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Poisonous Beauty
A White Lead Dispenser from an Indigenous Roman-period Chamber Grave in Nijmegen

Abstract

An enigmatic grave good from a wooden chamber grave in an indigenous (Batavian) Roman-period cemetery in Nijmegen (prov. Gelderland/NL) has been identified using various techniques. It is a section of a plant stem filled with cerussite (white lead), which appears to have been encased in a bronze cylinder. Additional Scanning Electron Microscope research led to a more specific determination of the vegetal part: it is a marsh plant, probably water horsetail (*Equisetum fluviatile*).
The thin hollow bone at one of the ends of the stem may have contained a bundle of hairs, so it could have been a slender brush. Even without such a feature, the artifact may be considered a cosmetic attribute. White lead was a well-known face whitener in the Roman world. The narrow end, however, suggests that the artifact was more likely a white eyeliner dispenser.
The artifact may have originated in Eastern Europe, as suggested by another remarkable find accompanying the cremation remains: a fibula unparalleled in Northwestern Europe. The closest known counterparts come from the eastern basin of the Danube, where Batavian auxiliaries were also stationed.

Keywords

Roman period / white lead / cosmetics / water horsetail

For years, a chalk-like stick with a thin tube at the end was a mysterious find, until it was subjected to microscopic examination and archaeometric analyses. It was found in a rural Batavian cemetery dating from the Roman period in the northern part of Nijmegen (prov. Gelderland/NL). A description of the burial and the specific artifact will be followed by a discussion of the results of various analyses and an interpretation of the artifact in its cultural context, which, altogether, leaves several questions unanswered[1].

1 This contribution was adapted from an article that was published in Dutch in 2021 (van den Broeke et al. 2021).

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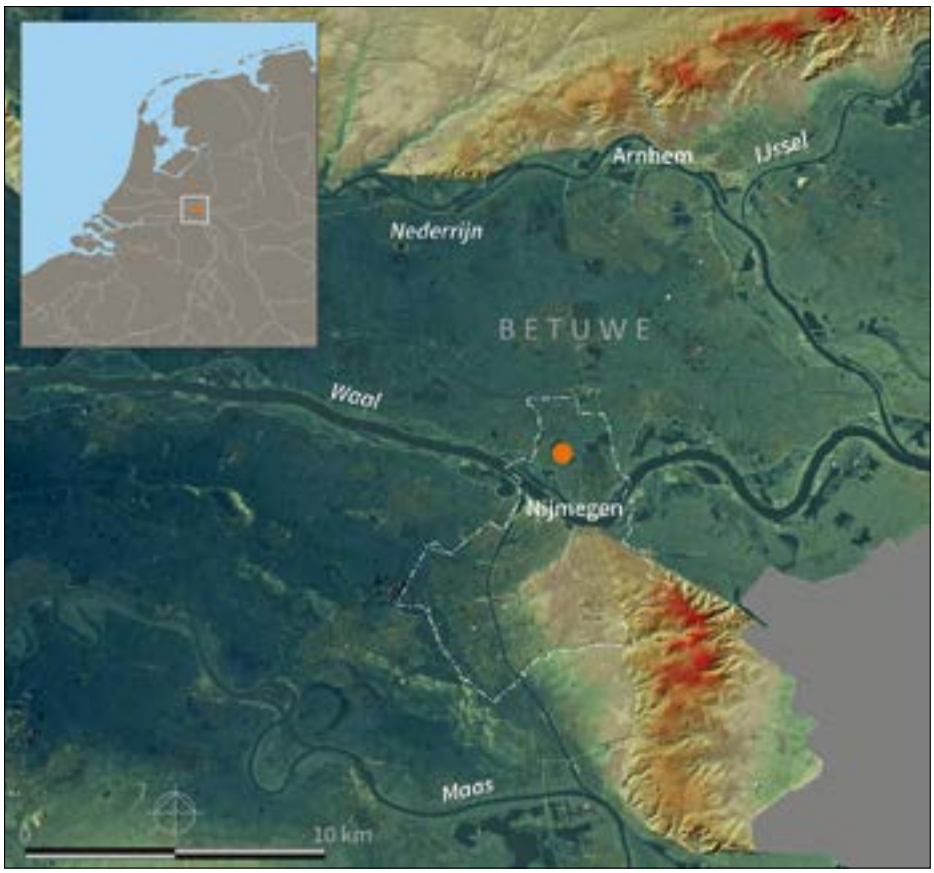

Fig. 1 The site's location (●) within Northwestern Europe and within the Betuwe region, a river plain situated partly among the remains of ice-pushed ridges dating from the Saale glaciation (relative elevation map). – (Map Actueel Hoogtebestand Nederland; edited by R. Mols, Bureau Archeologie en Bodemkwaliteit, municipality of Nijmegen [BABN] / N. W. Willemse, RAAP Archaeological Consultancy).

A Find from a Wooden Chamber Grave

The object was discovered during large-scale investigations in the part of the eastern Betuwe region where the municipality of Nijmegen acquired territory in the late 1990s (fig. 1). In 1996, the municipal authorities of Nijmegen started carrying out archaeological research in this area prior to its scheduled redevelopment (Waalsprong project). Among other things, six cemeteries dating from the Roman period have so far been discovered and investigated[2]. But two of them have not yet been published because only fieldwork was financially supported until 2004. One of these two is the cemetery of Nijmegen-Rust Wat, which yielded the remarkable grave good highlighted here[3]. This cemetery was discovered in 2001 and excavated in 2003–2004 under the supervision of the first author (P. v. d. B.)[4]. It was found to comprise around 100 graves, mainly cremation graves, dating predominantly from the 2nd century and the first half of the 3rd century[5]. Several burial pits were surrounded by a square or round ditch enclosure[6].

As the cemetery has not yet been analysed, only a first impression can be given of the cremation grave that yielded the find discussed here. Remains of wood and iron nails that came to light at the corners of the inner rectangle, which measured approx. 120 cm × 90 cm (fig. 2), suggest that the burial comprised a wooden chamber buried within a wider pit[7]. The chamber's flat base lay approx. 10 cm above the undulating floor of the pit, which had been dug into the clay soil to a depth of at least 31 cm.

2 See Hendriks 2024, esp. tab. 1 for an overview.

3 However, it has received small-scale attention in van den Broeke/Ball 2012; van den Broeke 2017; Hendriks 2024. – A final publication is being prepared as part of the »Uitwerking oud onderzoek Waalsprong« programme funded by the Ontwikkelingsbedrijf of the municipality of Nijmegen. These are the Bo6 and Bo8 projects of the (now) Bureau Archeologie en Bodemkwaliteit of the municipality of Nijmegen (BABN) at site 108 in Nijmegen-Noord.

4 The cemetery was discovered by chance at the eastern end of the Bronze Age site published in van den Broeke et al. 2023.

5 Provisional identification of pottery (J. Hendriks, BABN) and fibulae (S. Heeren, Vrije Universiteit Amsterdam).

6 See provisionally Hendriks 2024, fig. 4. The relevant grave is S9.8.

7 Graves of this kind, which seem to have been reserved for members of the elite, have been found in urban Nijmegen and Huissen-Loovelden (prov. Gelderland/NL) (Koster 2013; van der Feijst et al. 2017, grave 24, respectively). In total, two chamber graves have been excavated in the Rust Wat cemetery (Hendriks 2024, 374).

Fig. 2 View of the burial in which the described artifact was deposited as a grave good. The inner rectangle represents the inside of a shallowly buried wooden chamber. The jug that was found in the gap between the remains of the chamber and the pit into which it was sunk will have been placed on top of the chamber. The dark band at the back left suggests that the pit had a wooden lining. – (Photo BABN).

Apart from a concentration of cremation remains, three separate blocks of soil containing grave goods were recovered. One of them comprised mostly glass fragments, the second fragments of (sheet) bronze. The third block was found to contain an enigmatic artifact of indistinct material (**fig. 3**) consisting of a cylindrical stick protruding from a kidney-shaped mass of dark, possibly organic material, such as leather or wood. After the soil had been peeled away[8], a similarly shaped concentration of dark matter, of almost the same length as the stick, was found lying directly next to and partly overlapping it, here and there accompanied by remains of extremely thin bronze (**fig. 4**), suggesting that the stick was encased in bronze. The end of the stick held a bone tube (**fig. 5**).

Fig. 3 Detail of the chamber grave at a deeper level showing the cremation remains on the right, a concentration of bronze flakes at the bottom left and a concentration of glass fragments on the left. The red arrow indicates the artifact described here, protruding from a kidney-shaped dark mass. – (Photo BABN).

The white stick, with a diameter of 0.7 cm, had broken into three parts. Due to its fragile nature it was not completely removed from the block of earth[9]. It has a length of 8.6 cm – including the bone tube – with a rigid linear pattern on the surface (**fig. 6**). The inserted bone tube is barely 1.1 cm long with a diameter of 0.25 cm. Its cylindrical interior with a diameter of 0.1 cm may be the inside of a naturally hollow bird bone[10].

Identification

The stick's actual composition was determined in 2018 and 2019 with the help of the Cultural Heritage Agency of the Netherlands (RCE). An initial test using a handheld XRF spectrometer and a microscope

8 This work was meticulously carried out by the restorer F. Reijnen, BABN.

9 The back half was consolidated in this condition; the object was deposited in the depot for archaeological finds of the municipality of Nijmegen along with the other finds from this cemetery. Find number Bo8.9.163.

10 Identification by R. Lauwerier, RCE.

Fig. 4 The grave good with a length of 8.6 cm. The pin-like iron object surrounded by oxidation residues in the foreground was probably not associated with this find. – (Photo R. Mols, BABN).

Fig. 5 Detail of the end containing the slender bone tube. – (Photo R. Mols, BABN).

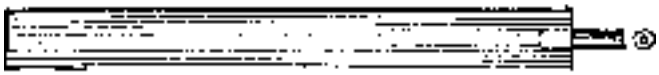

Fig. 6 Reconstruction of the artifact without a bronze casing. Length 8.6 cm. – (Drawing F. Reijnen, BABN).

soon revealed a high concentration of lead in an object with a plant structure[11]. This, along with the previously observed linear pattern on the object's surface, indicated that this had to be part of a plant stem. A follow-up study carried out by the third (I. J.) and fourth (L. M.) authors comprised a surface examination using a stereomicroscope, non-destructive analysis of the chemical composition with a micro-XRF spectrometer[12], characterisation by means of sample analysis using X-ray diffraction (XRD)[13], examination of a sample using a Scanning Electron Microscope with Energy Dispersive X-ray Spectroscopy (SEM-EDX)[14] and pyrolysis-gas chromatography-mass spectrometry (THM-py-GCMS)[15].

11 Determination by B. van Os and H. Huisman, respectively.

12 The Bruker ArTax 600 spectrometer, with an X-ray tube with molybdenum anode (tube voltage 50 kV, tube current 600 µA), polycapillary lens with a spot size of 90 µm and an SDD detector.

13 The Bruker D8 Discover microdiffractometer, with CuKα radiation focused on the sample with a monocapillary lens up to a spot size of 300 µm. The identification was made by comparing the diffractogram with the ICDD-PDF2 database (version 2002).

14 The results described below are a selection from the report published on this subject (Joosten/Megens 2019).

15 A stem sample of less than 1 mm was suspended in 10 µl of solution of tetramethylammonium acetate in ethanol. This mixture was then placed in the online pyrolyzer (Frontier Lab 3030D) on the gas chromatograph (Thermo Scientific Focus GC), after which the compounds separately released by the GC were detected using a mass spectrometer (Thermo Scientific ISQ). The compounds were identified using the NIST database.

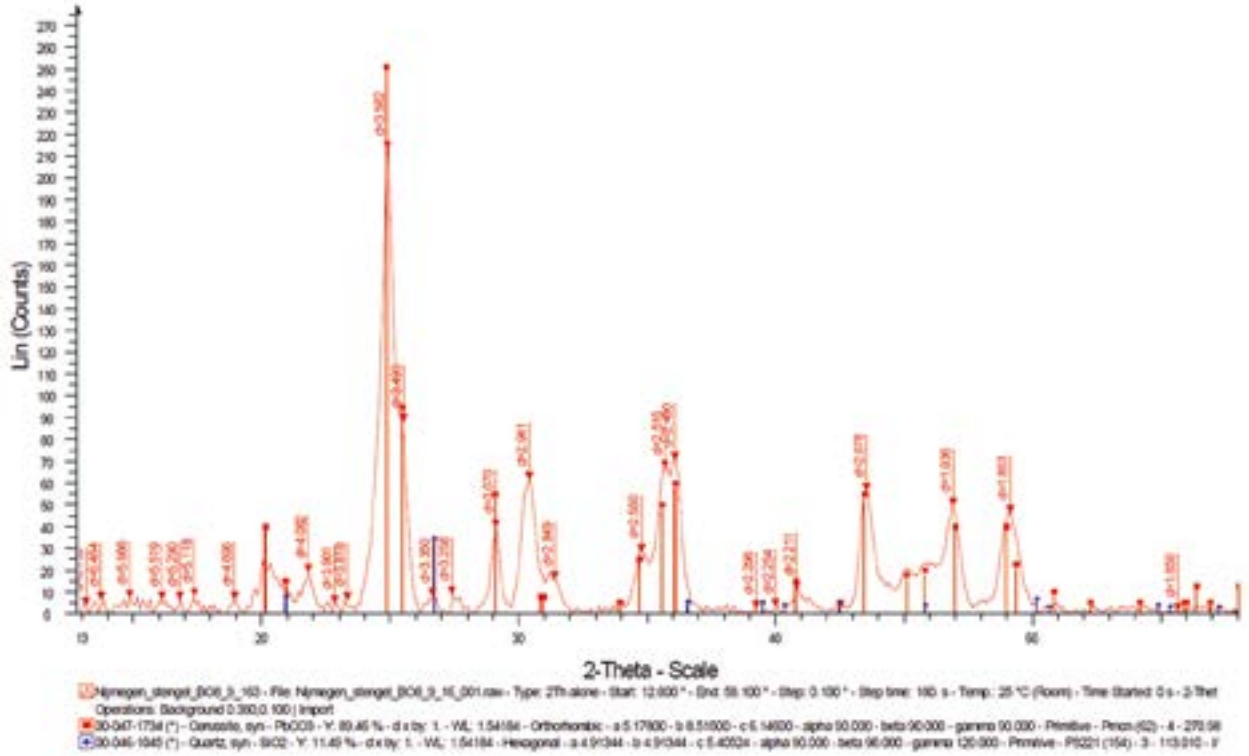

Fig. 7 XRD diffractogram of the stem. – (Graph L. Megens).

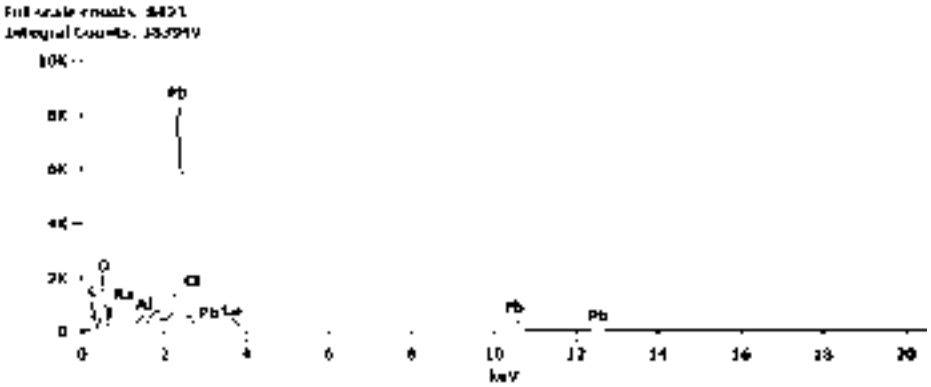

Fig. 8 EDX spectrum of the white matter. – (Graph I. Joosten).

The XRD analysis of the white stick showed that it consisted mainly of neutral lead carbonate ($PbCO_3$; cerussite), or white lead (fig. 7). The SEM-EDX analysis[16] of part of the stick confirmed the high proportion of the lead carbonate component (fig. 8). Cell walls consisting of lead carbonate were visible in some parts of the surface of the stick, while lead carbonate without a specific structure was observed further towards the inside of the stick[17]. The cell structure of lead carbonate confirms that the (hollow) stick was indeed a plant stem, which had absorbed a high proportion of lead into its cell walls through contact with an abundant source of lead. Over the centuries, the chemical complexes of the lead and the polysaccharides in the cell walls were converted into lead carbonate through degradation.

16 Using JEOL's JSM5910LV SEM.

17 SE and BSE images taken with Thermo Scientific's NovaNanoSEM450. An important property of plant cell walls is that they can accumulate heavy metals through a reaction of the polysaccharide component of the cell wall with metal ions, thereby protecting the cell from the toxic effects of heavy metals (see e. g. Krzesłowska 2011).

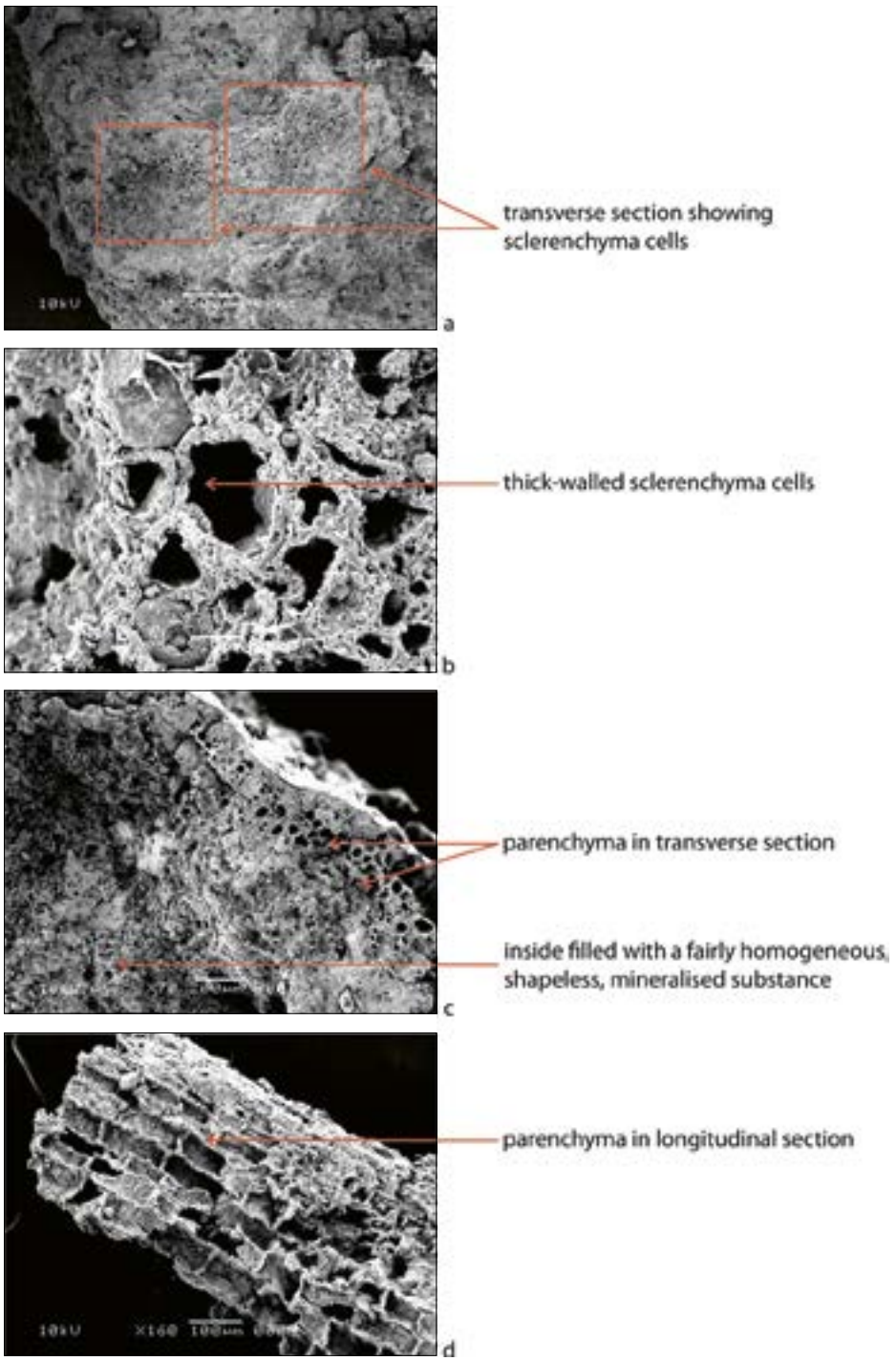

Fig. 9 SEM images of a sample of the artifact. – (Photos L. Kubiak-Martens).

The THM-py-GCMS analysis of a small sample of the object revealed mainly components of an acrylic[18]. There was no evidence of any oil, grease or resin with which the white lead might have been mixed[19].

More specific identification of the plant species was deemed necessary to clarify the function of the artifact. An initial stereomicroscopic study of the cell structure[20] by the fifth author (O. B.) suggested a marsh plant. Subsequent botanical research by the second author (L. K.-M.) using Scanning Electron Microscopy revealed the presence of thick-walled cells (fig. 9b)[21], most likely sclerenchyma cells. Sclerenchyma tissue is the supporting tissue in plants. The sclerenchyma cells in this archaeolog-

18 The object was consolidated using acrylic Paraloid.

19 Although it is possible that a mixture was used that would not have left any traces in the soil, such as a combination of water and gum.

20 Zeiss Axioscope (magnification up to 80×).

21 SEM microscope JEOL-JSM-6480LV, Naturalis Biodiversity Center, Leiden.

Fig. 10 Cross-sections of water horsetail (*Equisetum fluviatile*). – (Photo www.floravannederland.nl, Ben Goossens).

ical find are approx. 10–20 µm in diameter (with a few being approx. 40 µm in diameter). They lie just below the outer surface and were also observed further towards the inside of the specimen (**fig. 9a-b**). There were also areas of preserved parenchyma cells, which were photographed in both transverse and longitudinal sections (**fig. 9c-d**). However, no vascular tissue was observed. The central part of the specimen appeared to consist of a mineralised, featureless and rather homogeneous mass of lead carbonate (**fig. 9c**).

The sclerenchyma tissue strongly suggests that this is the stem of a marsh plant. The rounded surface of the stem appeared to show slight elevations alternating with shallow furrows (**fig. 9c**), implying vertical ridges confirming the visually observed features (**figs 4-5**).

All the cells appeared to have been deformed in the archaeological context. The thickened cell walls of the sclerenchyma and parenchyma had been strongly modified by mineralisation. In the electron microscope image the hollow core inside the parenchyma tissue can be seen to be completely filled with a fairly homogeneous, shapeless, mineralised substance (**fig. 9c**). The results of the XRD and XRF analyses revealed that this is white lead. As the vascular tissue just below the original surface was not observed in the sample, and the elongated cell structure (**fig. 9d**) is not exclusive to a particular plant species, the marsh plant cannot be identified to species level. However, it is clear that this is not a solid part of a stem, but only a cylindrical wall. This could mean that a stem was hollowed out or that a naturally hollow stem was used.

On the basis of the combined morphological and anatomical features of the archaeological object, the most likely candidate is a member of the *Equisetum* genus, probably *Equisetum fluviatile* (water horsetail). The stems of water horsetail are 80 % hollow (**fig. 10**), reinforced with silica, as in the case of all members of the horsetail family. The silica and the sclerenchyma tissue layer make the stems strong and hard while the natural partitions make the plant particularly suitable for applications such as those suggested in the next paragraph.

The results of the various investigations lead to the following image of the artifact: part of the stem of a marsh plant, probably water horsetail, encased in a thin bronze cylinder (and leather?). The naturally hollow core is filled with white lead. The white lead will have reacted with the organic material with which it came into contact[22], or complexed with organic molecules in the cell walls after dissolution of the white lead in a slightly acidic environment, eventually forming a cell structure mineralised in lead carbonate. The inserted bone tube need not have been the actual end of the object[23]. Even with an opening only 0.1 cm wide, the tube could theoretically have held a bundle of fine hairs, turning the artifact into a brush.

22 As is also the case in, for example, oil paint in which white lead reacts to form lead soaps.

23 It is not certain, but plausible, that the tube was inserted in a non-hollow part of the stem. In the case of water horsetail a natural partition could have been used for this purpose.

Interpretation and Cultural Context

Various techniques have been used to establish that this was a grave good made largely of plant material and filled with white lead, but the question what function this artifact had in the life of the deceased has yet to be answered. As far as we know, there is no evidence of similar objects from the Roman period, at least not in Northwestern Europe. So other paths must be explored to clarify its function, starting with the knowledge that the rural Batavian population of the Betuwe region was strongly influenced by Roman culture[24], as is also evident from other graves in the cemetery. Among other objects, the most richly endowed cremation grave yielded eight pieces of Roman pottery, a string of beads, some containing gold foil, a silver finger ring with the inscription VIC (goddess Victoria) and a mirror carved from a glass cosmetics jar[25]. Some remarkable grave goods from other burials in this cemetery are an iron skin scraper (*strigilis*) and a bronze candlestick.

White lead is not known to have been in vogue among the indigenous rural population of this area, but it was used on a large scale in the Roman spheres of the Empire, mainly in makeup and ointments, and also in (artistic) white paint[26]. In the Classical World in general, white lead is known to have been used for other purposes besides makeup, mainly in the medical field – for example to soothe ulcers, in eye ointments, ointments for treating wounds and as a contraceptive for women[27]. But the white lead is not known to have been applied or used with a fine instrument such as that discussed here. The assumption that we should not be looking for a medical function of this find is further supported by the observation that the rich Roman-period burials in the Betuwe region reflect prosperity and a way of life that may have had to be continued in the afterlife[28]. Cosmetic attributes played an important role in this context, as can be inferred from various finds recovered from the cemetery discussed here: a bottle of bath oil, some perfume flasks and the aforementioned mirror cut from a cosmetics jar. So our search focused on cosmetic attributes[29], partly also inspired by the discovery of fragments of apparently identical yellow-white (and red) sticks in a box containing (other) makeup attributes and iron scissors in the Roman cemetery of Frankfurt-Praunheim (Stadt Frankfurt am Main/DE)[30]. However, these sticks lacked a metal casing and did not have a narrow end[31]. What's more, the two samples that were examined to determine their chemical composition were found to contain not only lead, but also zinc as a main component. The sticks were interpreted as makeup sticks (*Fettschminkestäbchen*)[32].

If the white lead was liquefied, it could have flowed out of the bone tube at the end of the cylinder, whether or not dispensed via brush bristles. Like painter's white, it could have been liquefied using oil[33].

Along with calcareous ointments, white lead was the most popular means of whitening women's faces in the Roman Empire in order to conform to an ideal of beauty[34]. However, the application of a 1–2 mm-wide line is quite different from painting the entire face, making it conceivable that the white pigment in this case was used specifically for the area around the eyes (in addition to the well-known black kohl), even though evidence does not immediately present itself in the classical written sources and wall paintings. This is not surprising, given the scarcity of Roman portraits depicting eye makeup in detail[35]. However, a variety of eyeshadow colours are known from the Classical World, i. e. black, (ash) grey, green and blue[36], and the eyeliner colours black, (saffron) yellow and (ash) grey[37]. Given the attention that

24 See e. g. Willems/van Enckevort 2009, 89-94; van der Heijden 2016.

25 See van den Broeke 2017, fig. 11, for an image.

26 For sources see e. g. Olson 2009; Humphrey et al. 1998, 385; Nriagu 1983, esp. 298-299. 352-369.

27 See esp. Nriagu 1983, 352-369.

28 With grave 24 in Huissen-Loovelden as the most prominent published exponent (van der Feijst et al. 2017, 80-92).

29 It is not plausible that this is a painter's attribute. Such attributes are not commonly found as grave goods, except in graves with an extensive inventory of objects indicating a painter's profession, such as those of Nida-Heddernheim (Stadt Frankfurt am Main/DE) and Xanten (Kr. Wesel/DE) (Bachmann/Czysz 1977 and Schreiter 2001, respectively).

30 Fasold 2006, 137 (Grab 1) and tab. 273; Woelcke/Jassoy 1931. Figure 3 in the latter article leaves open the possibility that plant stems were also used in this context, but no mention is made of it. Inquiries to curator C. Wenzel of the Archäologisches Museum Frankfurt did not lead to clarity on this point. We thank S. Hoss (Small Finds Archaeology) for the literature that put us on the trail of this grave.

31 It is not clear whether fine bone material would have been preserved in this case.

32 Woelcke/Jassoy 1931, 39. The samples consisted of a yellow-white and a red stick.

33 As mentioned above, this could not be demonstrated through analysis, which does not mean that it was not originally present. Use may have been made of a mixture that would not have left any traces in the soil, such as a combination of water and gum.

34 See e. g. Devroe 2006; Olson 2009; Olthof/Teunissen 2018.

35 With the exception of the mummy masks, which, however, have an Egyptian cultural background (Michel 2016, 28-29).

36 Devroe 2006, 66; Michel 2016, 29; Olson 2009, 298.

37 Devroe 2006, 26; Olson 2009, 298.

wealthy women in classical society paid to their appearance, we may assume that they will have been at least as creative as contemporary women from all walks of life (fig. 11). The final hypothesis is therefore that this white lead dispenser was an instrument for applying white eyeliner, not excluding other possibilities of course[38].

Fig. 11 Contemporary application of white eyeliner. – (Photo unknown photographer; courtesy of Enfait Magazine).

Questions

Despite this result, several things remain unclear. For example, how did the white lead (mixture) flow out of the tube? Did the dark kidney-shaped soil discolouration from which the stick protruded (fig. 3) play a role in this context? Theoretically, it could represent some kind of leather pouch that acted as a bellows to blow out the white lead. However, this does not seem to be a very effective way of producing a fine white line. Instead, it is conceivable that the cylinder was filled from the rear and handled like a pipette by closing and releasing it with a finger[39]. Or was the outer bronze cylinder, closed at the back, pushed over the stem and the white substance squeezed out by air pressure? In this variant a hole at the top may be assumed, which was only closed with a finger when the bronze holder was pressed down.

And why was a plant stem used for this instrument? To answer this crucial question we can at least refer to a feature that is otherwise only conceivable in leather: the stem could be squeezed after the bronze mount had been retracted. Perhaps a stem with contents was merely the interchangeable filling of an instrument that was essentially a bronze casing[40]. The bone end (with hairs?) must have been reusable.

Another question is why white lead was used in this case, and not some calcareous product. This question is all the more relevant because of the results of a study of Roman-period cosmetics in the Nijmegen region and a few other places. Chemical analyses of the contents of twelve glass cosmetics containers in the form of spheres and graceful bird figures showed that lead played only a minor role in all cases, and that the products in question were mainly calcareous, in particular gypsum, in some cases chalk, and also clay minerals, as carriers of organic dyes[41]. Only one other glass sphere, from the cemetery around Museum Kamstraat in Nijmegen, was found to contain white lead, mixed with yellow and orange dyes[42].

Should we be considering a general difference in application? For example, cosmetics from glass containers for the whole face, and white lead generally for finer applications? Or was white lead preferred by Batavian women and calcareous products more suited to the ladies of the city? Although the analysis of the cremation remains has not yet confirmed that they belong to a woman, it is not certain that the person in question would then be a Batavian woman. Not only are no parallels of such a white lead dispenser known from the Netherlands and surrounding areas, but another grave good from the same burial – a small silver fibula – is also unknown in Northwestern Europe, but common in the eastern Danube region (fig. 12)[43]. The fact that Batavian auxiliaries were stationed in Pannonia, Dacia and surrounding areas from the beginning of the 2nd century[44] could help explain the presence of this find, and possibly the white lead dispenser, too. For example, a veteran may have returned to his family after his term of service and have brought back souvenirs from far away[45]. It is also known that soldiers were often accompanied by their wives[46]. Several wives of Batavian soldiers are known by name[47]. They

38 The instrument could theoretically also have been suitable for applying nail polish, but it is doubtful whether that was used in the Roman period (Devroe 2006, 67).

39 A possibility is a stopper of organic material at the end. It goes without saying that experiments could also help to answer this question.

40 It should be added that plant stems containing dye at the end were used for cosmetic purposes in early Egypt (Forbes 1955, 10).

41 Hottenot/van Lith 2006; Megens/van Bommel 2009.

42 Megens/van Bommel 2009; find number S XX.a.139.

43 Heeren/van der Feijst 2017, 241, type 99v and pl. 85:99v (location erroneously Oosterhout-Van Boetzelaerstraat settlement), probably dating from the 2nd–3rd c. Cf. Cociş 2004, pl. CI:1426; Kovrig 1937, tab. X:101 (with thanks to L. Swinkels, Museum Het Valkhof, Nijmegen, for the reference). - We are grateful to Philip Bes, Christoph Hinker, Dávid Schwarcz and Kaja Stemberger Flegar for their efforts to find counterparts for both the white lead dispenser and the fibula in Central and Eastern Europe.

44 Derks 2004, 46-49.

45 Even formal souvenirs were common in the Roman world (Künzl/Koeppel 2002).

46 Brandl 2008, 67-69.

47 Derks 2004, note 47.

Fig. 12 Small silver fibula from the chamber grave. Length 2.7 cm. – (Photo R. Mols, BABN).

may have returned home with trinkets from distant regions. And it seems to have been fairly common for soldiers to return home with a foreign wife[48]. This last possibility could potentially be confirmed through the isotopic analysis of the cremated bones, at least to determine origins outside the central part of the Netherlands[49]. But a positive result would be only one of several options to explain the presence of some unusual grave goods[50].

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48 Haalebos 2000, 31; Brandl 2008, 65-67.

49 Cf. Kootker et al. 2022.

50 Susan Mellor corrected the English text.

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Zusammenfassung
Résumé

Giftige Schönheit. Ein Weißbleispender aus einem einheimisch-römischen Kammergrab in Nijmegen

Eine rätselhafte Grabbeigabe aus einem hölzernen Kammergrab in einem einheimisch-römischen (batavischen) Gräberfeld in Nijmegen (Prov. Gelderland/NL) wurde mit verschiedenen Techniken identifiziert. Es handelt sich um einen mit Cerussit (Weißblei) gefüllten Abschnitt eines Pflanzenstängels, der offenbar von einem Bronzezylinder umschlossen war. Zusätzliche Untersuchungen mit dem Rasterelektronenmikroskop führten zu einer genaueren Bestimmung des Pflanzenteils: Es handelt sich um eine Sumpfpflanze, wahrscheinlich Teich-Schachtelhalm (*Equisetum fluviatile*).
Der dünne hohle Knochen an einem der Enden des Stängels könnte ein Haarbündel enthalten haben, sodass es sich um einen schlanken Pinsel handeln könnte. Auch ohne diese Eigenschaft kann das Artefakt als ein kosmetisches Attribut betrachtet werden. Bleiweiß war in der römischen Welt ein bekanntes Mittel zur Aufhellung des Gesichts. Das schmale Ende deutet jedoch darauf hin, dass es sich bei dem Objekt eher um einen Spender für weißen Eyeliner handelt.
Der Ursprung des Artefakts könnte im östlichen Europa liegen. Darauf deutet ein weiterer besonderer Fund hin, der den Leichenbrandresten beilag: eine Fibel, die in Nordwesteuropa ihresgleichen sucht. Die besten Entsprechungen finden sich im östlichen Donaubecken, wo auch batavische Hilfstruppen stationiert waren.

Beauté vénéneuse. Un distributeur de blanc de plomb provenant d'une tombe à chambre indigène de l'époque romaine à Nimègue

Une offrande funéraire énigmatique provenant d'une tombe à chambre en bois, dans un cimetière batave à Nimègue (prov. Gueldre/NL), a été étudiée et identifiée à l'aide de diverses techniques. Il s'agit d'une section de tige végétale remplie de cérusite (blanc de plomb), qui semble avoir été enfermée dans un cylindre de bronze. Des recherches complémentaires au microscope électronique à balayage ont permis de déterminer plus précisément la partie végétale: il s'agit d'une plante de marais, probablement la Prêle des eaux (*Equisetum fluviatile*). Le mince os creux situé à l'une des extrémités de la tige pourrait avoir contenu un paquet de poils, de sorte qu'il pourrait s'agir d'une brosse fine. Même sans cette propriété, l'artefact peut être considéré comme un attribut cosmétique. Le blanc de plomb était un produit bien connu dans le monde romain pour blanchir le visage. L'extrémité étroite suggère cependant que l'artefact était plutôt un distributeur d'eye-liner blanc.
L'origine de l'objet pourrait se situer en Europe de l'Est. C'est ce qu'indique une autre découverte particulière accompagnant l'incinération: une fibule sans équivalent en Europe du Nord-Ouest. Les meilleures comparaisons se trouvent dans le bassin oriental du Danube, où des auxiliaires bataves étaient également stationnés.

Correction de la texte française: Jean Bourgeois

Schlüsselwörter
Mots-clés

Römerzeit / Bleiweiß / Kosmetik / Teich-Schachtelhalm
Époque romaine / blanc de plomb / cosmétiques / Prêle des eaux