is a disease of infectious origin that causes progressive loss of enamel and dentin and it is caused by poor oral hygiene, the consumption of carbohydrates and simple sugars, age and inherited genetic traits. The tartar instead is formed by mineralization of the bacterial plaque and consists of a dense accumulation of microorganisms on the surface of teeth and it is caused by a poor oral hygiene and consumption of carbohydrates. Tooth loss and periodontal disease are often correlated with acute and chronic inflammatory processes mainly due to bacterial plaque.

Traumatic injury

Traumatic lesions are among the most important sources of data related to interpersonal violence within ancient populations. Unlike the historical and archaeological records that are subject to interpretative obstacles, these injuries represent a direct source aiding the analysis of the lifestyle of past populations. In the paleotrauma analysis, the correct investigation of lesion types provides data about interpersonal violence, intergroup conflict or warfare, and daily activities. It is important to explain that in osteoarchaeological collections, the investigation on the incidence of trauma is hard to evaluate, especially for the fragmented state of skeletal remains. To examine the episode of violence in antiquity, it is necessary to identify traumatic lesions from cause and from time of injury. The archaeological site of Cittiglio documented two violent deaths: tomb 13 and tomb 16. The young male of tomb 13 (Figure 6) shows, at level of the skull, three important cuts caused by a sharp weapon on the parietal and occipital bones³⁰. We believe that the subject was killed during a battle³¹ even if other hypotheses suggest a beheading for justice. From our point of view, three elements propose the "battle theory". In the first place, the location of the cuts at the skull level and not on the cervical vertebrae suggest this hypothesis. In a beheading for justice, generally transverse lesions on the cervical vertebrae are present. Furthermore, the number of cuts and the distance between them at the occipital and the parietal level, lead us to imagine that the fighting took place with energetic manoeuvres and that the duellist has launched three blows

²⁸ LAZZATI *et al.* 2015.

²⁹ MOLNAR 2008.

³⁰ LICATA, ARMOCIDA 2015.

³¹ KEPA *et al.* 2013.

from the top down. The first shot on the parietal brought the victim to the ground that collapsed with his face down and, in this position, he received two more blows to the occipital bone (Figure 10). By the archaeological point of view, the deposition of the corpse in a correct anatomical position, such as that received by the individual in tomb 13, does not lead us to suggest a beheading for justice³². The archaeological literature, in fact, contains funerary evidence of executed individuals who had their skulls placed in a grave at the knees or ankles' level, not in a continuous anatomical position. Outdistancing the head from the rest of the body sought to empathise the condition of the beheaded. Finally, the subsequent discovery of a nearby burial, containing the skeleton of an adult female with an arrowhead at the ribs level (Tomb 16 – Figure 5) furthermore suggests the “battle theory”. There are no traces on the skeleton of damage caused by this arrow but there is little to no doubt that the female individual died due to the extent of the injuries, since the portion of the weapon was found in her ribcage.

During the archaeological investigation of 2016 we have found other traumatic injuries, in particular a case of a resolved sharp trauma on the parietal bone of an adult male and a femur (bone isolated, found in a surface layer) with an important post trauma callus³³. At this point of the archaeological investigation it is difficult to make hypotheses about other violent deaths. By proceeding with our archaeological investigation inside and outside the church, in the two burial areas, we will evaluate the presence or the absence of other signs of injury associated with deaths in battle.

The future of research

There are still unanswered questions related to the archaeological site of San Biagio, especially from the osteoarchaeological point of view. We still have to clarify and better define the “battle theory”³⁴. Secondly, we need to appreciate if inside and outside the church there were designated areas for children buried, due to the high number of subadults found during the excavations. In order to answer these questions there is a need to proceed with new investigations both inside and outside the church, with other archaeological campaigns. Furthermore, the Cittiglio site is on the verge of being added to an archaeological museum tour, which includes historical and worship monuments representative of the medieval funerary rituals in North-Western Lombardy³⁵.

³² CARTY 2015.

³³ PROKOPEC, HALMAN 1999; LICATA *et al.* 2014b.

³⁴ LICATA, ROSSETTI 2017b

³⁵ LICATA *et al.* 2018

Acknowledgements. The authors wish to thank the Fondazione Comunitaria del Varesotto for the contribute to the research project. Thanks also go to Lombardy Archaeological Heritage Department for consigning the skeleton studied herein to our laboratory. Thanks also to the Dr Ugo Maspero, radiologist at the Fondazione Borghi in Brebbia (VA), who performed the X-ray and CT analyses.



Figure 1. The red dot indicates the localization of Cittiglio, Lombardy



Figure 2. The church of San Biagio in Cittiglio.



Figure 3. The picture of Chimera

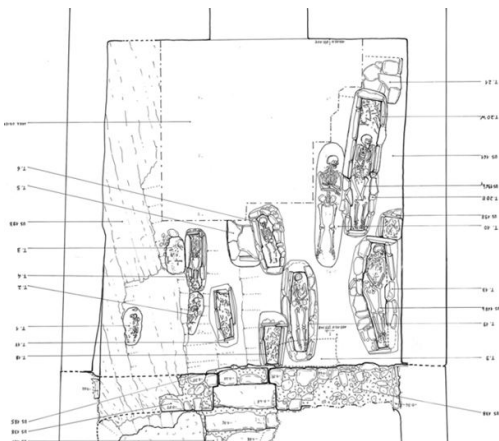


Figure 4. Left - plan of oldest burials inside the atrium; right - church interior, after restoration works

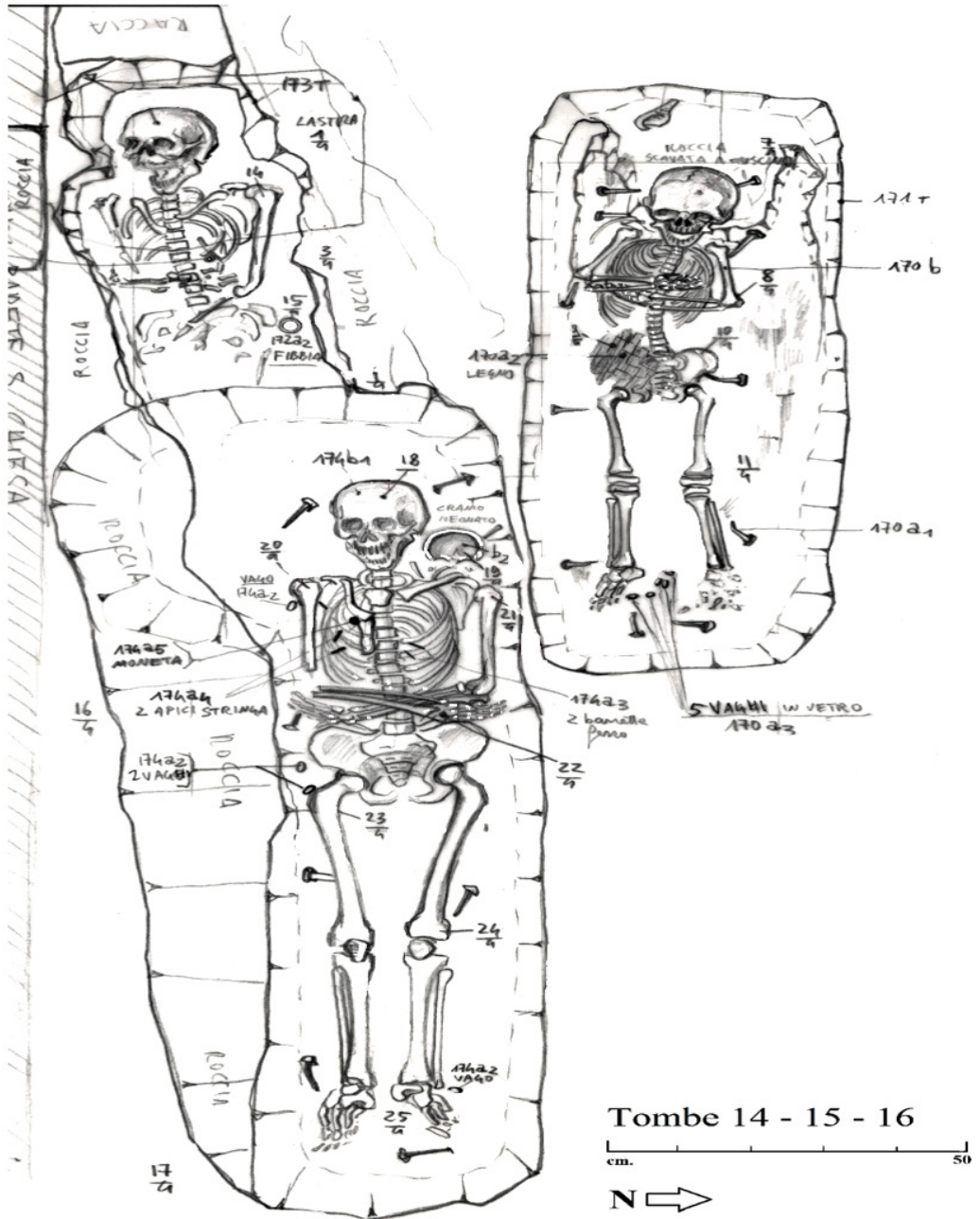
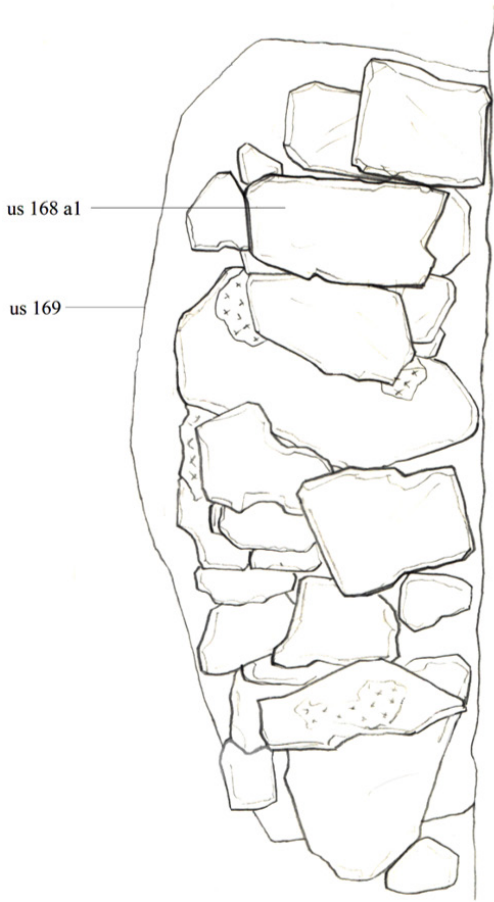
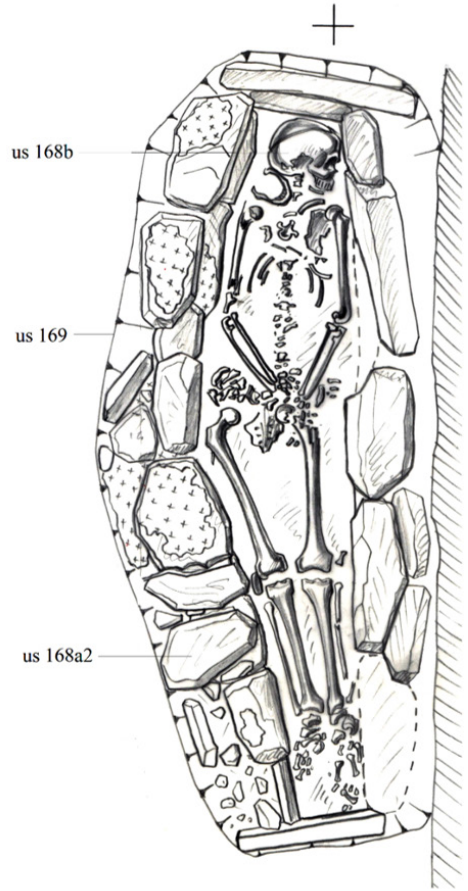


Figure 5. Plan of three inhumations present in the oldest layer



Tomba 13 - copertura



Tomba 13 - inumato



Figure 6. Plan of tomb 13

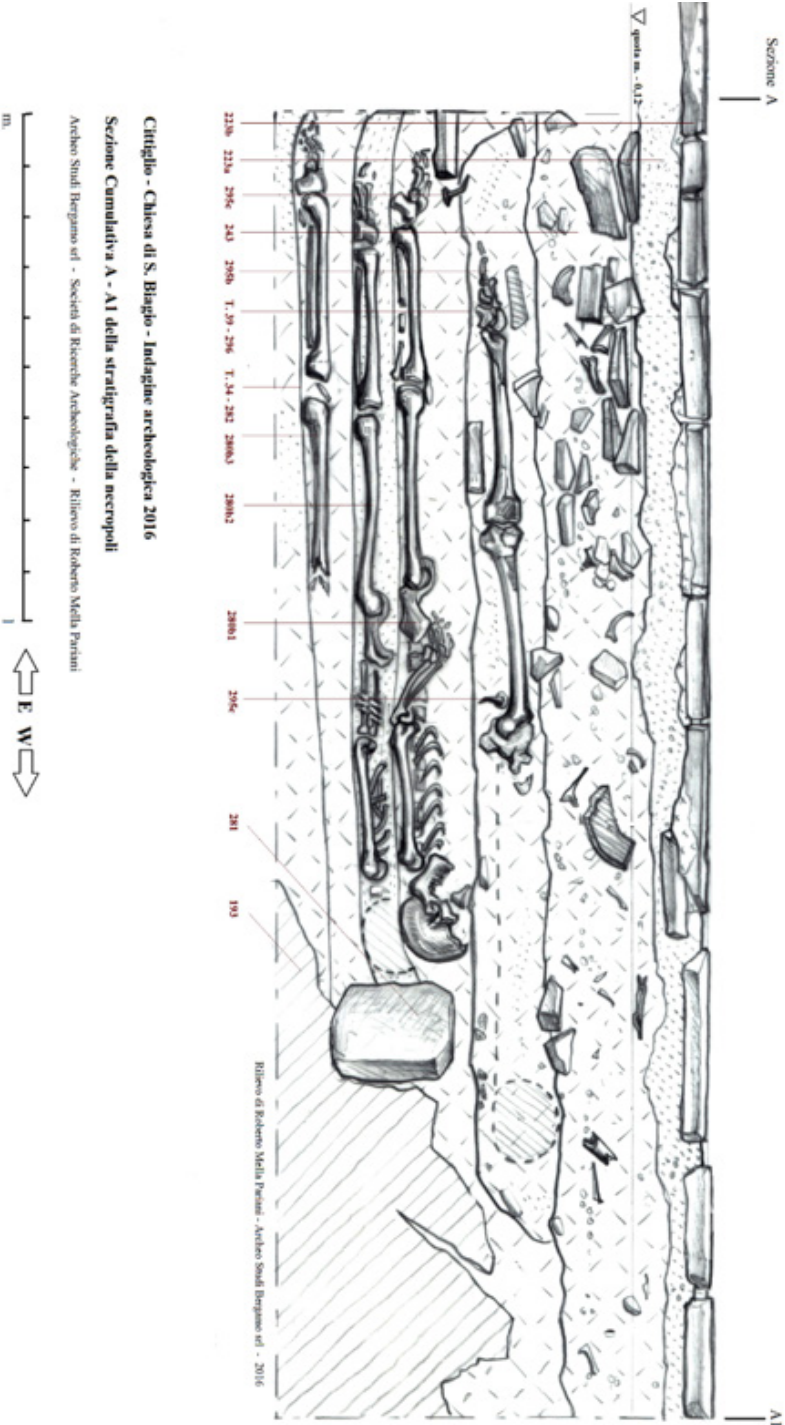


Figure 7. Plan showing the archaeological stratigraphy on the left side of the outside cemetery area

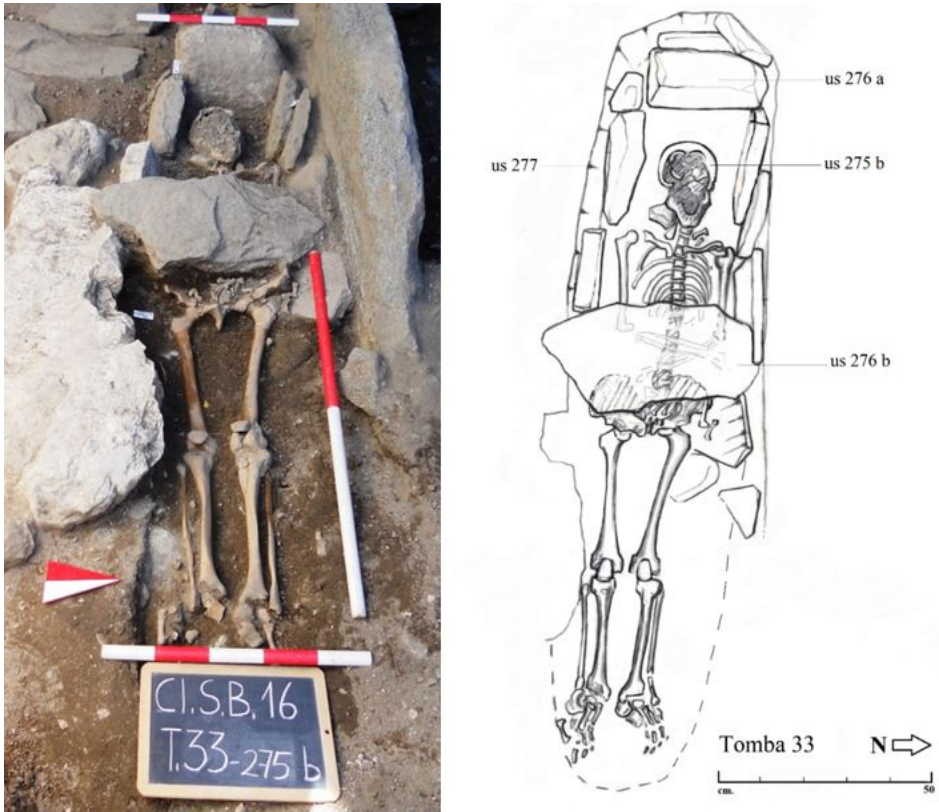


Figure 8. Left - picture of tomb 33; right - plan showing tomb 33

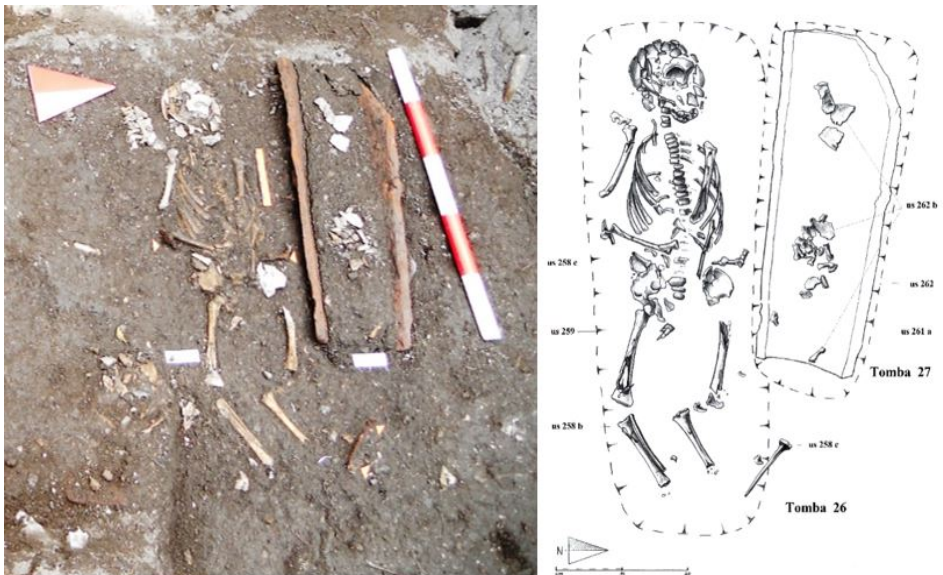


Figure 9. Left - picture of tomb 26 and 27; right - drawing of tombs 26 and 27



Figure 10. Left – picture of skull from tomb 13; right – CT scan of the skull of tomb 13

Table 1. NMI (number of minimal individuals), sex and age structure of skeletal sample from the funerary atrium (11th-13th century)

| <u>GRAVE</u> | <u>NMI</u> | <u>SEX</u> | <u>AGE</u> |
|--------------|------------------|----------------------|---------------|
| 1 | 1 | subadult | 1.5-2.5 |
| 2 | 1 | subadult | 2.5 |
| 3 | 1 | subadult | 2.5 |
| 4 | 2 | subadult subadult | foetus 6-8 |
| 5 | 1 | subadult | 1.5 |
| 6 | 1 | subadult | 1.5-2.5 |
| 7 | not investigable | | |
| 8 | not investigable | | |
| 9 | 1 | subadult | 6 |
| 10 | 1 | male | 40-50 |
| 11 | 1 | male | 35-55 |
| 12 | not investigable | | |
| 13 | 1 | male | 20-30 |
| 14 | 1 | subadult | 6 |
| 15 | 1 | female | 30-40 |
| 16 | 1 | male | 25-35 |
| 17 | 1 | subadult | 1.5 |
| 18 | 1 | subadult | 0.5-1 |
| 19 | 1 | subadult | 10-12 |
| 20 | 1 | female | 25-35 |
| 21 | not investigable | | |

| <u>GRAVE</u> | <u>NMI</u> | <u>SEX</u> | <u>AGE</u> |
|----------------|------------------|------------|------------|
| 22 | not investigable | | |
| TOTAL | 18 | | |
| TOTAL SUBADULT | | 12 | |
| TOTAL MALE | | 4 | |
| TOTAL FEMALE | | 2 | |

Table 2. NMI (number of minimal individuals), sex and age structure of skeletal sample from the cemeterial atrium (14th-17th century)

| <u>GRAVE</u> | <u>NMI</u> | <u>SEX</u> | <u>AGE</u> |
|--------------|------------|--|---|
| 23 | 5 | male indeterminated indeterminated indeterminated subadult | 30-35 indeterminated indeterminated indeterminated |
| 24 | 1 | indeterminated | indeterminated |
| 25 | 3 | indeterminated | indeterminated |
| 26 | 1 | subadult | 0.5-1 |
| 27 | 1 | subadult | Foetus |
| 28 | 1 | indeterminated | indeterminated |
| 29 | 3 | male male subadult | 60+ 40-60 indeterminated |
| 30 | 4 | male male indeterminated subadult | 35-45 18-24 indeterminated foetus |
| 31 | 5 | female male subadult subadult subadult | 45-55 18-24 10-15 1 0-0.5 |
| 32 | 3 | male indeterminated subadult | 18-24 indeterminated indeterminated |
| 33 | 2 | male subadult | 30-40 indeterminated |
| 34 | 5 | female female indeterminated indeterminated subadult | 60+ 35-45 indeterminated indeterminated 11-14 |
| 35 | 4 | indeterminated indeterminated | indeterminated indeterminated |

| <u>GRAVE</u> | <u>NMI</u> | <u>SEX</u> | <u>AGE</u> |
|----------------|------------------|------------|------------|
| | | subadult | 6-8 |
| | | subadult | foetus |
| 36 | 1 | subadult | foetus |
| 37 | not investigable | | |
| 38 | not investigable | | |
| 39 | not investigable | | |
| TOTAL | 39 | | |
| TOTAL SUBADULT | | 14 | |
| TOTAL MALE | | 8 | |
| TOTAL FEMALE | | 3 | |
| UNDETERMINATED | | 14 | |

References

- BIRKBY, W.H. 1966. An evaluation of race and sex identification from cranial measurements. *American Journal Physical Anthropology* 24, 21.
- BROOKS, S.T, J.M. SUCHEY 1990. Skeletal age determination based on the os pubic: a comparison of the Acsádi-Nemeskéri and Suchey-Brooks methods. *Human Evolution* 5, 227–238.
- BUIKSTRA, J., D.H. UBELAKER 1994. Standards for data collection from human skeletal remains. *Fayetteville. Arkansas Archaeological Survey Research, Series No. 44.*
- CARTY, N. 2015. The Halved Heads: Osteological Evidence for Decapitation in Medieval Ireland. *Institute of Archaeology* 25(1), 1–20.
- FINOCCHI, A. 1966. *Architettura romanica nel territorio di Varese*. Bramante editrice, Milano.
- FRIGERIO, P. 2004. S. Michele in monte. Una chiesa millenaria. *Loci Travaliae* 13, 118–127.
- GALERA, E., D.H. UBELAKER, L.A. HAYEK 1990. Comparison of macroscopic cranial methods of age estimation applied to skeletons. Terry Collection. *Journal of Forensic Sciences* 36, 898.
- GILES, E., O. ELLIOT 1963. Sex determination by discriminant function analysis of crania. *American Journal Physical Anthropology* 21, 53.
- ISCAN, M.Y., S.R. LOTH, R.K. WRIGHT 1984. Metamorphosis at the sternal rib end: a new method to estimate age at death in white males. *American Journal Physical Anthropology* 65(2), 147–156.
- KEPA, M., K. SZOSTEK, A. WRĘBIAK, H. GLĄB, C. BUŚKO, W. GLOWA, S. DRYJA 2013. A Case of the Execution of Swedish Soldiers at the Market Square in Cracow (17th c.). *International Journal of Osteoarchaeology* 23(6), 730–736.
- KROGMAN, W.M, M.Y. ISCAN 1986. *The human skeleton in forensic medicine*. Charles C. Thomas, Springfield.
- LICATA, M., M. RONGA, P. CHERUBINO, G. ARMOCIDA 2014a. Different types of traumatic lesions on mediaeval skeletons from archaeological sites in Varese (North Italy): diagnosis on ante mortal fractures using macroscopic, radiological and CT analysis. *Injury* 45, 457–459.
- LICATA, M, G. ARMOCIDA 2015. Trauma to the skull: an analysis of injuries in ancient skeletons from North West Lombardy archaeological sites. *Acta Medica Historica Adriatica* 13(2), 251–264.

- LICATA, M., I. VECCHIO, G. ARMOCIDA 2014b. Analysis of ante-mortem injuries in medieval skeletons from the necropolis of Caravate (Varese) Italy. *Acta Medica Mediterranea* 30, 555–559.
- LICATA, M., M. BORGO, G. ARMOCIDA, L. NICOSIA 2015. New paleoradiological investigations of ancient human remains from North Wets Lombardy archaeological excavations. *Skeletal Radiology* 45(3), 323–331.
- LICATA, M., G. ARMOCIDA, M. BROGGINI, M. BORGO 2017a. To investigate the degenerative alterations of the spine in Paleopathology. *Acta reumatologica portoguesa* 42(1), 94–95.
- LICATA, M., C. ROSSETTI. 2017b. Osteoarchaeological evidence of unknown medieval battle in Northern Italy. A case of Forensic Anthropology. *Journal of Forensic and Legal Medicine* 51, 74–74.
- LICATA, M., A. TOSI, C. ROSSETTI, S. IORIO 2018. The bioarchaeology of humans in Italy: Development and issues of a discipline. *Studia Antiqua et Archaeologica* 24(1), 119–130.
- LAZZATI, A.M.B., L. LEVRINI, L. RAMPAZZI, C. DOSSI, L. CASTELLETTI, M. LICATA, C. CORTI 2015. The Diet of Three Medieval Individuals from Caravate (Varese, Italy). Combined Results of ICP-MS Analysis of Trace Elements and Phytolith Analysis Conducted on Their Dental Calculus. *International Journal of Osteoarchaeology* 26(4), 670–781.
- LOVEJOY, C.O., R.S. MEINDL, T.R. PRYZBECK, R.P. MENSFORTH 1985. Chronological metamorphosis of the auricular surface of the ilium — a new method for the determination of the adult skeletal age at death. *American Journal Physical Anthropology* 68, 139–170.
- MALL, G., M. GRAW, K.D. GEHRING, M. HUBIG 2000. Determination of sex from femora. *Forensic Science International* 113, 315–321.
- MEINDL, R.S., C.O. LOVEJOY 1985. Ectocranial suture closure: a revised method for the determination of skeletal age at death based on lateral–anterior suture. *American Journal Physical Anthropology* 68, 57–66.
- MELLA PARIANI, R., J. LORENZI 2006. Cittiglio (VA). Chiesa di San Biagio. Indagine archeologica nella navata. *Notiziario Soprintendenza per i Beni Archeologici della Lombardia* 160–163.
- PEREGALLI, G., A. RONCHINI 1989. L'archivio della chiesa plebana di San Lorenzo in Cuvio. *Consorzio Archivistico* 7, 1174–1250.
- PERPENTI, A.L. 1849. Alcune iscrizioni rinvenute ne' distretti d'Angera, Cuvio e Gavirate. *Almanacco della provincia di Como* 25.
- POZZI, G. 1986. Cittiglio, antiche lapidi. *Il Settimanale della diocesi di Como*.
- PROKOPEC, M., L. HALMAN 1999. Healed fractures of the long bones in 15th to 18th century city dwellers. *International Journal of Osteoarchaeology* 9(5), 349–356.
- ROGERS, J., T. WALDRON, P. DIEPPE, I. WATT 1987. Arthropaties in paleopathology: The basis of classification according to most probable cause. *Journal of Archaeological Science* 14(82), 179–193.
- TROTTER, M., G.C. GLESER 1952. Corrigenda to the estimation of stature from long bones of American whites and Negroes. *American Journal Physical Anthropology* 19, 213.
- UBELAKER, D.H. 1989. *Human Skeletal Remains: Excavation, Analysis, Interpretation* (2nd Ed.). Taraxacum, Washington DC.

