
Book Section:
Carroll, P.M. (2017) 'The sacred places of the immortal ones' : ancient Greek and Roman sacred groves. In: Woudstra, J. and Roth, C., (eds.) A History of Groves. Routledge , London . ISBN 9781138674806

https://doi.org/10.4324/9781315561066-2

Maureen Carroll, '*The sacred places of the immortal ones*'. Ancient Greek and Roman Sacred Groves, in J. Woudstra and C. Roth (eds.), *A History of Groves*. London: Routledge, 2017

'*The sacred places of the immortal ones*'. Ancient Greek and Roman Sacred Groves

Maureen Carroll

Introduction

Many cultures of the ancient Mediterranean world acknowledged the close relationship between the divine world and the natural environment, with trees and vegetation being interpreted as a sign of god-given life. Accordingly, the temples and sanctuaries of many gods in ancient Assyria, Egypt, and Israel, to name but a few locations, included planted precincts that were considered holy and inviolable.[1] The ancient Greeks and Romans, like their neighbours, also maintained and worshipped in sacred groves. An early expression of the belief that 'the sacred groves of the immortal ones' were the dwelling places of semi-divine beings can be found in the *Homeric Hymn* to Aphrodite; in the groves of the *Hymn* lived the nymphs who were born as trees.[2] The Greeks also had notions of paradise in a mythical grove of plenty and immortality.[3] The importance of the ancient sacred groves of the heroic past in the literature and thought of Roman Italy in the late first century BC also reflects a cultural and religious reverence for ancient trees and rustic landscapes.[4] Although secular groves of trees and orchards also existed in Greco-Roman antiquity, this paper focuses on those connected with cult sites, simply because they are more abundantly attested.

The types of evidence available for the study of Greek and Roman sacred groves are varied, as this brief introduction attempts to show. One category of material is the textual evidence in the form of written accounts and inscriptions. Descriptions of venerable sacred groves of olives, pines, cypresses, oaks, laurels, and fruit trees can be found in Pausanias' guide book of ancient Greece in the later second century AD, and he refers to them as some of 'the most memorable and interesting things' for Roman cultural tourists to visit.[5] And because of the text of a Roman inscription of c.300 AD, we know that the ancient sacred olive grove associated with the temple of Athena on the acropolis of Lindos on Rhodes was renewed with plantings donated by the priest Aglochartos.[6]

There is also the pictorial evidence. A marble funerary relief of about 100 BC from the eastern Mediterranean, now in the Getty Museum, for example, depicts a woman and four young girls in a wooded grove.[7] A single tree with five large leafy boughs is depicted, which is a common shorthand and space-saving reference to a whole grove in Greek sculpture and painting. That this grove is sacred is evident by the presence of a sacrificial altar and a pillar with a votive offering (a *lekythos*) from a mortal suppliant on top of it. A belted dress as another votive offering is suspended from the tree.

Finally, a valuable body of material for the study of sacred groves in the Greek and Roman worlds is the archaeological evidence. Excavations at the Greek temple of Zeus at Nemea, for example, revealed the planting pits for twenty-four trees dug into the rocky subsoil of the sanctuary's precinct in the fifth and fourth centuries BC.[8] Charred remains

of cypress wood at the bottom of the pits actually confirmed Pausanias' description of the grove as one consisting of this species of tree.[9]

In the subsequent sections, these main strands of evidence for sacred groves in Classical antiquity will be explored in more depth in an attempt to understand their function, use, location, and appearance.

Defining a sacred grove: The written sources

It is important at the outset to establish what ancient terms were used to refer to sacred groves, and what properties such groves were thought to possess. In addition, it will be essential to this discussion to establish what activities took place in the groves 'of the immortal ones', and what provisions existed for their protection.

In the Greek texts, ἄλσος (*alsos*) is normally the word used for 'sacred grove', although this also could apply to a holy place, with or without trees.[10] Κῆπος (*kepos*) is generally used for 'garden', whether it was sacred or not.[11] The distinction between 'grove' and 'garden' is not always clear-cut; a grove of trees could be called a κῆπος, especially if it had fruit trees. The Latin texts use either *nemus* or *lucus* for a grove. Although scholars do not always agree on the distinction between the two, a *lucus* generally appears to have been a grove that was created and inhabited by divine spirits and was left in a natural state, whereas *nemus* refers to a grove created or manipulated by man and furnished with sacred buildings and images.[12] *Hortus* refers to a garden, but it appears to be used only in reference to secular gardens.

As suggested by this brief analysis of Greek and Latin terms, sacred groves could be natural woodlands or entirely man-made plantings of trees. Both types of sacred groves are attested by literary descriptions and by archaeological enquiry, although, as Edlund points out, even so-called natural open-air cult sites were generally shaped by man, be it through their enclosure within a boundary wall or their embellishment with an altar or sacred images and so on.[13] A relevant inscription from Rome sheds light on the creation of a sacred grove. The city of Rome was laid out on seven hills, each of the separate hills originally distinct and occupied by population groups, the Montani (hill dwellers). The Montani of the Oppian Hill had an inscription carved in the first century BC which recorded that the mayor (*magister*) and priests (*flamines*) of this community had been responsible for enclosing their central shrine and planting trees in it.[14]

Throughout the Greek and Roman worlds, sacred groves were religious spaces, marked out of the landscape from non-sacred land, and they were places where mortals worshipped and communicated with the divine. The ancient Greek verb τέμνειν, to cut out or to mark off, is reflected in the word *temenos*, used for sanctuary space marked off by a wall or a boundary stone.[15] In Roman religious law, ownership of the land was transferred ritually through *consecratio* to the deity, thereby removing it from secular access.[16] In these spaces, not only the trees, but also, on some occasions, the living inhabitants of the groves possessed sanctity. The sacred grove (*lucus*) of Lacinian Juno six miles from Croton in southern Italy, for example, was enclosed by dense woods and tall fir trees, and in the midst of the grove were pastures for cattle sacred to the goddess.[17]

Some inscriptions record measures taken to protect sacred groves. Particularly interesting in this regard are two Greek decrees from the island of Kos, one dating to the end of the fifth century, the other to the fourth century BC.[18] The texts reveal that the cypress trees in the sanctuary of Apollo Kyparissios and Asklepios were not to be cut down and it was prohibited to remove wood from the precinct; any infringement was punished with a stiff monetary fine of 1000 drachmas to the authorities and offenders were deemed guilty of impiety against the temple. These measures had, in the first instance, a practical aim, the preservation of the trees in a time of general deforestation in Greece and an increased demand for sources of timber, but they also had a religious aim in protecting the sanctity of the temple's property.[19] Also Roman epigraphic evidence allows us to recognise rules and principles for preserving sacred groves, and these have much stronger religious aims. According to inscriptions and literary references, the Romans considered violations of sacred groves religious offences.[20] A municipal decree from Spoletium, dating to the period after 241 BC, for example, prohibited the removal of anything belonging to the sacred grove and the cutting of wood in it, except on the day of an annual festival.[21] Any violation of the grove was punished by an expiatory animal sacrifice directly to Jupiter and the payment of a fine. Cutting wood in a sacred grove might even be punishable by death, as it was for Decimus Turullius who felled trees in a sacred grove on Kos to acquire timber for the fleet of Mark Antony in 32-31 BC; the victor over Mark Antony, Octavian, had the man executed.[22]

Although the destruction or mutilation of sacred wooded sites was unacceptable and punishable, there are recorded incidents of this kind of intentional damage during times of war, and there is no information on how any rules or laws governing the protection of sacred groves might have been applied in these cases. King Philip V of Macedon, for example, attacked Pergamon on the western coast of Asia Minor in 201 BC, ordering his army to cut down the trees in the sanctuary of Athena Nikephoros, the city's presiding deity and dynastic protectress of Pergamon's Attalid kings.[23] The famous Greek gymnasia and schools in the suburbs of Academy, Lykeion, and Kynosarges outside Athens were situated from the fifth century BC along the banks of the Kephissos, Eridanos, and Ilissos rivers in the midst of ancient sacred groves and shrines, some of which were 'natural', others man-made.[24] The plane, elm, poplar, and olive trees in the Academy, in particular, were praised in many ancient sources.[25] These institutions were highly revered even much later by aristocratic Romans seeking tuition in rhetoric and philosophy there, but not all Romans viewed these sacred groves as inviolable. The Roman general Sulla, in his attack on Athens in 86 BC and in need of timber for his siege engines, felled the trees in the shady groves of the Academy and Lykeion districts, regardless of their antiquity and importance to the Athenians.[26] A sacred grove close to the Greek colonial city of Marseilles in southern Gaul was cut down by Julius Caesar after the inhabitants had sided with his rival, Lucius Domitius Ahenobarbus, in civil war. The poet Lucan seemed to excuse this particular act of sacrilege because in this grove, which could not be penetrated by sunlight and in which no animals or birds lived, the Gallic and 'barbarous rites' of human sacrifice were practiced, a custom repellent to the Romans.[27]

Sacrifices took place and religious rituals and festivals pertinent to the cult were celebrated in sacred groves, and rules determined who should enter the groves or

perform tasks and rituals in them.[28] Some of the rituals are so shrouded in mystery and obscurity, particularly those of very old cults, that we cannot truly comprehend their origin or meaning. A prime example of this is the sacred grove (*lucus*) of Diana on Lake Nemi in the Alban hills south-east of Rome where an old, archaic temple to her was located.[29] According to Roman mythology, the Trojan prince Aeneas, fleeing from the ruins of Troy, visited this sacred grove and plucked a branch from a tree in it, going on to fulfil the divine prophecy of being the founding hero of Latium and the Roman people. This act became a ritual central to the religious office of the priest known as the *Rex Nemorensis* (King of the Grove). The *Rex Nemorensis* could be challenged by any runaway slave who, if able to break off a limb from a tree in the sacred grove and defeat the incumbent priest in armed combat, would become the King of the Grove.[30] By the time Roman authors were writing about the ritual in the first century AD, however, there was certainly no longer any aspect of real physical combat involved in choosing the *Rex Nemorensis*, but the grove continued to be an important aspect of the cult, as it is represented in abbreviated form on Roman coins as late as the first century BC.[31] Furthermore, women seeking help in conceiving a child in the first centuries BC and AD worshipped here as suppliants of Diana, leaving garlands and votive tablets hanging from the trees in the grove.[32]

In Rome itself, the Arval Brethren, an ancient fraternity of twelve priests, conducted archaic fertility rites and worshipped in a sacred grove (*lucus*) of the goddess of fecundity, Dea Dia, on the road from Rome to Ostia. One of their tasks may have been an annual ritual circuit of the Roman fields, as part of the Ambarvalia festival in May. Something is known about the rituals conducted in the grove, largely from inscriptions and texts from the early first to the mid-third centuries AD.[33] According to these sources, the grove contained ilex and laurel trees, and only the priests entered it to celebrate the annual sacrifice or to prune damaged trees or remove or burn off dead ones. The *lucus* remained inaccessible to the public.

The sacred grove of ancient cypresses on a hill above the source of the river Clitumnus in Umbria was, on the other hand, very much accessible to visitors. According to Pliny the Younger at the end first century AD, it was the site of an 'ancient and venerable temple, in which is placed the river-god Clitumnus clothed in the usual robe of state', but also 'several little chapels are scattered round, dedicated to particular gods'.[34] Pliny also mentions the many coins tossed by the visiting faithful into the crystal clear water of the sacred spring. The site attracted some visitors of very high standing, including the emperor Caligula who 'on a sudden impulse' went 'to visit the river Clitumnus and its grove' around AD 39.[35]

A direct connection was made between types of trees in sacred precincts and the deities worshipped there. Pliny the Elder remarked on the antiquity of the custom of the veneration of trees in temple precincts in his native Italy, saying that 'different kinds of trees are kept perpetually dedicated to their own divinities, for instance the oak to Jupiter, the bay to Apollo, the olive to Minerva, the myrtle to Venus, the poplar to Hercules'.[36] Trees in sacred groves were often believed to have magical or prophetic properties, some of them relating to the varying political fortunes of the empire. A fig tree growing in the forum in Rome was a sacred reminder of the tree under which the

she-wolf had suckled the abandoned infants Romulus and Remus, the mythical founders of the city.[37] Whenever the tree shrivelled up it was thought to be a portent, and it had to be replanted more than once by the priests. Also in Rome, the shrine of Quirinus was one of the most ancient temples in the city, and in front of it two sacred myrtles grew for a long time.[38] One of them, the patricians' myrtle, flourished as long as the Senate did; the other one, the plebeians' myrtle, later grew stronger, when the influence of the plebeians dominated over that of the Senate. Ovid also mentions a shady grove in conjunction with this sanctuary.[39] At Nocera in Campania in south-west Italy, the growth of an elm in the sacred grove of Juno was related directly to the fortunes of the Roman empire. It had been cut back during the wars against the Germanic Cimbri who swarmed into Gaul and northern Italy in the late second century BC because its branches hung down onto the altar, but the elm recovered immediately and began to flower, and from that time on 'the power of Rome recovered after being ravaged by disasters'. [40]

Sacred groves also were places of refuge and asylum in which divine protection against injury and injustice was sought. The altar and grove of the Twelve Gods in the Athenian agora, for instance, functioned as a place of supplication when, in 519 BC, the Plataeans sought protection there from the Thebans, placing themselves under Athenian protection.[41] The site continued to be a place of refuge on various occasions in the fifth and fourth centuries BC.[42] The Roman writer Statius referred in the first century AD to this grove as a *nemus* of olive and laurel trees, but the term 'grove' in this case clearly applied to a very small number of trees, as excavations conducted there in the 1930s revealed only three or four tree pits.[43]

Groves and gardens connected with the gods of a city were viewed as a reflection of heavenly power and sanction of the city and its people. This is clear in the connection made by Diodorus Siculus in the first century BC between the fertile groves and gardens near Panara on Sicily and the divine majesty of the place.[44] Sacred groves and temples could be so closely associated with the city or landscape in which they were located that they came to be considered a symbolic equation of that place. The grove of the temple of Apollo at Daphne outside Antioch on the Orontes in Syria, for instance, is depicted summarily on an illustrated map of the Roman world in the fourth century AD as a landmark of Antioch.[45] The city of Antioch is depicted as an enthroned female figure, and she is surrounded by the trees of her famous grove.

But groves were not always necessarily the location only of religious or cultic activities. They occasionally had a more prosaic role to fulfil because the temples could own estates that generated income. Within the walls of Athens, in the south-east corner of the city, for example, was a *temenos* of Neleus and Basile planted with over two-hundred olive trees providing revenue for the cult.[46] Important details of this planted *temenos* and the sanctuary (*hieron*) of Kodros, Neleus, and Basile are recorded in a decree of 418/17 BC. The *hieron*, nearby by not contiguous, was not leased for cultivation because it was sacred, whereas the *temenos* could be because it was under public jurisdiction and designated for private use.[47] Such temple properties could be located at a considerable distance from the sanctuary. Numerous inscriptions recording temple property of this kind in Classical and Hellenistic Greece survive, especially on the island of Delos where officials of the sanctuary of Apollo managed its estates on that island and on the

neighbouring islands of Rheneia and Mykonos.[48] Temple land could be a rental commodity. The estate of Zeus Temenites on the island of Amorgos, for instance, was leased contractually to a tenant who tended to its orchard of fig trees; he also was responsible for erecting and maintaining a boundary wall around this plantation.[49] The tradition of maintaining estates worked by tenants for the profit of the temple continued in the Roman period. A Greek inscription of the fourth century AD from Herakleia in Sicily preserves a lengthy list of temple lands, including olive groves, vineyards, and woodlands.[50] The tenants were responsible for planting vines and trees and caring for them, as well as replacing old and unproductive vines or trees with new ones.

Images of sacred groves

Sacred groves filled with sanctuary furniture, gods, and worshippers engaged in cult activities are sometimes shown in Greek and Roman painting and sculpture. Some of the earliest Greek depictions in painting are those on red-figure vases of the fifth century BC produced in Athens. On one of these vessels, a wine mixing vessel (*krater*) of c. 440-420 BC in Agrigento, the god Apollo is seated in his sacred *temenos*, indicated by a tripod on a column, an altar, and a single, leafless tree.[51] Worshippers lead in a goat to be sacrificed on the altar. Roughly contemporaneous is a red-figure bell *krater* again showing Apollo in front of what is recognisably a laurel tree beneath which is a blood-spattered altar.[52] A youth roasts sacrificial meat for himself and the other worshippers on a spit over the flames on the altar, whilst another pours wine from a jug onto the altar.[53] Elsewhere, on a fragmentary bell *krater* of the third quarter of the fifth century BC in the British Museum, Herakles sacrifices to Chryse in her precinct, in which are to be seen a statue of the goddess on a column, an altar, and a leafy tree from which three votive tablets or *pinakes* dangle (Figure 1).[54] The sacrificial animal's tail, the god's portion of the sacrifice, burns on the fire, while the skewered meat to be consumed by the worshippers is roasted over it.

The single tree standing *pars pro toto* as an artistic convention for an entire grove is a feature also of marble votive reliefs that were thank offerings to the gods in fulfilment of a vow. On a marble relief panel in the Glyptothek in Munich, dating to about 200-150 BC, a group of eight men, women, and children, approach a bearded god and his female associate, bringing objects of dedication and sacrifice (Figure 2).[55] They all are gathered in a sanctuary planted with trees, although the grove here is represented as a single, old plane tree with leafy, gnarled branches. The sanctity of the tree and the place in which it stands is obvious because of the sacrificial altar below it, as well as the dedicated cloth fillets wrapped around the tree trunk, and the tall pedestal on which small statues of two gods stand. A curtain tied to a branch of the tree on the left and another tree or structure out of the picture separates the gods and their worshippers from the rest of the open-air sanctuary. The antiquity of the sacred grove is particularly highlighted by the apparent age and size of the plane tree.

A popular genre of Roman wall painting in the late first century BC and the first third of the first century AD was that of the so-called sacro-idyllic landscape. These landscapes, executed in an exquisite and impressionistic, even sketchy fashion, were painted on the walls of private houses in Roman Italy, with the best and most complete examples surviving in Rome and in and around Pompeii (Figure3). Some of the most beautiful

landscapes of this type decorated the imperial villa of Augustus's friend and son-in-law Agrippa at Boscotrecase near Pompeii.[56] In these paintings, rural shrines consisting of a few remains of ruined buildings, a tower or a votive column are located on rocky outcrops, and a few gnarled trees casting a bit of shade on the tiny figures of humans and animals moving around in and around the sanctuary. They are very much of their age when the bucolic landscape of streams, meadows, groves, and hills peopled by goatherds, shepherds, fauns, satyrs, and nymphs became a major literary genre in the poetry of the Augustan age, primarily due to Virgil's *Eclogues*.[57] For city dwellers, these idealised and pleasant, if artificial, landscapes offered a vision of a benign pastoral world in which the natural environment was revered but nonetheless tamed and to which they symbolically had access. Urban and rural ways of life blended together in these paintings, as they did in reality, for example, at the sacred grove (*nemus*) of Anna Perenna just outside Rome. Ovid described the use of the site by the common people of Rome, who came on her annual festival on 15 March to have picnics on the meadows, some pitching tents, some making leafy huts of branches or awnings of togas draped over reed stalks, and the description sounds a lot like the painted bucolic landscapes of age-old sacred groves.[58] This sanctuary, however, was neither ancient nor natural in character. Archaeological exploration of the deposits in a sacred well at the grove shed light on the votive offerings left behind by the faithful.[59] They indicate that the main periods of activity here cannot be ascribed to the distant past, but to the Augustan period and the fourth century AD. This sanctuary and its grove were in a suburban area on the border of the city of Rome, not in a rural location, and its visitors were city dwellers, not countryside rustics, who could enjoy a religious experience in accessible and managed nature.[60]

Temples and sacred groves occasionally are depicted also on Roman coins, particularly those from various places in the Greek-speaking eastern Empire. Bronze coins of Caracalla (AD 198-217) and Elagabalus (AD 218-222) from Thrace, for example, show the emperor's portrait on one side, and on the reverse is a portrayal of a temple at Augusta Traiana (Stara Zagora) in modern Bulgaria.[61] On either side of the temple is a tree, suggesting that there was a grove surrounding it. A temple is also on coins from Zeugma (Belkis) on the Euphrates, issued in the second and third centuries AD. In front of the temple is a colonnaded square or *porticus* with a large grove of trees within it.[62]

Excavated remains of sacred groves

There is a considerable body of archaeological evidence for sacred groves in sanctuaries. Plantings of trees in the pilgrimage sanctuary of Apollo Hylates, or 'Apollo of the woods', at Kourion on the south coast of Cyprus, for example, are known both from textual and archaeological evidence.[63] The excavations demonstrated that trees or bushes were planted in the seventh or sixth century BC in pits and trenches cut into the bedrock in the sanctuary *temenos*, although the grove went out of use and the planting pits were paved over by the first century BC. But it is possible that the cult also owned woodlands separate from the enclosed temple site itself, especially since Apollo was revered at Kourion as the god of woodlands. It may be these woodlands that are described much later in the second century AD as an extensive grove filled with wild animals, primarily deer.[64]

There is no literary or epigraphic mention of a sacred grove associated with the temple of Hephaistos in the heart of Athens, but archaeological excavations in 1937 uncovered rows of planting pits arranged around three sides of the temple .[65] The pits were cut out of the living rock of the slope on which the temple stood, some of the pits in 1937 still containing ceramic planters for trees or bushes (Figure 4). The diagnostic finds and stratigraphy of the deposits indicate that although the temple was built in the mid-fifth century BC, the trees around it were not planted until about two centuries later. This grove may have been damaged in 86 BC in the Roman siege of Athens under Sulla, as the trees were replanted thereafter in the first century BC.

In Italy, one of the earliest examples of a Roman temple grove is that of Juno at Gabii near Rome, dating to the second half of the second century BC.[66] Excavations at the site revealed rows of thirty-four holes (1.50 x 1.60 m) cut into the bedrock for trees; these were arranged on three sides of the temple, much like the plantings around the temple of Hephaistos in Athens. In the first decades of the first century BC, the grove was restructured and seventy new and smaller holes (1.20 x 1.30 m) were excavated for plantings. These may have been for less substantial trees or bushes than those in the first phase, possibly myrtles, although no botanical remains have survived to confirm this.

Evidence for the planting of trees and shrubs in temple precincts in the city of Rome itself is varied. Some of it is restricted solely to written sources. A shrine, known only from inscriptions, is that of Bellona Pulvinensis in the northeast part of the city. A funerary inscription of a priest of Bellona from Rome refers to the shrine as having been within a grove (*in luco*).[67] There was another grove in the sanctuary of Libitina. Dionysius of Halicarnassus referred to a 'treasury of Venus in the Grove, whom they call Libitina'.[68] The *lucus Libitinae* may have been located just outside the Esquiline gate in the eastern part of the city where there are attested burial grounds, although funerary inscriptions naming individuals who lived 'near the grove of Libitinae' do not reveal so precise a location.[69] John Bodel, who studied a range of texts in conjunction with the grove of Libitina in Rome, concludes that in this location the business of professional undertaking was conducted, a death register kept, and a possible death tax paid.[70] This is, therefore, not a typical sacred grove.

Archaeological exploration in Rome also has revealed physical remains of sacred groves. The remains of soil and roots embedded in rows of travertine marble containers on the west and north sides of the temple of the deified Julius Caesar, built in the Roman forum in 29 BC, for example, indicate that these containers held plantings, and the organic remains point to laurel trees.[71] In the early 1990s, excavations by the École Française at a site on the Palatine hill uncovered the remains of a system of plantings within a complex that may have belonged to the eastern god Elagabal erected by the emperor Elagabalus in the early third century AD.[72] Surrounded by porticoes on all four sides, the temple stood in the centre of a courtyard that was paved, but the paving was interrupted by four rectangular planting beds irrigated by underground channels. Although it is not certain what type of plants grew in the courtyard, low plantings of bushes and small trees have been suggested. The pots used for plantings were halved amphorae, the majority of which are wine and oil amphorae of the late second and early third century AD (Figure 5). The discovery of broken amphorae re-used as planting pots at this and

other sites makes it apparent that such containers often had a 'second life' in the context of both secular and sacred gardens.[73]

A marble plan of the city of Rome carved in the reign of Septimius Severus at the beginning of the third century AD, known as the *Forma Urbis Romae*, is another valuable source of information not only on the buildings in Rome, but also on groves and gardens associated with several structures.[74] The excavated and surviving fragments of the *Forma Urbis*, together with archaeological exploration of the sites depicted on the plan, clearly show that formal plantings were integral design elements in the temples of Rome. These plantings are represented in a variety of ways on the marble plan. The building complex erected in 55 BC in the western suburb of Rome by Pompey the Great to celebrate his triple triumph over Mediterranean pirates and kingdoms in Asia Minor and the Black Sea in 61 BC included a stone-built theatre and a temple of Venus adjacent to a large colonnaded courtyard (the *Porticus Pompeiana*) . On the marble plan, two elongated rectangles parallel to the two long sides of the courtyard can be seen. Gleason's definitive landscape architectural study of this complex has shown that these rectangles represent the double lanes of plane trees praised in ancient descriptions of the building, perhaps the Asiatic plane trees that Pompey brought back from his campaigns and displayed in his triumph as fruits of victory (Figure 6).[75] The poet Martial, writing in the first century AD, referred to the plantings here as a *nemus duplex*, a double grove, the term *nemus* indicating the sacred nature of this carefully contained landscaping.[76] Between the columns of the porticoes hung gold embroidered tapestries from Pergamon, and in the galleries and the grove were famous masterpieces of painting, statues of gods and mythical figures (some with fountains), as well as images of conquered nations, all impressing members of the Roman public who strolled here as testament to the wealth of Roman conquest and the divine sanction of Pompey and Rome by the goddess Venus.[77]

The marble plan also shows rows of joined rectangles in the courtyard of the *Templum Pacis* (Temple of Peace) in the heart of Rome, dedicated by the emperor Vespasian in AD 75 in celebration of his victory in Judea . These once were thought to represent rows of trees, hedges or flowerbeds, but recent excavation at the site indicates that these were, in fact, masonry water basins and bases for sculpture.[78] Between the water basins were plantings, as indicated by the double rows of amphorae found in the soil that had been re-used as planting pots. It is unknown what kinds of trees or bushes once grew in these pots, but at least some of the vegetation consisted of rose bushes, to which the carbonized remains of this plant in the soil attest. Like the *Porticus Pompeiana*, the galleries and courtyard here were adorned with famous Greek masterpieces of painting and sculpture, and in this case also trophies from Jerusalem.[79] Although the building was also called a forum, which seems to have little to do with a sanctuary, other Latin and Greek authors call the overall site *templum* and *aedes* (temple and shrine) as well as *temenos* and *hieron* (sacred precinct and sanctuary).[80] We do not know whether the plantings in the courtyard were called a *nemus*, but the presence of a temple to *Pax* (peace) suggests that it had a sacred character, in addition to its role as a display of Roman conquest and dominion over others.[81]

A temple grove of the first century BC is attested also at Pompeii. Excavations by the author at the temple of Venus, the patron goddess of the city, produced clear evidence that this sanctuary was built in the mid-first century BC after Pompeii had become a Roman colony under Sulla (Figure 7).[82] At the same time, the courtyard surrounding the temple was planted to create a sacred grove. The goddess of fertility, Venus, was connected more than any other with vegetation and growing plants, so it is entirely appropriate that her precinct should be planted. On three sides of the courtyard in front of the porticoes, planting pits, terracotta plant pots, and root cavities were found . The pits contained ceramic pots in a complete or fragmentary state; these vessels alternated between those either with one hole in the base or with one hole in the base and three in the lower body, and in between these were pits with no pot in them at all (Figure 8). This regular pattern may reflect the planting of types of vegetation of alternating form and shape, or it may simply imply a sequence of trees and shrubs that required propagation in ceramic pots and those that did not need containers to develop. Possibly laurels, roses, and myrtles grew in these containers, the latter two being particularly sacred to Venus.

The sacred grove of Venus, almost certainly a *nemus*, was very much an architectural garden in which alternating types of trees and bushes were planted parallel to the columns of the porticoes surrounding the courtyard, the trees echoing the rhythms of the columns and visually highlighting the temple as one approached from the south. In its layout of regular plantings on three sides of the temple the grove of Venus resembled those at the temple of Hephaistos in Athens and the temple of Juno at Gabii (see above). All three sites display the design of formal plantings surrounded by a *porticus triplex* in sanctuary architecture. Evidence recovered in the excavations at the temple of Venus also clearly indicates the replacement of some of the trees in the grove and other rarely attested maintenance work by gardeners.[83] Furthermore, analysis of the soil in the planting pots points to the practice of soil enrichment or the use of fertilisers in the plant nursery in which these trees and bushes were raised before being transferred to the sanctuary. This is the first evidence for plant nurseries supplying cult organisations with the desired vegetation for the landscaping of a sanctuary.

Also outside Italy there is good archaeological evidence for temple groves of the Roman period.[84] The geographer Strabo referred to the grove of laurels surrounding the gymnasium and stadium at Nikopolis, the Roman town in northwest Greece that was created by the emperor Augustus in the late first century BC.[85] But this emperor also built a sacred precinct dedicated to Mars, Neptune, and Apollo here between 29 and 27 BC to celebrate his defeat of Antony and Cleopatra at the battle of Actium in 31. Recent excavations show that the courtyard in this victory monument was a formally planted area within a *porticus triplex*, a design that clearly had become popular beyond Italy.[86] Ceramic plant pots were inserted in the ground parallel to and in front of all three porticoes, with the altar in the centre of the courtyard. Augustus himself must have chosen the trees for his monument, and it is likely that they were laurels, as these were particularly sacred to Apollo, his patron god.

Conclusion

Throughout the Greek and Roman worlds, 'the sacred groves of the immortal ones' were enclosed or assigned spaces, separate from secular ones, where mortals worshipped and

communicated with the divine. Particularly revered were those sacred groves that were perceived to be of great antiquity and unmanaged, although, in reality, the vast majority of open-air cult sites were generally shaped by man, either by enclosing them, setting up altars and votive monuments and building temples in them, or even planting a regular and regimented grove of trees from scratch. From the first century BC, and especially in Roman Italy, many completely new temples and sanctuaries were established that included the recurring design of rows of trees on two or three sides of a sacred precinct, ranging from the *nemus duplex* of Pompey the Great in Rome to the *porticux triplex* at the temple of Venus in Pompeii. These have the appearance of being manicured and managed in the extreme. At the same time, and particularly in the Augustan age, wall painting and poetry reveled in the bucolic portrayal of apparently ancient, rural landscapes in which little shrines and shady groves are visited by shepherds and other rustics, but the natural environment in such portrayals is artificial and, for increasing numbers of city dwellers, primarily symbolic of a benign pastoral world of old in which gods and men interacted in tune with nature.

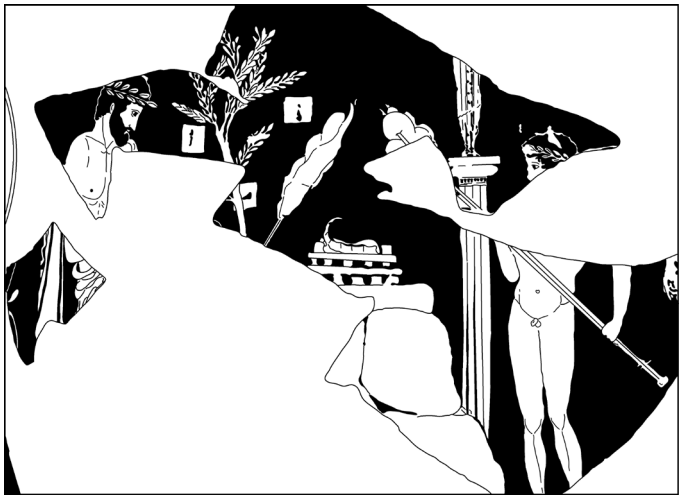

Fig. 1 Athenian red-figure bell *krater* with worshippers sacrificing in a sacred grove, c. 450-425 B.C. Drawing by I. Deluis.

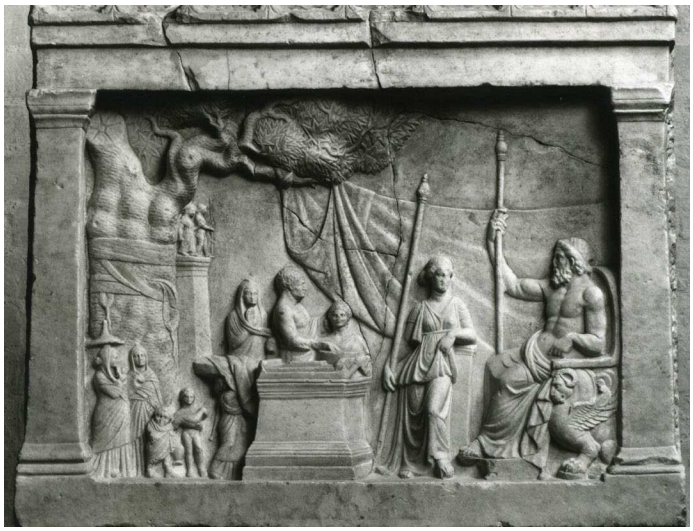

Fig. 2 Greek votive relief depicting worshippers in a sacred grove approaching the gods, c. 200-150 B.C. Photo Hartwig Coppermann, courtesy of the Glyptothek, Munich.

Fig. 3 Roman wall painting from the Villa Farnesina, Rome, depicting a rural shrine with trees and a cult statue on a column, late first century B.C. Photo M. Carroll.

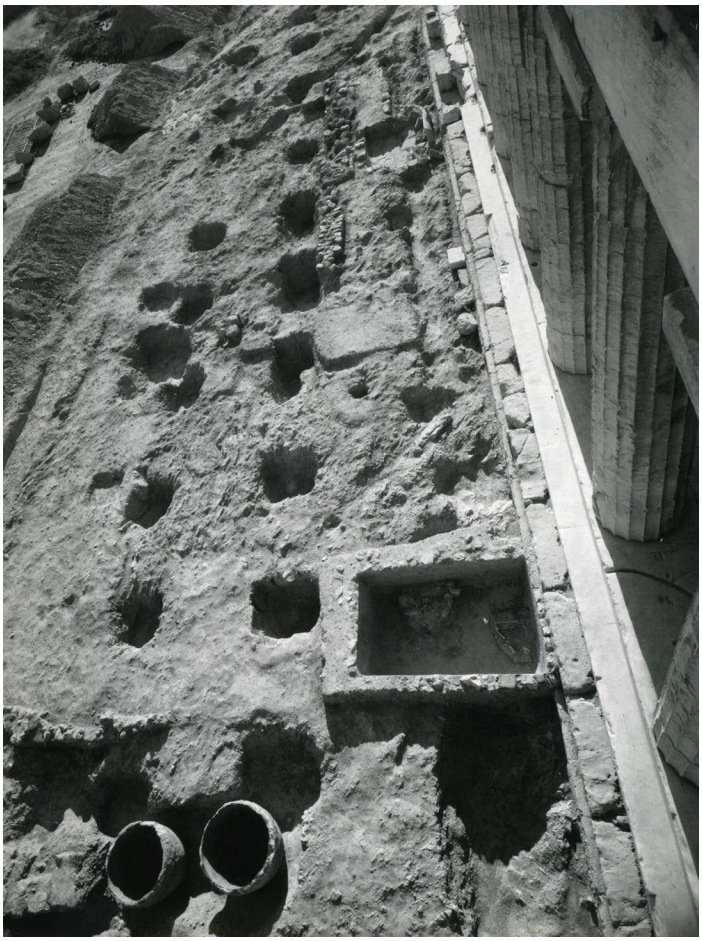

Fig. 4 Excavated planting pits for trees cut into the living rock next to the temple of Hephaistos, Athens. Photo American School of Classical Studies.

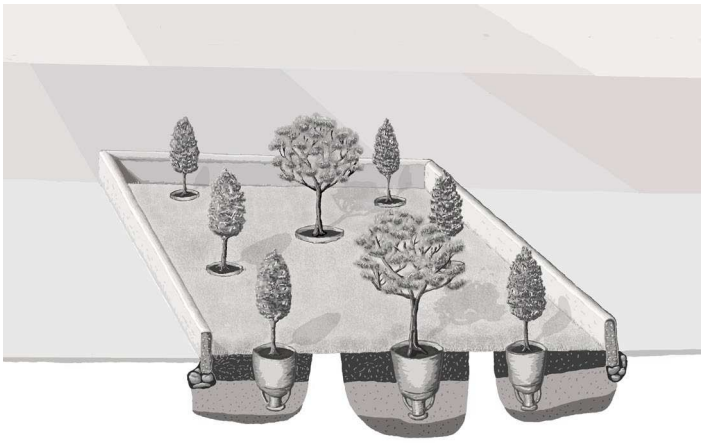

Fig. 5 Reconstruction of an area of the sacred grove at the Temple of Elagabal in Rome, where the amphorae (upside down) were used as planters in the third century A.D. Drawing by I. Delui

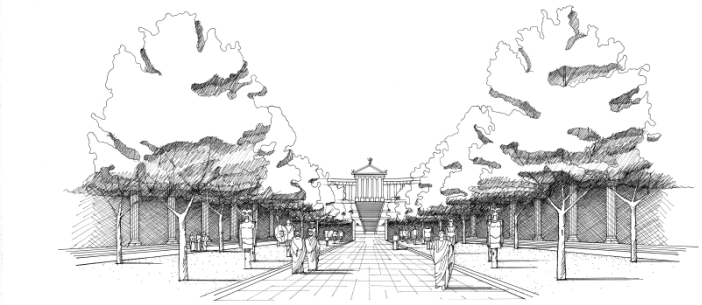

Fig. 6 Reconstruction of the *nemus duplex* in the Porticus Pompeiana in Rome with the theatre/temple of Venus in the background, 55 B.C. Drawing by L. Cockerham Catalano, courtesy of K.L. Gleason.

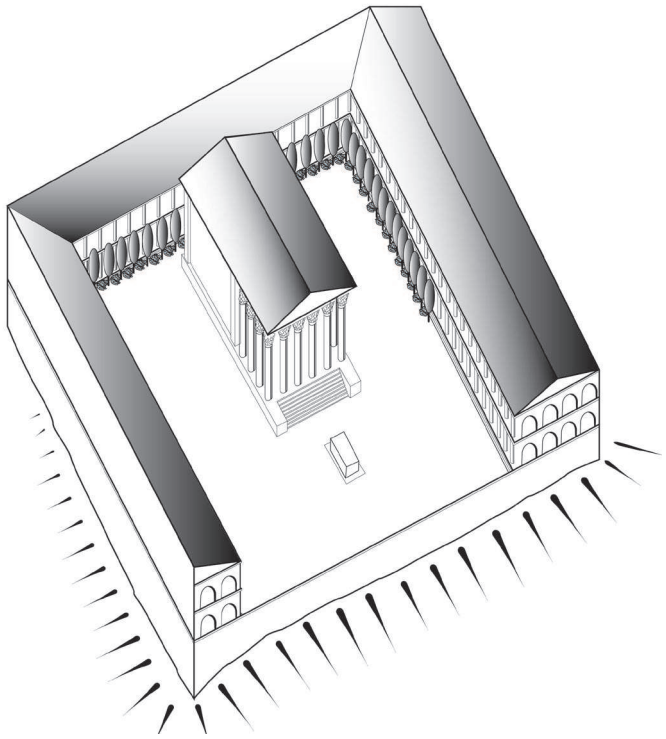

Fig. 7 Plan of the sanctuary of Venus at Pompeii with tree plantings in the grove on three sides of the temple courtyard, ca. 50 B.C. Plan by O. Jessop.

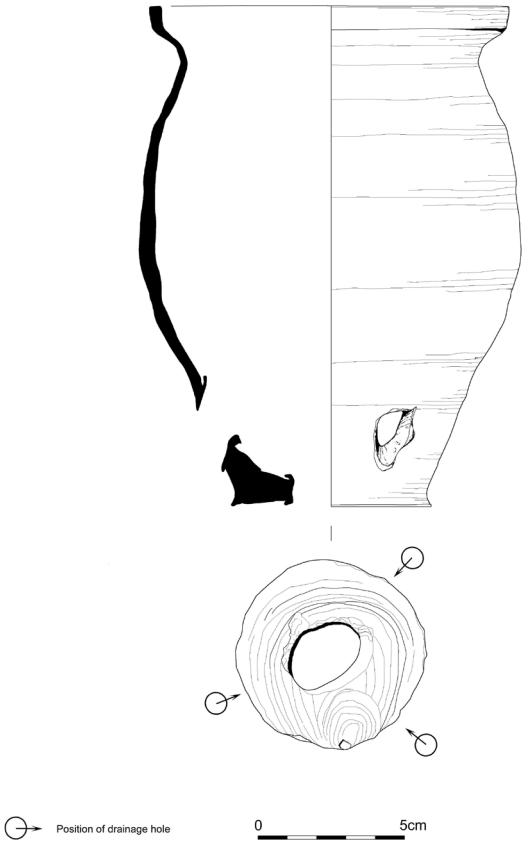

Fig. 8 Ceramic plant pot with four growth holes for roots, found at the grove of the temple of Venus in Pompeii, ca. 50 B.C. Drawing by O. Jessop.

[1] For a 'garden for the god Addu' that was 'full of juniper trees' in the late nineteenth and early eighteenth centuries BC, see Jean-Claude Margueron, 'Die Gärten im Vorderen Orient', in *Der Garten von der Antike bis zum Mittelalter*, ed. by Maureen Carroll-Spillecke (Mainz: Verlag von Zabern, 1992), p. 61. On Egyptian gardens and sacred gardens, see Jean-Claude Hugonot, *Le jardin dans l'Égypte ancienne* (Frankfurt: Peter Lang, 1989); Alix Wilkinson, *The Garden in Ancient Egypt* (London: Rubicon Press, 1998). *Isaiah* 60.13 records trees planted to beautify the sanctuary of the Hebrew god.

[2] Lines 256-72. The poem probably dates to the period between 700-500 BC. It is translated and commented on by Diane Raynor, *The Homeric Hymns. A Translation with Introduction and Notes* (Berkeley: University of California Press, 2004), pp. 75-85. See also Borimir Jordan and John Perlin, 'On the Protection of Sacred Groves', in *Studies Presented to Sterling Dow on his Eightieth Birthday* (Durham, N.C.: Duke University, 1984), p. 154.

[3] For the garden of the Hesperides in the Atlas mountains, in which the goddess Hera had planted the tree of immortality laden with golden apples, as well as other trees such as pomegranate, pear, mulberry, myrtle, laurel, and almond, see Hesiod, *Theogony* 215-216 and Skylax, *Periplus* 108.

[4] Dunstan Lowe, 'Tree-Worship, Sacred Groves and Roman Antiquities in the Aeneid', *Proceedings of the Virgil Society*, 27.1 (2011), 91-128.

[5] Pausanias, *Description of Greece* 8.54.7. See also Christian Jacob, 'Paysage et bois sacré: ἄλσος dans la *Périégèse de la Grèce* de Pausanias', in *Les Bois Sacrés*, ed. by Olivier de Cazanove and John Scheid (Naples: Centre Jean Bérard, 1993), pp. 31-44. On the portrayal of trees and ruins by Pausanias, see James I. Porter, 'Ideals and Ruins. Pausanias, Longinus and the Second Sophistic', in *Pausanias. Travel and Memory in Roman Greece,* ed. by Susan E. Alcock, John F. Cherry and Jas Elsner (Oxford: Oxford University Press, 2001), pp. 63-92.

[6] *IG* 12.1.781-783; Georgios Deligiannakis, 'Late Paganism on the Aegean Islands and Processes of Christianisation', in *The Archaeology of Late Antique Paganism*, ed. by Luke Lavan and Michael Mulryan (Leiden: Brill, 2011), pp. 314-15.

[7] Janet Grossman, *Greek Funerary Sculpture. Catalogue of the Collections at the Getty Villa* (Los Angeles: Getty Publications, 2001), cat. No. 47, pp. 130-31.

[8] Stephen G. Miller, 'Excavations at Nemea 1976,' *Hesperia*, 46 (1977), 1-26 and 'Excavations at Nemea 1977', *Hesperia,* 47 (1978), 58-88; Darice E. Birge, Lynn H. Kraynak and Stephen G. Miller, *Excavations at Nemea. Topographical and Architectural Studies. The Sacred Square, the Xenon and the Bath* (Berkeley: University of California Press, 1992), pp. 85-96 and figs. 1, 98-103.

[9] Pausanias, *Description of Greece* 2.15.2

[10] See Philippe Bonnachere, 'The Place of the Sacred Grove (alsos) in the Mantic Rituals of Greece: The Example of the alsos of Trophonios at Lebadeia (Boiotia)', in *Sacred Gardens and Landscapes: Ritual and Agency*, ed. by Michel Conan (Washington D.C.: Dumbarton Oaks, 2007), pp. 17-18.

[11] On ancient Greek gardens of all kinds, see Maureen Carroll-Spillecke, *ΚΗΠΟΣ. Der antike griechische Garten* (Munich: Deutscher Kunstverlag, 1989) and *Der Garten von der Antike bis zum Mittelalter* (Mainz: Verlag von Zabern, 1992), pp. 153-76.

[12] John Scheid, '*Lucus, nemus*. Qu'est-ce qu'un bois sacré?', in *Les Bois Sacrés*, ed. by Olivier de Cazanove and John Scheid (Naples: Centre Jean Bérard, 1993) p. 19; Filippo Coarelli, 'I luci del Lazio: la documentazione archeologica', in *Les Bois Sacrés*, ed. by Olivier de Cazanove and John Scheid (Naples: Centre Jean Bérard, 1993), p. 52.

[13] Ingrid E.M. Edlund, *The Gods and The Place. Location and Function of Sanctuaries in the Countryside of Etruria and Magna Graecia (700-400 B.C.)* (Stockholm: Almqvist and Wiksell, 1987), pp. 30-43, 126-46.

[14] *CIL* 6.32455/*ILS* 5428.

[15] Pausanias, *Description of Greece* 8.37.10, 2.27.1.

[16] Ulrike Egelhauf-Gaiser, 'Roman cult sites: A pragmatic approach', in *A Companion to Roman Religion*, ed. by Jörg Rüpke (Oxford: Blackwell, 2007), p. 206.

[17] Livy, *From the Founding of the City* 24.3.3-7. The cattle were not merely for decoration, however, as Livy tells us that 'great profits were made from the cattle', and out of these profits a massive golden column was made and set up to the goddess.

[18] Jordan and Perlin, pp. 155-57.

[19] Jordan and Perlin, p. 156.

[20] John Bodel, *Graveyards and Groves : A Study of the Lex Lucerina* (Cambridge, Mass.: American Journal of Ancient History, 1994), p. 26.

[21] *CIL* 6.4766-4767/*ILS* 4911. Bodel, pp. 24-29.

[22] Valerius Maximus, *Memorable Doings and Sayings* 1.19; Cassius Dio, *Roman History* 51.8.2.

[23] Polybios, *Histories* 16.1.6.

[24] Jean Delorme, *Gymnasion. Étude sur les monuments consacrés à l'éducation en Grèce* (Paris: Boccard, 1960), pp. 51-61; John Travlos, *Pictorial Dictionary of ancient Athens* London: Thames and Hudson, 1971), pp. 42-51, 340-41, 345-47; Carroll-Spillecke, *ΚΗΠΟΣ*, pp. 28-31; Wolfram Hoepfner, *Antike Bibliotheken (*Mainz: Verlag von Zabern, 2002), pp. 56-62; Maureen Carroll, *Earthly Paradises. Ancient Gardens in History and Archaeology* (London: British Museum Press, 1993), pp. 50-52. For the intentional planting of trees in these areas, see Plutarch, *Cimon* 13; Pseudo-Plutarch, *Decem Oratorum Vitae* 841C-D.

[25] Aristophanes, *Clouds* 1002-1019; Plato, *Laws* 6.761B-C; Diogenes Laertius, *Lives of Eminent Philosophers* 3.7.

[26] Plutarch, *Sulla* 12.3; Appian, *Mithridatic Wars* 30.

[27] *Civil War* 3.399-425.

[28] Bonnachere, pp. 1-7.

[29] Vitruvius, *On Architecture* 4.8.4. For an overview of the archaeology of the sanctuary, see Pia Guldager Bilde and Mette Moltesen, *In the Sacred Grove of Diana: Finds from the Sanctuary at Nemi* (Copenhagen: Ny Carlsberg Glyptothek, 1997).

[30] Strabo, *Geography* 5.3.12; Virgil, *Aeneid*, 6.13; Servius, *On Aeneid* 6.136; Suetonius, *Caligula* 35; Pausanias, *Description of Greece* 2.27.4.

[31] Michael H. Crawford, *Roman Republican Coinage* (Cambridge: Cambridge University Press, 2001), no. 486/1.

[32] Ovid, *Fasti* 3.266.

[33] *CIL* 6.2065; *CIL* 6.2075; Henri Broise and John Scheid, 'Étude d'un cas: Le lucus Deae Diaea à Rome', in *Les Bois Sacrés*, ed. by Olivier de Cazanove and John Scheid (Naples: Centre Jean Bérard, 1993), pp. 145-57.

[34] Pliny, *Letters* 8.8.

[35] Suetonius, *Caligula* 43.

[36] *Natural History* 12.2.3.

[37] Livy, *From the Founding of the City* 10.23.12; Pliny, *Natural History* 15.20.77.

[38] Pliny, *Natural History* 15.36.120-121.

[39] *Metamorphosis* 14.836-837.

[40] Pliny, *Natural History* 16.57.132.On the wars against the Germanic Cimbri and Teutones, see Maureen Carroll, 'Measuring Time and Inventing Histories in the Early Empire. Roman and Germanic Perspectives', *TRAC 2001. Proceedings of the Eleventh Annual Theoretical Roman Archaeology Conference, Glasgow 2001,* ed. by Martin Carruthers (Oxford: Oxbow, 2002), pp. 104-12.

[41] Herodotos, *History* 6.108.4.

[42] Diodorus Siculus, *Historical Library* 12.39.1; Plutarch, *Pericles* 3.2; Lycurgus, *Against Leocrates* 93.

[43] Statius, *Thebaid* 481-296; Homer A. Thompson and R. E. Wycherley, *The Agora of Athens. The History, Shape and Uses of an Ancient City Center* (Princeton: Princeton University Press, 1972), p. 135; L. M. Gadberry, 'The Sanctuary of the Twelve Gods in the Athenian Agora: A Revised View', *Hesperia,* 61 (1992), 447–89.

[44] *Historical Library* 5.42.6-43.3, 5.44.5

[45] The map is known today in a medieval copy, the so-called *Tabula Peutingeriana*. Annalina and Mauro Levi, *Itineraria picta: Contributo allo studio della Tabula Peutingeriana* (Rome: 'L'Erma' di Bretschneider, 1967), pp. 154-56, pl. 9; Carroll 1993, 71, fig. 55.On

primary references to the grove, see Strabo, *Geography*, 16.2.6; Philostratos, *Life of Apollonios* 1.16.

[46] *IG* I[3] 84; Travlos, pp. 332-33, fig. 435.

[47] Susan G. Cole, *Landscapes, Gender, and Ritual Space. The Ancient Greek Experience* (Berkeley: University of California Press, 2004), pp. 59-60.

[48] John Harvey Kent, 'The Temple Estates of Delos, Rheneia and Mykonos', *Hesperia*, 17, (1948), 243-338.

[49] *IG* XII.7.62.

[50] *IG* 14.645

[51] Folkert T. van Straten, *Hiera Kala. Images of Animal Sacrifice in Archaic and Classical Greece* (Leiden : E.J. Brill, 1995), p. 215, cat. No. V127, fig. 30.

[52] van Straten, p. 231, cat. no. V200, fig. 152.

[53] On animal sacrifice and the apportioning of sacrificial meat to man and gods, see van Straten, pp. 128-141.

[54] van Straten, p. 261, cat. no. V367, fig. 124.

[55] Jerome J. Pollitt, *Art in the Hellenistic Age* (Cambridge: Cambridge University Press, 1986), p. 197, fig. 210.

[56] Peter von Blanckenhagen and Christine Alexander, *The Augustan Villa at Boscotrecase* (Mainz: Philipp von Zabern, 1990). For bucolic rural shrines, see also the paintings in the Villa Farnesina in Rome: Diana Spencer, *Roman Landscape: Cultural and Identity* (Cambridge: Cambridge University Press, 2010), pp. 147-153, figs. 13-14.

[57] Frederick Jones, *Virgil's Garden. The Nature of Bucolic Space* (London: Bloomsbury, 2013), pp. 18-21.

[58] Ovid, *Fasti* 3.525-530. See also Martial, *Epigrams* 4.64.17.

[59] Marina Piranomonte, *Il santuario della Musica e il bosco sacre di Anna Perenna* (Milan: Electa, 2002).

[60] Egelhauf-Gaiser, pp. 213-14.

[61] Nikola Muschmov, *Antichnitje moneti na Balkanskiia poluostrov i monetitie tsare* (*Ancient Coins of the Balkan Peninsula and the Coins of the Bulgarian Monarchs*) (Sofia: National Museum, 1912), cat. no. 3076; Richard Stoll, *Architektur auf römischen Münzen.* (Trier: Selbstverlag, 2000), p. 80, nos. 115-116.

[62] Warwick Wroth, *A Catalog of the Greek Coins in the British Museum, Galatia, Cappadocia, and Syria* (London: British Museum , 1899), p. 127, no. 29, pl. 16.13, no. 46, pl. 16.14.

[63] Darice E. Birge, '*Ἄλσος* and the Sanctuary of Apollo Hylates', in *Studies in Cypriote Archaeology*, ed. by Jane C. Biers and David Soren (Los Angeles: Institute of Archaeology, 1981), pp. 153-58; Vassos Karageorghis and Maureen Carroll-Spillecke, 'Die heiligen Haine und Gärten Zyperns', in *Der Garten von der Antike bis zum Mittelalter*, ed. by Maureen Carroll-Spillecke (Mainz: Verlag von Zabern, 1992), pp. 141-52.

[64] Aelian, *Nature of Animals* 11.7.

[65] Dorothy B. Thompson, 'The Garden of Hephaistos', *Hesperia*, 6 (1937), 396-425; John M. Camp, *The Athenian Agora. Excavations in the Heart of Classical Athens* (London: Thames and Hudson, 1986), p. 87; Carroll-Spillecke, *ΚΗΠΟΣ*, pp. 31, 58, 72.

[66] Hans Lauter, 'Ein Tempelgarten? ', *Archäologischer Anzeiger* (1968/69), pp. 626-31; Coarelli, pp. 48-51.

[67] *CIL* 6.2232/*ILS* 4181.

[68] *Roman Antiquities* 4.15.5.

[69] *CIL* 6.9974/*ILS* 7574; *CIL* 6.33870/*ILS* 7471.
[70] Bodel, pp. 17-18.
[71] Bernhard Andreae, 'Archäologische Funde im Bereich von Rom 1949-1956/57', *Archäologischer Anzeiger* (1957), pp. 110-358; Lawrence Richardson, *A New Topographical Dictionary of Ancient Rome* (Baltimore: Johns Hopkins University Press, 1992), pp. 213-14.
[72] Françoise Villedieu, 'I giardini del tempio', in *Il giardino dei Cesari: Dai palazzi antichi alla Vigna Barberini sul monte Palatino. Scavi dell'École Française de Rome, 1985-1999,* ed. by Françoise Villedieu (Rome: Edizioni Quasar, 2001), pp. 94-97; Giorgio Rizzo, 'Le anfore del giardino del tempio', in *Il giardino dei Cesari: Dai palazzi antichi alla Vigna Barberini sul monte Palatino. Scavi dell'École Française de Rome, 1985-1999,* ed. by Françoise Villedieu (Rome: Edizioni Quasar, 2001), p. 98.
[73] For example, at Hadrian's villa at Tivoli: Wilhelmina F. Jashemski and Eugenia S.P. Ricotti, 'Preliminary Excavations in the Gardens of Hadrian's Villa: The Canopus Area and the Piazza d'Oro', *American Journal of A*rchaeology, 96 (1992), 580-85.
[74] Gianfilippo Carettoni, Antonio M. Colini, Lucos Cozza, and Guglielmo Gatti, *La pianta marmorea di Roma antica* (Rome: Comune di Roma, 1960); Robert B. Lloyd, 'Three Monumental Gardens on the Marble Plan', *American Journal of Archaeology*, 86 (1982), 91-100.
[75] Kathryn Gleason, 'Porticus Pompeiana. A new perspective on the first public park of ancient Rome', *Journal of Garden History*, 14.1 (1994), 13-27. For a description of the living trees from Asia and Africa that were brought in Pompey's triumphal procession, see Pliny the Elder, *Natural History* 12.20 and 12.111.
[76] Martial, *Epigrams* 2.14.10. The trees (and their shade) are mentioned again by Martial, *Epigrams* 11.47.3 and Propertius 2.32.11-12.
[77] Ann L. Kuttner, 'Culture and History at Pompey's Museum', *Transactions of the American Philological Association*, 129 (1999), 343-73.
[78] Carettoni *et al*., pp. 73-74, pl. 20.15-16; Lloyd, pp. 91-92, fig. 1; Richardson, pp. 286-87; S. Rizzo, 'Indagini nei fori Imperiali. Oroidrografia, foro di Cesare, foro di Augusto, templum Pacis', *Römische Mitteilungen* 108, (2001), 238-39; Roberto Meneghini, 'I Fori Imperiali: ipotesi ricostruttive ed evidenze archeologica', in *Imaging Ancient Rome. Documentation – Visualisation – Imagination*, ed. by Lothar Haselberger and John Humphrey (Portsmouth, R.I.: Journal of Roman Archaeology, 2006), pp. 158-59; Stefania Fogagnolo, 'Lo Scavo del Templum Pacis. Concordanze e novità rispetto alla *Forma Urbis*', in *Formae Urbis Romae. Nuovi Frammenti di Piante Marmoree dallo Scavo dei Fori Imperiali*, ed. By Roberto Meneghini and Riccardo Santangeli Valenzani (Rome: 'L'Erma' di Bretschneider, 2006), pp. 61-74; Roberto Meneghini and Riccardo Santangeli Valenzani, *I Fori Imperiali. Gli Scavi del Comune di Roma (1991-2007)* (Rome: Viviani Editore, 2007), pp. 61-70, figs. 54-55. On the use of exotic trees and plants brought back to Rome in triumph over defeated lands, including the parading of balsam trees from Judaea by Vespasian in A.D. 71, see Elizabeth Macaulay-Lewis, 'The Fruits of Victory: Generals, Plants and Power in the Roman World', in *Beyond the Battlefields. New Perspectives on Warfare and Society in the Graeco-Roman World*, ed. by Edward Bragg, Lisa I. Hau and Elizabeth Macaulay-Lewis (Cambridge: Cambridge Scholars Publishing, 2008), pp. 206-24.
[79] Josephus, *The Jewish War* 7.5.7; Pliny the Elder, *Natural History* 12.94; 34.84; 35.102, 109; 36.27, 58; Suetonius, *Vespasian* 18. Some of the sculpture had been taken from the demolished Golden House of Nero.

[80] Carlos F. Noreña, Medium and message in Vespasian's Templum Pacis, *Memoirs of the American Academy in Rome*, 48 (2003), pp. 25-26, 40.
[81] Noreña, pp. 38-41.
[82] Maureen Carroll, 'Nemus et Templum. Exploring the sacred grove at the Temple of Venus in Pompeii', in *Nuove ricerche archeologiche nell'area vesuviana (scavi 2003-2006), Atti del convegno internazionale, Roma 1-3 Febbraio 2007*, ed. by Pietro Giovanni Guzzo and Maria Paola Guidobaldi (Rome: 'L'Erma' di Bretschneider, 2008), pp. 37-45, and 'Exploring the Sanctuary of Venus and its sacred grove. Politics, cult and identity in Roman Pompeii', *Papers of the British School at Rome* 78, (2010) 63-106.
[83] Carroll 2010, pp. 79-80.
[84] These include tree pits in a temple precinct in Thuburbo Maius in Tunisia and planting pits in the paved terrace of a temple complex at Munigua in Spain. Wilhelmina F. Jashemski, 'Roman Gardens in Tunisia: Preliminary Excavations in the House of Bacchus and Ariadne and in the East Temple at Thuburbo Maius', *American Journal of Archaeology*, 99 (1995), 559-76; Theodor Hauschild, 'Los templos romanos de Munigua', in *Templos romanos de Hispania* (Murcia: Cuadernos de arquitectura romana, 1992), pp. 133-43 ; Coarelli, p. 52.
[85] *Geography* 7.7.6.
[86] Konstantin Zachos, 'The tropaeum of the sea-battle of Actium at Nikopolis: interim report', *Journal of Roman Archaeology,* 16 (2003), 65-92**.**