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The Gällared Shroud: a clandestine early 19th century foetal burial

Abstract

A tiny wooden box was accidentally discovered directly underneath the wooden floorboards of the 19th-century rural parish church in Gällared, Sweden during restoration building works carried out in 2015. Upon closer examination, it was revealed that the simple wooden box was a coffin containing the naturally mummified skeletal remains of a first-trimester foetus wrapped in a cotton burial shroud. This paper describes the coffin and its contents, focusing on the well-preserved burial shroud that contributed significantly to the preservation of the foetal remains. The study of the shroud provides insight into the information such textile finds can contribute both to elucidating the history and evolution of the burial itself and to furthering the understanding of deliberate concealment of foetal remains within and around churches, and of infant death and grief.

Keywords: burial shroud, material culture, natural mummification, burial rituals, foetal death, dermestid beetles, Gällared, Sweden

Introduction

During the winter of 2015, restoration building works were carried out in the 19th century parish church in the rural village of Gällared located in the county of Halland in southwest Sweden. When the wooden floor in the southwest part of the nave was removed, the construction workers discovered a small wooden box underneath the floorboards (Tegnhed, 2016, 8-9). It was not known to them at the time that the box could be a clandestine burial. When recovered, the box was intact and sealed (fig. 1a). Assuming it was empty, the workers removed the lid, which proved easy because the nails had rusted through. Inside the box was a piece of folded cloth, which, upon closer examination later, revealed to be wrapped around and stuck to small pieces of what were suspected to be skeletal remains (fig. 1b). It became clear that the box was a coffin and the textile a burial shroud. This led to a systematic study of the box and its contents, and of the cultural practices relating to pre-term and unbaptised individuals that prevailed at the time of the

interment. The excellent preservation enabled detailed observation of features and presented the opportunity to gain insight into the factors that contributed to this, especially the burial shroud. The aim of this article is to present this analysis, focusing on the burial shroud and place the find in a broader physical and social context. In this article, the medical definition of a foetus as an stillborn baby from the eighth week after fertilisation until birth is used. Foetal age (also known as fertilisation age, conceptional age and embryonic age) is used unless otherwise specified. This the actual age of the foetus calculated from the day of conception whereas gestational age is the common term and is determined from the first day of the last normal menstrual period.

The village of Gällared – population 393 in 2018 (Statistics Sweden) – is situated in an ancient cultural and cultivation landscape in rural southwest Sweden in the county of Halland. Its rural parish church is located on a gently sloping hill on the northern outskirts. There has been a parish church on the



Fig. 1: The Gällared wooden coffin (10.7 x 6.8 x 5.3 cm) containing the wrapped foetal remains. Fig. 1a. The lidded coffin. Fig. 1b. The open coffin with textile burial shroud (Images: Uno Andersson, Kulturmiljö Halland)

site of the current church since at least 1100 to 1350 (Nilsson 2002, 24; 2009, 358) although its exact dating is uncertain. It is constructed of white-plastered local graystone with a wooden shingle roof. Originally a rectangular longhouse, it underwent remodelling through the centuries, including the addition of a stand-alone wooden bell tower. The present building dates from its enlargement and the addition of an integrated bell tower at its west end in 1856 (fig. 2) (Karlsson 1982, 54). The church has no crypt, and there has been no custom of inhumations in the church (Uno

Andersson, pers. com. 22 May 2020). The church has several medieval works of art of note, including a 13th century stone baptismal font of Gotland limestone, a 15th century polychrome wooden crucifix and Madonna in oak, and a late 15th century wooden figure of St Olaf.

By the end of the 1700s, Gällared's parish church had not only fallen into serious disrepair but was also considered insufficient for the village population (Karlsson 1982, 47 & 49). The wooden shingle roof was collapsing into the interior, lime plaster was delaminating from the interior stone walls and the mortar securing building stone was crumbling. A major building campaign was undertaken in 1831 to tear down, rebuild and extend the old church. The condition of the exterior walls was such that most of the church structure had to be demolished. The longhouse was extended in the east ending with the addition of a semi-circular sacristy. In the west end, thinner walls were erected atop broken down older, thicker, foundation walls. This was a period when Sweden was experiencing an economic downturn at the end of the 1820s and the beginning of the 1830s (Jonsson, 1994, 245-246). The population of the parish at that time was approximately 760 people (Larsson 1982, 85). The rebuilding began in May and except for three weeks of haymaking, the construction work proceeded into the autumn. The male parishioners were required to provide building materials (both quarried stone and wood) and to perform day labour, which is estimated to have been 3,000 days (Karlsson 1982, 51). The year 1831 was a hard year in the parish. The entire spring through autumn period was rainy. This delayed the spring sowing, damaged crops and caused a poor harvest. Additionally, a typhoid epidemic descended upon the parish. Together, these events delayed the rebuilding of the church, which was not completed until November (Karlsson 1982, 52). There is no doubt this building enterprise was a strain on both the economic and labour resources of the village.

Restoration building works within the church in 2015 were necessary to meet requirements for accessibility compliancy. During this work, it was discovered that the floor and floor beams in the western parts of the nave, especially on the north side, were rotten. In conjunction with replacing the floor, the contractor found it advisable to clear the crawl space under the floor and lower the ground level along the west walls of the church. It is these walls that were built atop the thicker medieval walls in the 1831 rebuilding. The well-ventilated crawl space was filled with building rubble (stone, masonry mortar and plaster) and fine

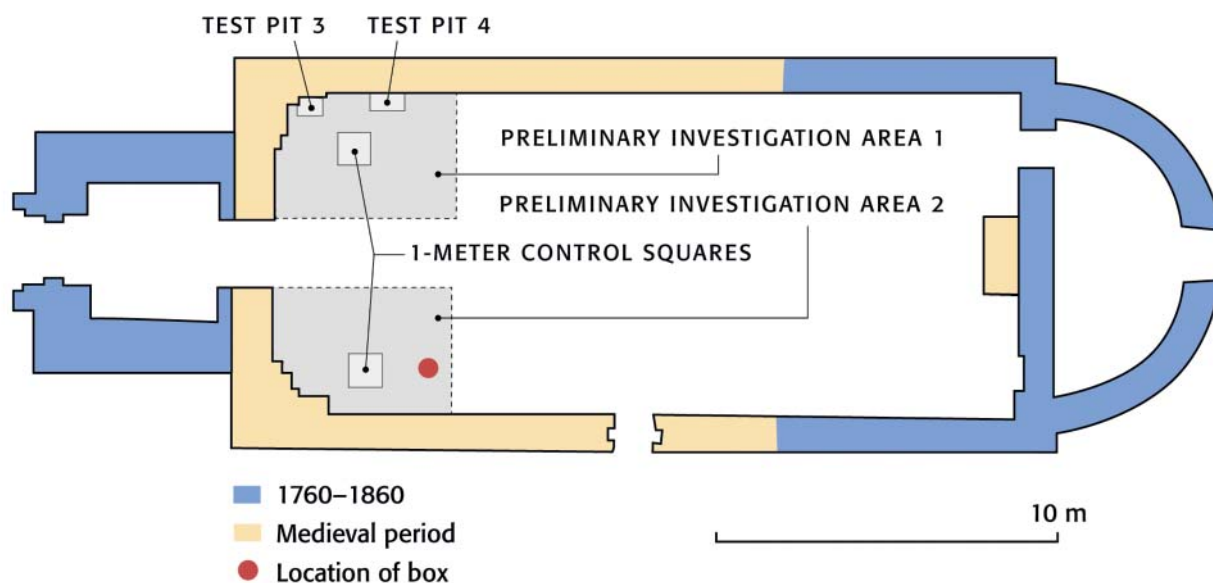


Fig. 2: Architectural plan of Gällared Parish Church, Sweden illustrating the remains of the medieval local graystone rectangular long-house, its rebuilding (1831) and bell tower addition (1856). The 2015 archaeological investigation and location of the coffin containing the foetus found underneath the floorboards are noted (Image: Uno Andersson, Kulturmiljö Halland)

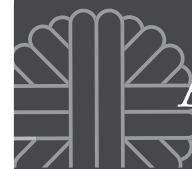
sandy soil in addition to the thicker remaining stone walls of the medieval church. It was established that the older cultural layers and remaining construction elements of the medieval church preserved under the floor required an archaeological investigation to ensure that any structures or cultural layers relating to the medieval church were recorded. Several 1 m control squares and test pits were opened up and the area was investigated by Kulturmiljö Halland (fig. 2) (Tegnhed 2016). This was followed by a watching brief. It was during the removal of the floor that the builders discovered a small lidded wooden box sitting on building rubble directly underneath the floorboards. They reported that there were no gaps in the floor in the vicinity, and that the box was placed so far in under the floor that it most likely was concealed during the original laying of the floor in 1831 (Tegnhed 2016, 8-9).

The coffin and its contents

The simple wooden coffin is rectangular in shape. The coffin's exterior including lid measures 10.7 x 6.8 x 5.3 cm (l x h x w) and the interior is 8.2 x 4.5 x 3 cm. It is crudely constructed of six small dissimilar pieces of roughly sawn and planed pieces of pine (*Picea*) timber, with a mean thickness of 1.2 cm (fig. 1). The sides, corners and base are butt-joined together with wrought iron square-cut nails (Wells 1998), which have corroded, staining the surrounding areas rust brown.

Additionally, the flat lid was fastened in place with nails. The use of adhesive to join the pieces of wood was not detected. No physical evidence of burial ritual was observed, such as exterior hardware or decoration (either painted or textile), or interior furnishings or burial goods. The edges of the individual pieces are neither precise nor square cut and vary from normal to rough and uneven. The lid and several side edges are roughly bevelled. Although the pieces are well-secured to one another, the overall shape of the coffin is skewed. The coffin is complete and was intact when discovered. It received no invasive interventive conservation treatment. The plank pieces are in good condition with no sign of past damp or insect activity either on interior or exterior faces. Exterior sides of the coffin are dusty and dark grey in colour. There is no evidence of water or soil staining on the coffin. The interior faces of the wood are a dusty, natural wood colour with no sign of staining.

Considering the coffin was constructed to house the Gällared foetus, its interior space was assessed to estimate the maximum size of foetus – in its natural crouched (sleep-like) position. The Gällared foetus prior to wrapping could not have exceeded a length of 6 to 7 cm. A foetus older than 10 to 11 foetal weeks – or late first trimester – would not have fit comfortably into the coffin (Napolitano et al. 2014, table 2). The preserved skeletal remains were stuck to the



inside face of the burial shroud in approximate anatomical arrangement adhering to the fabric with dried connective tissue. Their condition is indicative of natural mummification. They constitute 23 tiny bones, including ribs from both sides of the body (nine from the right and eight from the left), the left and right halves of the unfused mandible, the right humerus, an unidentified long bone and several pieces of paper-thin bone. These ossified skeletal parts exhibit an etched and fibrous surface morphology. The age at death of the foetus was estimated through assessment of times of appearance and fusion of major centres of ossification and the size, morphology and state of preservation of the skeletal elements in comparison with current data on embryonic and foetal development. It is estimated that the foetus died in foetal week nine.

The textile shroud is rectangular in shape (14.7 x 8.5 cm) with single-fold, turned-under edges on all sides and weighs 3 g (fig. 3a). The raw edges are straight and were scissor-cut prior to being turned under. The fabric is a regular diagonal 2/2 twill of medium quality in undyed cotton (*Gossypium*) with a thread count of 19 to 22 threads per cm in both the warp and weft directions. Its quality and use of the same yarn as both warp and weft points to it being handwoven and most likely the product of household textile production, which at that time produced the largest volume of cloth in Sweden, compared to the handicraft factories and mechanised factories (Schön 1980, 64-67; Nilsson & Schön 1978, 93-94). There are no selvages on the textile. The Z-spun threads range in thickness from 0.25 to 0.9 mm with a light to medium twist. The single-fold, turned-under edges are 0.5 to 0.7 cm wide and were fastened with a whipstitch using linen thread (*L. usitatissimum*). These edges are no longer completely



Fig. 3: The Gällared burial shroud. Fig. 3a. The folded shroud. Fig. 3b. The unfolded shroud illustrating the stained area and embroidery on the inside face (Images: Anders Andersson, Kulturmiljö Halland)

fastened. They now have a scalloped contour from the stitching, and there are remnants of the thread in the stitch holes. There are two small circles coarsely embroidered next to one another on the fabric in the same sewing thread (fig. 4). Their nature could not be identified; however, it has been suggested that, considering the cloth was repurposed, these could be

Area of cloth	L*	a*	b*	ΔL^*	Δa^*	Δb^*	ΔE^*
Original (O)	79.50 ± 0.22	1.38 ± 0.12	12.13 ± 0.89				
Current (C)	73.65 ± 1.06	2.08 ± 0.22	15.23 ± 0.87	5.85 ↓ (O-C)	0.70 ↑ (O-C)	3.10 ↑ (O-C)	6.66
Staining (S)	67.24 ± 1.26	3.97 ± 0.30	18.56 ± 0.83	12.26 ↓ (O-S)	2.58 ↑ (O-S)	6.42 ↑ (O-S)	14.08

Table 1: Colour of burial shroud on the inside face. The colour of the inside face of the burial shroud in colour coordinates of the CIE L*a*b* colour coordinate system. The colour of the cloth was measured for pre-burial, original (under seams) = O, post-burial = C, and stained areas =S. Colour difference was calculated between original and post-burial (O-C) and original and stained areas (O-S). Symbols: L* = lightness-darkness scale; a* = red-green chromatic scale; b* = blue-yellow chromatic scale; ΔL^* Δa^* and Δb^* = change in lightness and colour coordinates; and, ΔE^* = total colour change. ↓ ΔL^* darker; ↑ Δa^* increase in red; ↑ Δb^* increase in yellow. Following European Committee for Standardization CSN EN 15886 (2010).



laundry marks (Jane Malcolm-Davies, pers. com. 27 May 2020).

The interior face of the textile is stained along one half (fig. 3b). Colour measurement under a folded-over corner reveals the fabric was originally off-white (table 1). The current colour of the fabric is darker with a beige tone and with visual signs of light staining. The stained areas are darker with a brown-pinkish tone.

The textile is intact and in good condition. It is dry, soft and flexible, and can be handled without damage to the fabric. It received no invasive interventive conservation treatment. It has two non-creased folds edge-to-edge in the width direction. There are several weak areas where threads of the weave have been physically degraded but not broken through. There is no indication of active or recent biodeterioration by microorganisms or insects. However, there is some cotton-fibre frass under one of the folded-over long edges.

Fragmentary insect remains were found inside the coffin and scattered on the burial shroud. These were determined to be mostly parts of dermestid beetles at different life stages: a cast larval skin, a partial abdomen and a leg, plus the head of an ant (Rasmus Hovmöller, pers. com. 10 May 2016).

Discussion

The practice of burying foetuses within the church or walls of the consecrated graveyard surrounding the church was common in Scandinavia (Jonsson 2006, 84), and the custom dates to the Early Medieval period. Religion was a major structuring principle for beliefs and practices regarding burial during this period (Mytum 2004, 13). Medieval canon law dictated detailed directives for burial in consecrated church graveyards. Suicides, thieves, criminals, strangers, drowned bodies and unbaptised adults and children (including miscarriages, stillborns and newborns) were not entitled to burial in consecrated ground. With the denial of burial in consecrated soil, and the associated difficulties of the unbaptised children to find peace and come to the kingdom of heaven, alternative illicit burial customs developed for them (Jonsson 2006, 84; Hagberg 2015, 517-519). This included being secretly buried (with or without a coffin) in the bottom of a newly dug grave or placed together in the grave with the next adult burial (for example, Olsson 2003, 27); hidden in the coffin of an adult (for example, Ahlström et al. 2018, 16-17); or burial in a small container concealed within the church or graveyard wall. Burial directives that denied unbaptised children a Christian burial in consecrated ground led to fears surrounding the corpse and soul



Fig. 4: Close-up of the embroidered area of the shroud (Image: Anders Andersson, Kulturmiljö Halland)

ranging from the unfortunate souls becoming restless spirits, such as so-called *mylings* in Scandinavia (for example, Hagberg 2015, 566-579; Kätterström Höök 2015, 15-16; Lindquist 1981, 7-12; Bø 1960), to abuse of their bodies by witches (Hausmair 2017, 2).

Gradually, from the late 16th century through to the late 18th century, a more tolerant attitude developed, and unbaptised newborns, followed by stillborns, were permitted burial in the church graveyard. The situation of small foetuses remained critical and, as a result, the custom of clandestine burial continued; although, it seems that this practice became limited to contained burial in small containers and cloth bundles and no longer earth-cut graveyard burial. Such burials constituted a transgression of official church regulations and were parents' attempt to achieve burial within consecrated ground and challenge their children's damnation.

The investigation of crypts is an expanding archaeological research area in Scandinavia (see, for example, Karsten and Manhag 2018; Ahlström Arcini 2016; Anthony 2016; Jonsson 2006). Meanwhile, archaeological investigations are often executed in



association with restoration and construction work carried out in medieval churches and churches with medieval structures and cultural layers. The extent of these surveys usually varies with the scope of the construction activity. Traditionally, the mapping of the church building's architecture and construction details was the focus; however, there is increased emphasis on systematic collection and documentation of the many small finds that are recovered from such investigations, especially from underneath the floorboards. This includes small containers containing foetal burials.

Comparative material

Bø (1960, 99-152) undertook an extensive ethnographic study of the occurrence of clandestine historical foetal burials in Norway and Sweden. This practice ranged from the medieval period to the mid-20th century (Magnussen 2005, 58). In response to the 1953 survey Bø and Lid sent out to all parishes in Norway, one builder commented that he had found hundreds of small containers (Bø 1960, 134, 145). Bø recounts many churches in Norway and Sweden that provided accounts of such finds. Since the custom of burying foetuses in small boxes within the church or cemetery was well known, they were recognised as such when found and there was no reason to open and examine the contents. Consequently, there is scant comparative physical material. Another contributing factor to the scarcity is that archaeological investigation of crypts has been a limited research area in Scandinavia.

Only a few boxes and coffins have made their way into museum collections. There are three boxes in the collections of the Nordic Museum, Stockholm, Sweden (Kätterström Höök 2015, 16), inventory numbers NM.0285614+, NM.0285615+ and NM.0285616+. Furthermore, there is one in the collection of Jönköpings läns museum (Jönköping County Museum), Jönköping in Sweden (Londos 1995, 49-51); and eight in the collections of the University Museum of Bergen, Norway (Magnussen 2005, 54-57).

Many of the boxes in museum's collections do not contain skeletal remains. In those that do, the remains are wrapped in textile or newspaper. Only the skeletal remains in the coffin from Bringetofta Church in Jönköping Museum are reported as analysed (Londos 1995, 49). One of the wooden coffins in the Nordic Museum (inventory number NM.0285616+) and the coffin in Jönköping County Museum (Londos 1995, 48-49) are similar to the Gällared coffin in period (1700s to 1800s), size, shape, construction and lack of decoration with the exception that the wooden pieces are joined together with wooden plugs. The iron nails

of the Gällared coffin place it in a later part of this period.

The burial containers range from small homemade boxes, to secondary use of various types of packaging such as cigar boxes, butter boxes, matchboxes, pieces of cloth and newspaper. The people of the community made use of the materials available. Containers are both undecorated and decorated, including some painted or carved with elaborate designs (Bø 1960, 150; Magnussen 2005, 55-57; Sellevold 2008, 7-9, 23). Most of the boxes are of such a nature that they could easily have been constructed by anybody; although, Bø (1960, 150) reported three centres in Norway for production of such boxes for sale. Whilst crudely constructed from scrap wood and undecorated, the Gällared coffin was specifically made for the foetus.

There is even less comparative textile material. Reports of box contents, when investigated, mention that the remains are packed or rolled in a piece of textile (Sellevold 2008, 18, 19, 23) or wrapped in a white cloth (Magnussen 2005, 55-57). The skeletal remains in the coffin recovered from Bringetofta Church were wrapped in a very worn and repaired linen children's shirt in tabby weave (Londos 1995, 50). Kätterström Höök (2015, 16) reports there are no skeletal remains in the coffins in the Nordic Museum but that one (NM.0285615+) contains flax and cotton fibres. One exception is a match-stick box in the Bergen University Museum collections that, in addition to containing a white cloth, was itself packed in a white cloth (Magnussen 2005, fig. 4; Østigård 2009, 19). Visual inspection of an image of the cloth (Østigård 2009, 19) suggests that the fabric is similar to the Gällared burial shroud in that it is a white, diagonal 2/2 twill of medium quality. The fibre could not be identified. Although a dearth of coffin textiles hampers further comparative technical study, the burial wrapping of the Bringetofta remains provides insight into the careful handling and attention to details the Gällared foetus was afforded. The Bringetofta wrapping was a repaired, fragmentary and very worn-out piece of child's clothing; whereas the white rectangular Gällared burial shroud was fashioned – probably by someone who was grieving the death of the child – with carefully hemmed, cut edges from a textile that was, judging from the embroidery, probably from re-purposed clothing or household linen but not worn-out, broken-down cloth. Comparative textile material has not come to light.

The environmental conditions surrounding the concealed Gällared coffin and its contents would have consisted of: low wintertime and cool summertime temperatures; low humidity; absence of weathering



(for example, wind, rain, snow, ice, sunlight); exchange of air; and a dry, sandy soil ground with mixed building rubble, plaster and stones. The present configuration of the church sitting on a small rise would have contributed to favourable climate conditions in the crawl space. The surrounding environment over the almost 200-year history of the coffin's concealment was relatively stable and undisturbed as evidenced by the exterior and interior colour and condition of the coffin wood; the darkening and yellowing of the shroud fabric, which is in agreement with the natural oxidation (i.e., not resulting from burial) of cellulose-based plant fibres with age; and insect fauna that inhabit dry environments. The fresh pine wood, from which the coffin was constructed, produces turpenoids with significant antifungal and antimicrobial properties (Piombino-Mascalì et al. 2014, 119) and this may have contributed to preservation in the initial burial phase as well.

During the early postmortem period of burial, the dry, aerated environment suggests that the Gällared foetus became naturally mummified by the principal mechanism of desiccation. This may not be apparent upon initial observation of the remains due to the absence of dried tissue. However, upon closer examination, the presence of minute fragments of dried tissue on and the adhesion of the skeletal parts to the burial shroud - as evidenced by the physically degraded areas in some threads of the weave - are certainly indicative of mummification. Mummification of a deceased vertebrate can be seen as a competition between desiccation and decomposition (Micozzi 1986, 954). Decomposition in a cool, dry and well-aerated space would be expected to accelerate water loss by evaporation, both from the skin and the surrounding textile. Wrapping in a textile shroud will facilitate dissipation of any fluids leaking from the foetus (Aufderheide 2003, 303) and there were signs of liquid staining on the shroud.

Experimental forensic and bioanthropological studies carried out to investigate the effect of clothing and wrapping on the rate of human postmortem tissue desiccation concluded that the most important factor influencing the rate of postmortem body water loss is the environment at the skin surface and that clothing accelerates the desiccation rate (Aturaliya & Lukasewycz 1999, 893-896). Thus, the Gällared shroud in contact with the foetal skin surface, would have substantially enhanced the extent and rate of body water loss and soft tissue mummification in contrast to no wrapping. The shroud would have continually, effectively and rapidly removed water from the foetal skin surface hastening the desiccation of the soft tissue.

The nine-week Gällared foetal corpse would have no gut flora to putrefy upon death (Burcham & Jordan 2017, 33-34). Its weight is estimated to have been approximately 20 to 25 g (extrapolated from Fazekas and Kósa's (1978) data set cited in Kósa 1989, table 2.1) of which 94% or 19 to 23 g (19 to 23 ml) would be water (Moulton 1923, table 1). The folds in the Gällared shroud bear evidence of double-folding, not tight winding, around the foetus. The staining is an indication that the textile was wrapped around something slightly damp, and that the foetal remains were not mummified when placed in the coffin. Remains in a saturated state would have discoloured the entire fabric and led to its biodegradation. It seems likely that the foetus was washed and dried prior to being wrapped. The specific area of staining along one side points to the foetus being in direct intimate contact with the shroud, and that the shroud was double-folded around the foetus with the short side parallel to the length of the body. The medium spin of the yarn and the medium weave of cloth created a porous textile. Together with the natural moisture-wicking properties of plant fibres, the burial shroud was well-suited to transport moisture, including body fluids, away from the foetal body. The loose wrapping will have facilitated the drying out of the soft tissue and brought about relatively widespread desiccation of the corpse (Bouquin et al. 2013, 14).

Furthermore, the wrapping of the foetus in the shroud restricted the scattering of the skeletal parts as the body decomposed, and thus led to those parts retaining the anatomically correct position of the foetal skeleton (Duday 2009, 45). This significantly aided the identification of the individual skeletal remains.

The foetal remains are predominantly skeletal; however, as previously noted, these were stuck to the fabric by dried-out connective tissue. That and the nature of the modified bone surface of the skeletal parts evidence a mummified state but one that has experienced insect attack. This is supported by the recovered insect fauna. Initially, the shroud would have protected the foetus from the access of insects once in the coffin. Once inside the shroud, however, the dermestid would have consumed the small amount of dried tissue of the mummy leaving the denser ossified skeletal parts.

The remains from dermestid beetles provide some clues about the environmental conditions experienced by the small coffin. In a forensic context, blow flies (*Ophyra sp.*) are among the first insects to visit a corpse and they prefer to feed on bodies before they become dried out. That there was no evidence of *Ophyra* in the tiny casket may indicate that they could not get



access to the foetal remains or that it was interred during cold months (Turner-Walker & Scull 1997, 326). *Dermestidae* (skin beetles) feed on dead plant and animal remains, and in a forensic context are relatively late arrivals and feed on dried skin, tendons and bone. Electron microscope studies have demonstrated that the mouthparts of dermestids can modify the surfaces of bones causing grooves and a fibrous appearance (Fernández-Jalvo & Marín Monford 2008, fig. 3). They are typically small and would be able to infiltrate small cracks and crevices to gain access to the interior of the coffin. In the case of the Gällared foetus one might not expect a larger population of diverse insect species to be associated with such a small corpse.

Beyond exposing one specific event and in addition to the part they played in the postmortem preservation of the Gällared foetus, the simple coffin and burial shroud bear evidence of a complex material language heavily imbued with cultural meanings and values (Mui 2015, 154). The burial treatment of the foetus was not simply to accomplish the removal of its decaying remains. The foetus was handled with care and dignity after its death and was buried with attention to details. This was at a time not only when the village was beset with misfortune but also when miscarried individuals were not permitted similar burials to other members of society. Although crudely constructed from scrap wood, the lid and the edges of the small box used for the burial were finished. The piece of textile was fashioned into a burial shroud with carefully hemmed edges. It was carefully loosely wrapped around the foetus; it was not meaning-free and simply a piece of cloth wrapped around a corpse (Mui 2015, 150-151). Both were fashioned with care and specially made to house the foetal remains and witness an adherence to providing as decent and appropriate a burial as possible (Davidson 2016, 235; Douny & Harris 2014, 20). Neither was a haphazard solution whether improvised through resourcefulness or necessity. (Cannon & Cook 2015, 401). The formable textile wrapping protected the body and the stiff wooden coffin wrapping protected the wrapped body (Douny & Harris 2014, 15). The parents (mourners) made conscious decisions about the manner in which the deceased foetus was treated and arrangements for its emotionally motivated illicit internment in sacred ground under the newly laid floorboards of the parish church. This particular burial ritual represents an expression of strategy for coping with and managing loss, grief and transition.

Ethical considerations related to the raising, handling, study and exhibition of human remains from archaeological contexts have been and continue to be a

much-debated issue (for example, World Archaeology Congress 1989; ICOM 2004; Jennbert 2004, 327-347; Tarlow 2006, 199-216; DeWitte 2015, 10-19). The dead should be treated with dignity and respect. This applies to the intimately associated textiles too (Peacock 2007, 12-16; Bakó 1998, 150-151; Janaway 1998, 17-18). The Gällared coffin was discovered by chance. The burial of early stage fetuses in boxes or other containers within churches or churchyard walls is no longer within living memory. Unknowingly, the Gällared box was opened up and the folded textile investigated before those on site realised that it contained human remains.

A less-structured part of the study of the Gällared find consisted of informal correspondence and conversations with practicing osteologists and several archaeologists representing universities, museums and forensic institutes in Scandinavia and the UK. Of the 19 respondents, many stated that they encountered graves with small children or fetuses in both cemeteries and inside churches. However, fewer than five were aware of the tradition of secretly burying small fetuses within churches or churchyard walls. This is of interest considering Bø's (1960, 99-152) survey in the mid-20th century found that this custom was well-known in rural areas at that time.

The remains of the Gällared foetus will be wrapped once again in their burial shroud and returned to their coffin, and then be reinterred in Gällared Parish Church under the floorboards where they were discovered (Uno Andersson, pers. com. 2019).

Conclusions

The Gällared coffin was a clandestine burial. There is no record or knowledge of a similar secret burial within Gällared Parish Church (Uno Andersson, pers. com. 20 April 2020). Based upon the find context, it is posited that the find dates to autumn 1831. The rebuilding of the church between the spring and autumn 1831 would have provided not only a convenient supply of fresh scrap wood for the coffin, but also a convenient place for concealment when the floor was laid inside the new church. This is in agreement with the few fragments of insects that point to burial during a cooler period. The Gällared coffin was constructed using iron nails, whereas recovered boxes of earlier date have wooden nails. The cotton fibre of the burial shroud also supports an early 19th century date. It was at the end of the 1700s that cotton began to make inroads into the Swedish market eventually overtaking linen as the primary textile industry (Schön 1979, 99-136).

Although there are many examples of almost full-term foetal or stillborn child burials recovered from



archaeological contexts, early stage fetuses are so tiny and poorly ossified that the potential to recover them is low (Halcrow et al. 2018, 86). It is possible the first-trimester Gällared fetus is the youngest recovered from an archaeological context. The conditions conducive for preservation by natural mummification were exceptional: 1) an aerated 'crypt' instead of an earth-cut cemetery burial; 2) contained in a well-sealed wooden coffin placed in a stable cool environment; 3) the high water content and lack of gut bacteria of the foetal corpse; and, 4) wrapped in a highly absorbent textile burial shroud.

Beyond the textile material itself, archaeological textiles are diagnostic resources. They contain physical information not only in the form of technique, material and design, but also within patterns of wear and use, staining and alterations – evidence of creation, context and use (Lister 2002, 99-100; Brooks et al. 1996, 16-17; Cooke 1988, 28-29). In addition, there is the truly hidden evidence revealed by chemical analysis such as dyestuffs, age and protein preservation. The Gällared shroud was not only instrumental in but also bears witness to the preservation of a young early 19th century fetus in a church archaeology context.

Commonly, the importance of burial textile finds, in particular, lies in providing evidence of burial customs, funerary fashion and in understanding garments of the period (e.g., technique, fibre, dyes). Less attention is given to the fact that they preserve evidence of the history and evolution of burial itself (Duday 2009, 50-51) evidenced in staining, residue, folds, damage and loss (e.g., Glover 1990, 49-52). Similarly, excavated mortuary evidence has tended to be seen as a source for biological data with the cultural dimension often being overlooked (Mytum 2004, viii). Study of the Gällared skeletal remains, coffin and burial shroud taken together provide broader insight into understanding not only the deposition and postmortem history of this find but also its associated social and cultural life.

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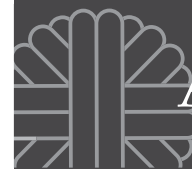
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