[title]Bronze Trees from the Greek to the Roman World

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[A-head]Abstract

[abstract]

Among the various anathemata that were offered in major Greek sanctuaries are fruits, vegetables, and trees in bronze and precious metals. These objects are well-known from literary sources, which mention the bronze palm dedicated to the sanctuary of Delphi by Kypselos, and the one offered by the Athenians after the battle of the Eurymedon. Moreover, various metal trees are known to have functioned as interior decorations for sacred temples, such as the ingenious bronze palm tree in the Erechtheion crafted by Kallimachos. Others were decorative objects displayed in secular settings.

After an earlier study on Greek bronze trees,[[1]](#endnote-1) this new contribution focuses on bronze trees in the Roman world and no longer on anathemata, with the exception of some small trees in *lararia* or domestic shrines*,* as well as a number of lamp-holders shaped like tree trunks.

It is possible that the secular artworks drew their inspiration from the great Greek plant-shaped anathemata—for example, the golden grapevine and the golden plane tree, which both decorated the palace of the king of Persia until the time of Alexander the Great. Such objects could have been a source of inspiration for many toreutics in the Hellenistic and Roman period, such as the grapevine offered by Aristobulos II to Pompey the Great, as well as the trunk-shaped lamp-holders found in many wealthy *domus*.

[main text]

It is well known that trees, gardens, and landscapes are not commonly represented in Greek art until the Hellenistic period. In vase painting, the focus is on men, gods, and heroes; war, hunting, labor, rituals, weddings, death, and festivals offer the opportunity to represent humans, who are at the center of philosophy and art in ancient Greece. Nature and landscapes, by contrast, rarely appear in vase painting; floral patterns, tendrils, and leaves only appear as subsidiary decoration. In a few cases, flowers and trees acquire life on their own as gods’ attributes or to give emphasis to a sacred setting, as for example the palm tree linked to the birth of Apollo and the sanctuary of Delos.

In the Greek world, fruit and vegetables played an important role as offerings and anathemata. Items such as firstfruits were given to the gods, but these were perishable items meant to be burnt on the altars the same day.[[2]](#endnote-2)

Fruit and vegetables could became more durable offerings if they were modeled from clay, ivory, bronze, or gold,[[3]](#endnote-3) as for instance the famous “golden harvest” dedicated from Metaponto to Delphi; the gold celery from Selinus; or the *silphium* from Ampelos.[[4]](#endnote-4) In addition to such fruits and vegetables given as anathemata, trees made from bronze and precious metals have been reported as offerings at some of the major Greek sanctuaries.

These objects are well-known thanks to the ancient sources. For example, Plutarch described the bronze palm dedicated in the sanctuary of Delphi by Kypselos—perhaps a *sphyrelaton*[[5]](#endnote-5)—and one offered by the Athenians after the battle of the Eurymedon (470/69 BC).[[6]](#endnote-6) The base of the latter has been identified to the northeast of the front side of the Apollo temple: a statue of Athena with an owl stood on top of the palm tree, which had bunches of golden dates and was still standing at the time of Pausanias.[[7]](#endnote-7) Another famous bronze palm tree was offered by Nikias at the Apollo sanctuary of Delos around 417 BC, as mentioned by Plutarch; its base is preserved not far from the *oikos* of the Naxians.[[8]](#endnote-8)

However, we also have many *realia*. A good example in bronze was found during the excavations of Karapanos in Dodona; it represents a branch of an oak, the tree sacred to Zeus.[[9]](#endnote-9) Moreover, we may remember the bronze branches and laurel leaves in the sanctuary of Apollo in Klaros, and those found in Magna Graecia, in Kroton, Kaulonia, and Metaponto (**fig. 31.1**); these testify to the practice of dedicating bronze laurel trees to Apollo.[[10]](#endnote-10)

Among profane artworks, I would note the golden grapevine adorned with precious stones attributed by some scholars to the versatile artist Theodoros of Samos and the golden plane tree, both decorating the Persian royal palace: the grapevine was hung over the king’s bed like a baldachin. According to the majority of sources, this work combined the monumentality of bronze sculptures with the elegance of jewelry.[[11]](#endnote-11)

The ancient texts date these ornaments to the period of Darius I (522–486 BC), but it is likely that they remained in use until the time of Alexander the Great. They might therefore have become a source of inspiration for some of the toreutic art in the Hellenistic and Roman period, such as a golden grapevine offered as anathema in the Artemision of Delos in the third century BC, and the one offered by Aristobulos II to Pompey when he arrived in Syria: εἴτε ἄμπελος εἴτε κῆπος.[[12]](#endnote-12) This may be the same one that Pliny the Elder remembered as being displayed during a triumph in Rome, “a square mountain of gold with deer, lions and every variety of fruit on it and a golden vine entwined around it,” which was then exhibited in the temple of Jupiter Capitolinus.[[13]](#endnote-13)

Moreover, we know that various metal trees served as interior decorations for sacred temples, such as the ingenious bronze palm tree in the Erechtheion crafted by Kallimachos.[[14]](#endnote-14) A famous candelabrum, perhaps trunk-shaped, with lamps shaped like fruits, was once held in the temple of Apollo Ismenios in Thebes. It was taken away by Alexander the Great, then dedicated in the temple of Apollo at Cyme (Kyme), and finally carried to Rome to be shown in the Apollo temple on the Palatine. Pliny may be the only source that refers to this installation, but a *terminus ante quem* for its creation is given by the conquest of Thebes by Alexander the Great in 335 BC.[[15]](#endnote-15)

In Hellenistic art, unlike in Classical Greek art, vegetal themes were very popular, perhaps following the model of the Persian royal gardens, which Alexander himself knew well.[[16]](#endnote-16) Flowers and plants were used, for instance, in the luxurious decoration of the famous pavilion (*skené*) and procession of Ptolemy Philadelphus in the court of Alexandria,[[17]](#endnote-17) whose golden plants and furniture with floral decorations were described by Athenaeus.[[18]](#endnote-18)

Of course, gardens like the one in Alexandria were artificial: the exuberance of nature was subordinated to the rigor of architecture and architectural decoration. The same concept is evident in the wall-paintings of Imperial villas, for example in the famous villa of Livia(*Villa ad gallinas albas*) at Prima Porta, where the gardens are depicted according to architectural rules.[[19]](#endnote-19)

The taste for ornamental plants spread in the arts and crafts of early Imperial Rome. They evoked the spirit of the Alexandrian gardens and the tree-shaped artworks and precious monumental anathemata in the Greek temples and sanctuaries (i.e., laurel trees, palms, and grapevines in bronze or gold) that were still visible in Roman times.

Candelabra in the form of trees, more or less naturalistic, were widespread. The most common were certainly lampstands with slender shafts *a canna* (cane-like), representing bamboo or lopped branches, surmounted by a disk to hold a single lamp (**fig. 31.2**).[[20]](#endnote-20) This type was most likely produced in Central Italy and was manufactured in a small, tabletop version, and in a larger version, to be placed on the floor.[[21]](#endnote-21)

In addition to such stylized variants, however, there is also evidence of more naturalistic representations. There are medium-sized lampstands, trunk-shaped, made to be placed on tables or supports, with small lamps suspended from their branches like fruits, such as the specimens from Pompeii and the famous lampstand from the Meloria (Livorno) (**fig. 31.3**).[[22]](#endnote-22) These “trees” have few leaves: evidently, the lamps, like small luminous fruit, replaced the foliage.

Some ornate stands have a large rectangular base upon which statuettes of heroes, satyrs, or gods could be placed, as for instance a beautiful acanthus-shaped candelabrum, with Attis or Alexander Helios, which is now in Geneva.[[23]](#endnote-23) In these examples, the tree can be naturalistic, with twisted trunk and branches, in the manner of Hellenistic art, or modeled with more architectural forms, such as a floral column. In addition to examples of this type from the early Imperial period, there is evidence of more complex objects in which the tree is the support of statuettes, leaning toward the plant. I recall here examples in Pompeii, Ephesos, Baden (Switzerland), the one now in Kansas City, and perhaps the one from Hungary (Brigetio).[[24]](#endnote-24) These artworks testify to the decorative function of certain metal trees, which is very evident in the Roman world; the tree, after a long life as *agalma* or gift to the gods, is now a “bringer of light” that found its way out of the sanctuaries and into the wealthy *domus* of the Romans as luxury furniture.[[25]](#endnote-25)

Other bronze trees in the Roman world had a votive function: such is likely the case for the candelabrum in the British Museum, a true *signum pantheum*, in which a twisted tree became the support for pantheistic attributes in relief. This is a unique object, as far as I know, which due to its small size should be assigned to a *lararium* or a small domestic shrine setting.[[26]](#endnote-26)

In northern Italy, a group found in the region of Verona is of great interest. It consisted of a small bronze tree and a statuette of Minerva (**fig. 31.4**): one can assume that they too were likely placed in a *lararium*.[[27]](#endnote-27) Lamps modeled in the form of an acanthus bud are known also from among the famous findings of Montorio Veronese, some of which were likely part of a *lararium*.[[28]](#endnote-28) Individual leaves, too, are represented in Roman times among votive offerings, as we know from many examples from northern Italy.[[29]](#endnote-29)

Some finds derive from the provinces also, but these materials are mostly without context; the hypothesis that they belong to *lararia* or domestic shrines is considered here because of the small size of the objects.Small trees have notably been found in the Magdalensberg (Noricum); in Strasbourg (Argentoratae) and in Seltz (both in Alsace); in Hintzerath (Trier); in Zugmantel; and in Bonn.[[30]](#endnote-30) These examples are scattered over a wide area, but always within the Roman Empire; some of them are quite alike (and may have been produced in the same area[[31]](#endnote-31)) and they all attest to the practice of dedicating more or less naturalistic little figures of trees to the gods.

We can gain a sense of the importance of plants from two famous statuettes. One is the miniature silver statuette from northern Italy, considered the *Terra mater/salus*, of the Summano mountain site.[[32]](#endnote-32) The find is linked to transhumance routes but also to practices that evoke the rural fertility cults: the goddess sits on a throne, with a patera, snakes, and branches. The second is the well-known Dea Artio from Muri (Bern), with a tree that seems to represent the wild landscape.[[33]](#endnote-33)

If we turn from votive objects to wall-painting, we can see that, at least in southern Italy, branches, plants, and flowers are widespread in *lararia*, in scenes of sacrifice—representing the natural landscape of the ritual—or to recall the ancient *lucus*, the sacred grove.[[34]](#endnote-34)

I would speculate that these small bronze trees, when they were placed in *lararia* or domestic shrines, are more than mere small-sized tree-shaped lamp-holders. Rather they may reference the *lucus* or the ancient offering of firstfruits that was always of great importance in the Roman world.

[A-head]Acknowledgments

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[A-head]Bibliography

[bibliography]

Amandry 1954

Amandry, P. 1954. “Notes de topographie et d’architecture delphiques. IV. Le palmier de bronze de l’Eurymédon.” *BCH* 78: 295–315.

Bailey 1996

Bailey, D. M. 1996. *A Catalogue of the Lamps in the British Museum.* Vol. 4: *Lamps of Metal and Stone and Lampstands*. London: The Trustees of the British Museum.

Beschi1962

Beschi, L. 1962. *I bronzetti romani di Montorio Veronese*. Venice: Istituto Veneto.

Beschi 1984

Beschi, L. 1984. “Bronzi antichi da un naufragio alla Meloria di Livorno.” In *Toreutik und figürliche Bronzen römischer Zeit: Akten der 6. Tagung über antike Bronzen (Berlin 1980),* ed. U. Gehrig, 50–58. Berlin: Staatliche Museen Preussischer Kulturbesitz, Antikenmuseum.

Bieber 1963

Bieber, M. 1963. “A Satyr in Pergamene Style in Kansas City.” *AJA* 67: 275–78.

Bol 1970

Bol, P. C. 1970. “Die Herakles-Kentauren-Gruppe in Wien.” *AntP* 10: 81–90.

Bolla 2007

Bolla, M. 2007. “Bronzi figurati romani dal veronese: un aggiornamento.” *NumAntCl* 36: 245–85.

Bolla 2015

Bolla, M. 2015. “Arredi e oggetti vari del tempio di età imperiale.” In *Archeologia e storia sul Monte Castelon di Marano di Valpolicella*, ed. B. Bruno and G. Falezza, 271–92. Mantua: SAP Società Archeologica s.r.l.

Bommelaer and Laroche 1991

Bommelaer, J. F., and D. Laroche. 1991. *Guide de Delphes: Le site*. Paris: École française d’Athènes.

Büttner 1962

Büttner, A. 1962. “Figürlich verzierte Bronzen von Kastell Zugmantel.” *SaalbJb* 22: 62–75.

Calandra 2008

Calandra, E. 2008. “L’occasione e l’eterno: la tenda di Tolomeo Filadelfo nei palazzi di Alessandria. 1. Materiali per la ricostruzione.” *Lanx* 1: 26–74. http:riviste.unimi.it/index.php/lanx/index.

Calandra 2009

Calandra, E. 2009. “L’occasione e l’eterno: la tenda di Tolomeo Filadelfo nei palazzi di Alessandria. 2. Una proposta di ricostruzione.” *Lanx* 2: 1–77. http:riviste.unimi.it/index.php/lanx/index.

Calandra 2011

Calandra, E. 2011. *The Ephemeral and the Eternal: The Pavilion of Ptolemy Philadelphos in the Court of Alexandria*. Athens: Scuola Archeologica Italiana di Atene.

Calandra 2015

Calandra, E. 2015. “I giardini di Alessandria.” In Sena Chiesa and Pontrandolfo 2015, 256–64.

Carapanos 1878

Carapanos, C. 1878. *Dodone et ses ruines*. 2 vols. Paris: Hachette.

Castoldi 2005

Castoldi, M. 2005. “Cremona e l’*ager cremonensis*: elementi d’arredo in bronzo.” In Slavazzi 2005, 187–204.

Castoldi 2010

Castoldi, M. 2010. “Gli arredi in bronzo della *domus* di Piazza Marconi a Cremona.” In *Arredi di lusso di età romana: Marmi e bronzi nelle case della Cisalpina: Atti della Giornata di Studi (Milano 2009*)*,* ed. F. Slavazzi (*Lanx* 6), 150–60. http:riviste.unimi.it/index.php/lanx/index.

Castoldi 2014

Castoldi, M. 2014. *Alberi di bronzo: Piante in bronzo e in metalli preziosi nell’antica Grecia*. Bari: Edipuglia.

Clément and Dumoulin 2010

Clément, N., and F. Dumoulin. 2010. “Deux nouveaux éléments de la statuaire antique d’ *Alba Helvorum* sorten de l’ombre.” *RANarb* 43: 331–38.

Courbin 1973

Courbin, P. 1973. “Le colosse naxien et le palmier de Nicias.” *BCH* *Suppl* 1.1: 157–72.

Deimel 1987

Deimel, M. 1987. *Die Bronzekleinfunde vom Magdalensberg*. Klagenfurt: Verlag des Landesmuseum für Kärnten.

Eichholz 1971

Eichholz, D. E., ed. and trans. 1971. *Pliny, Natural History X: Libri XXXVI–XXXVII*. London: W. Heinemann Ltd.; Cambridge (MA): Harvard University Press.

Forrer 1927

Forrer, R. 1927. *Strasbourg*-Argentoratae*: préhistorique, gallo-romain et mérovingien*. Strasbourg: Istra.

Gamba 2012

Gamba, M. 2012. “Il Monte Summano: Un santuario sulle vie della transumanza.” In *La lana nella Cisalpina romana: Economia e società: Studi in onore di Stefania Pesavento Mattioli: Atti del Convegno (Padova-Verona 2011*), ed. M. S. Busana and P. Basso, 81–95. Padua: University Press.

Gentili 2013

Gentili, G., ed. 2013. *Cleopatra: Roma e l’incantesimo dell’Egitto.* Exh. cat. Rome, Chiostro del Bramante. Milan: Skira.

Gerding 2006

Gerding, H. 2006. “The Erechtheion and the Panathenaic Procession.” *AJA* 110: 389–401.

Giacobello 2005

Giacobello, F. 2005. “Portalucerne romani in bronzo dall’Italia settentrionale.” In Slavazzi 2005, 119–30.

Giacobello, F. 2008

Giacobello, F. 2008. *Larari pompeiani: Iconografia e culto dei Lari in ambito domestico*. Milan: LED Edizioni Universitarie di Lettere Economia Diritto.

Gschwantler 1986

Gschwantler, K. 1986. *Guss + Form: Sonderausstellung: Bronzen aus der Antikensammlung*. Vienna: Kunsthistorisches Museum.

Kaufmann-Heinimann 1998

Kaufmann-Heinimann, A. 1998. *Götter und Lararien aus Augusta Raurica: Herstellung, Fundzusammenhänge und sakrale Funktion figürlicher Bronzen in einer römischen Stadt*. Forschungen in Augst 26. Augts: Römermuseum.

Kaufmann-Heinimann 2002

Kaufmann-Heinimann, A. 2002. *Dea Artio, die Bärengöttin von Muri: römische Bronzestatuetten aus einem ländlichen Heiligtum*. Zürich: Chronos; Bern: Bernisches Historisches Museum.

Kaufmann-Heinimann and Deschler-Erb 2013

Kaufmann-Heinimann, A., and E. Deschler-Erb. 2013. *Göttlich, menschlich: Römische Bronzen der Schweiz*,ed. M. Bürge. Exh. cat. Zürich, Archaologisches Institut der Universität Zürich.

Kyrieleis 1988

Kyrieleis, H. 1988. “Offerings of ‘the Common Man’ in the Heraion at Samos.” In *Early Greek Cult Practice:Proceedings of the Fifth International Symposium at the Swedish Institute at Athens, Athens 1986*, ed. R. Hägg, N. Marinatos, and G. C. Nordquist, 215–21.Stockholm and Göteborg: P. Åströms Förlag.

Kyrieleis 1993

Kyrieleis, H. 1993. “The Heraion at Samos.” In *Greek Sanctuaries: New Approaches*, ed. N. Marinatos and R. Hägg, 125–53.London: Routledge.

Menzel 1966

Menzel, H. 1966. *Die römischen Bronzen aus Deutschland*. Vol. 2: *Trier*. Mainz: Verlag des Römisch-Germanischen Zentralmuseums.

Palagia 1984

Palagia, O. 1984. “A Niche for Kallimachos’ Lamp?” *AJA* 88: 515–21.

Pirzio Biroli Stefanelli 1990

Pirzio Biroli Stefanelli, L. 1990. *Il bronzo dei Romani: Arredo e suppellettile*. Rome: L’Erma di Bretschneider.

Rouse 1902

Rouse, W. H. D. 1902. *Greek Votive Offerings: An Essay in the History of Greek Religion*. Cambridge (MA): At the University Press.

Schaeffer 1927

Schaeffer, F. A. 1927. *Un dépôt d’outils et en trésor de bronzes de l’époque gallo-romaine découverts à Seltz (Bas Rhin)*. Haguenau: Imprimerie Municipale.

Schnitzler 1995

Schnitzler, B. 1995. *Bronzes antique d’Alsace: Musée archéologique de Strasbourg, Musées de Biesheim, Colmar, Haguenau, Mulhouse, Niederbronn, Wissembourg.* Inventaire des collections publiques française 37. Paris: Réunion des musée nationaux.

Sena Chiesa and Pontrandolfo 2015

Sena Chiesa, G., and A. Pontrandolfo, eds. 2015. *Mito e natura: Dalla Grecia a Pompei*. Exh. cat. Milan, Palazzo Reale. Milan: Electa.

Slavazzi 2005

Slavazzi, F., ed. 2005. *Arredi di lusso di età* *romana: Da Roma alla Cisalpina*. Flos Italiae 6. Florence: All’insegna del giglio.

Slavazzi 2015

Slavazzi, F. 2015. “La rappresentazione della natura nelle residenze imperiali: le immagini dei giardini.” In Sena Chiesa and Pontrandolfo 2015, 231–38.

Zieling and Leih 2004

Zieling, N., and S. Leih 2004. “Rheinisches Amt für Bodendenkmalpflege  
Ausgrabungen, Funde und Befunde 2001 und 2002.” *BJb* 204: 273–357.

1. Castoldi 2014. [↑](#endnote-ref-1)
2. Castoldi 2014, 11–13, with bibliography. [↑](#endnote-ref-2)
3. Rouse 1902, 66; Kyrieleis 1988; Kyrieleis 1993, 138. [↑](#endnote-ref-3)
4. See Castoldi 2014, 18–27, with bibliography. [↑](#endnote-ref-4)
5. The source is Plutarch *De Pythiae oraculis* 399e; idem., *Convivium septem sapientium* 164a; see Castoldi 2014, 44–51. [↑](#endnote-ref-5)
6. Plutarch *Nicias* 13.5; *De Pythiae oraculis* 397f; Castoldi 2014, 51–58. [↑](#endnote-ref-6)
7. Pausanias 10.15.4. Amandry 1954; Bommelaer and Laroche 1991, 186, no. 420. [↑](#endnote-ref-7)
8. Plutarch *Nicias* 3.7. Courbin 1973; Castoldi 2014, 58–60. [↑](#endnote-ref-8)
9. Carapanos 1878, 91, plate XLIX.8. This beautiful branch is now displayed in the National Archaeological Museum in Athens, Bronze Collection. [↑](#endnote-ref-9)
10. Castoldi 2014, 32–41. [↑](#endnote-ref-10)
11. Castoldi 2014, 87–94. [↑](#endnote-ref-11)
12. *FHG* III 493, 11. [↑](#endnote-ref-12)
13. Pliny *Historia naturalis* 37.6.14; Eichholz 1971, 175. [↑](#endnote-ref-13)
14. Pausanias 1.26.6–7. See also Palagia 1984; Gerding 2006, 394–97; Castoldi 2014, 81–85. [↑](#endnote-ref-14)
15. Pliny *Historia naturalis* 34.8.14; see also Castoldi 2014, 7. [↑](#endnote-ref-15)
16. Calandra 2015. [↑](#endnote-ref-16)
17. Calandra 2008; Calandra 2009; Calandra 2011. [↑](#endnote-ref-17)
18. Athenaeus 5.196a–197c. [↑](#endnote-ref-18)
19. Slavazzi 2015. [↑](#endnote-ref-19)
20. For the lampstand from Cremona (*domus* del Ninfeo), see Castoldi 2010, 153, fig. 2. [↑](#endnote-ref-20)
21. For this lampstand *a canna* (bamboo-shaped), see Bailey 1996, 94–96, plates 109–15; for northern Italy, see Giacobello 2005. [↑](#endnote-ref-21)
22. For Pompeii, see Pirzio Biroli Stefanelli 1990, and for the candelabrum“della Meloria”, see Beschi 1984, 54–55; Castoldi 2005, 197–98. Another lampstand modeled as tree is one found in Alba Helvorum (France): Clément and Dumoulin 2010, 336, fig. 4. [↑](#endnote-ref-22)
23. Gentili 2013, 267, no. 62; see also Bailey 1996, 98–99, plate 118–21. [↑](#endnote-ref-23)
24. Pompeii: Pirzio Biroli Stefanelli 1990, 276, no. 80, fig. 186. Ephesos: Bol 1970, 82–90, figs. 6–7. Baden: Kaufmann-Heinimann and Deschler-Erb 2013, 48, fig. 21. Kansas City: Bieber 1963.Brigetio: Gschwantler 1986, 139, no. 218, fig. 280; given its small size, this piece could have been part of a domestic shrine. [↑](#endnote-ref-24)
25. We may remember the statues of nude youths in the tradition of the fifth century that have become tray-bearers or lamp-holders: see *supra* the paper of Carol Mattusch. [↑](#endnote-ref-25)
26. British Museum, inv. Q 3909: Bailey 1996, 99, plates 124–25. [↑](#endnote-ref-26)
27. See Bolla 2007, 248, figg. 3–4; the tree and the statuette have the same patina; they were found in Predelle (Gazzo Veronese) in a residential setting. [↑](#endnote-ref-27)
28. Beschi 1962, 102–104; Kaufmann-Heinimann 1998, 293, GF94. [↑](#endnote-ref-28)
29. See now Bolla 2015, 284–87. [↑](#endnote-ref-29)
30. Magdalensberg: Deimel 1987, 167, no. 4, plate 32. Strasbourg-Argentoratae: Forrer 1927, 495, fig. 365 C; Schnitzler 1995, 82, no. 87. Seltz: Schaeffer 1927, 38–39, no. 21, plate VIII; Kaufmann-Heinimann 1998, 262, GF45, fig. 219. Hintzerath, Kr. Bernkastel (Trier): Menzel 1966, 80, no. 192, plate 62. Zugmantel: Büttner 1962, 74 (ZM 2750), plate 7.11. Bonn, legion camp: Zieling and Leih 2004, 322, fig. 37. [↑](#endnote-ref-30)
31. Compare for instance the spiral trees from Brigetio, Hintzerath, and Kansas City; or the specimens from Seltz and Strasbourg-Argentoratae, which are very similar; for bibliography, see nn. 23 and 29 above. [↑](#endnote-ref-31)
32. Gamba 2012, fig. 4. [↑](#endnote-ref-32)
33. Kaufmann-Heinimann 2002, 48–53. [↑](#endnote-ref-33)
34. See Giacobello 2008, 99–100, figs. 2, 9, 11, 13, 18–20. [↑](#endnote-ref-34)