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Resolved

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STEPHANIE DALLEY

ANCIENT MESOPOTAMIAN GARDENS AND THE IDENTIFICATION OF THE HANGING GARDENS OF BABYLON RESOLVED

The Babylonians and Assyrians planted gardens in cities, palace courtyards, and temples, in which trees with fragrance and edible fruits were prominent for re-creating their concept of Paradise. The famous Hanging Gardens of Babylon, one of the Seven Wonders of late antiquity, have finally been identified as the palace garden of the Assyrian king Sennacherib, constructed not at Babylon but at Nineveh, which was also known as 'old Babylon', around 700 B.C. Sennacherib invented the Archimedean screw, using cast copper or bronze, for watering the gardens. A sculpture now in the British Museum shows a part of the gardens in the reign of Sennacherib's grandson, when the trees had matured.

The king plants a date-palm in his palace and fills up the space beside her with a tamarisk. Meals are enjoyed in the shade of the tamarisk, skilled men gather in the shade of the date-palm, the drum is beaten, men give praise, and the king rejoices in his palace.

The two trees, brother and sister, are quite different; the tamarisk and the palm-tree compete with each other. They argue and quarrel together. The tamarisk says: 'I am much bigger!' And the date-palm argues back, saying: 'I am much better than you! You, O tamarisk, are a useless tree. What good are your branches? There's no such thing as a tamarisk fruit! Now, my fruits grace the king's table; the king himself eats them, and people say nice things about me. I make a surplus for the gardener, and he gives it to the queen; she, being a mother, nourishes her child upon the gifts of my strength, and the adults eat them too. My fruits are always in the presence of royalty'.

The tamarisk makes his voice heard; his speech is even more boastful. 'My body is superior to yours! It's much more beautiful than anything of yours. You are like a slavegirl who fetches and carries daily needs for her mistress'. He goes on to point out the king's table, couch, and eating bowl are made from tamarisk wood, that the king's clothes are made using tools of tamarisk wood; likewise the temples of the gods are full of objects made from tamarisk. The date-palm counters by pointing out that her fruits are the central offering in the cult; once they have been taken from the tamarisk dish, the bowl is used to collect up the garbage.

THIS EXTRACT, from one of the most popular pieces of Babylonian literature, was written in cuneiform on clay tablets as early as 2000 B.C. It tells us about one of the earliest kinds of garden, 4,000 years ago.

If we look at the natural, uncultivated environment of central Iraq, we can see immediately that the most important features of a garden would be trees for shelter from

the heat and the glare of the sun. By contrast, in the natural environment of southern Iraq's beautiful marshlands, about which Wilfred Thesiger has written, we see the characteristic trees of the south — the date-palm, the tamarisk, and the Euphrates poplar — flourishing alongside the water-courses which lead into the cane-breaks of the marshland.

THE COURTYARD GARDEN

In ancient times the wild boar as well as domesticated pigs rootled everywhere, and the first city walls were designed not simply against human enemies but also to keep out greedy snouts, and to divert flood water whenever the great rivers — the Tigris and the Euphrates — burst their banks. For these reasons the garden was an urban phenomenon, set safely inside the walls of a city which formed a mound raised well above the flood plain of the adjacent countryside. More than that, the best place for a pleasant garden safe from marauding pigs and thieving urchins, grazing goats, and noisy people, was the large internal courtyard that was characteristic of royal palaces.

This is where the tamarisk and the date-palm argued it out. One of the huge courtyards in the palace at Mari (c. 1800 B.C.) on the Middle Euphrates was called the Court of the Palms in contemporary written records. The walkways across it are made of baked brick, terracotta, and they are traditionally raised above the surface of the courtyard, to keep them free of drifting dust in hot weather and ubiquitous mud in winter. The ration lists found in this palace tell us that there were several professional gardeners on the palace payroll, and that the king and his entourage often ate their meals in the garden. There were certainly orchards and fishponds elsewhere, beyond the palace walls, but we know very little about them. However, it seems to have been a source of pride to have a large area within the city walls devoted to palm-groves or orchards, for the prologue to the *Epic of Gilgamesh* boasts of the famous city Uruk, saying: 'One square mile is city, one square mile is orchards, one square mile is claypits'. The reason for such spaciousness was the need to drive herds inside the city walls at night for security and in times of siege. Indeed, an epithet of Uruk in myth is 'the sheepfold'. By 'orchards', date-palm groves are probably implied.

A few centuries later at the site of Ugarit on the coast of Syria, with its palace (c. 1400 B.C.) looking towards the Mediterranean, we find the palace courtyard containing a garden, with a not-quite-central stone basin for water forming an important feature. The excavators thought they found evidence for loose earth at the edge of one of these courtyards, and speculated that flowers or shrubs might have been planted there.

It may be surprising, if one is thinking of later, Islamic gardens, that the stone water basin is not centrally placed in the courtyard. The reason may be that a tree normally took that position — either a real tree or an ornamental, imitation tree. The tree was so important in ancient Mesopotamia that it was personified as a god, Nin-Gishzida, 'trusty tree', and had the power of human speech, just as the date-palm and the tamarisk did in their dispute over superiority. Nin-Gishzida guarded the gate of heaven and acted as a sheriff in the Underworld. In a Babylonian elegy at the death of Tammuz (dating to the seventh century B.C. or earlier), the felled tree makes its lament in a first person narrative:

'Now they have felled me, they have carried me off forever. My father sees me and weeps'.

Texts and architectural remains from Ugarit suggest the possibility that gardens in palace courtyards served for the remembrance of dead ancestors. The dynastic tomb was sometimes located in a vault beneath the palace, sometimes actually beneath the courtyard; and sacrifices were offered at Ugarit to an Underworld god, Resheph, in the palace garden. The tombs of Assyrian queens of the ninth and eighth centuries B.C., found recently with all their finery beneath the paving of a courtyard in the north-west palace at Nimrud, are the most splendid examples of the practice. Is this our first evidence for the garden of remembrance? And does the tree planted in the centre of the courtyard thus symbolize regeneration in a very direct way, the family tree in every sense?

Few kinds of trees are natural to central and southern Iraq, and perhaps that is the reason why the tree was so important to the ancient Babylonians. As the dispute between the date-palm and the tamarisk shows, they were valued for food and timber, but certain attributes that are less easily quantifiable are clear from scattered allusions to gardens as places for picnics, for courtship, for the display of military trophies, and for the quiet appreciation of nature's beauty. Resinous scents were particularly valued. Several of these attributes are evident in the most famous garden picture from ancient Mesopotamia, although it shows a garden outside a palace: Assurbanipal, the last great king of Assyria, is shown on a sculpture feasting with his queen, reclining western-style upon a couch beneath an arbour of vines, attended by servants, courtiers, and musicians. Various trophies from his illustrious conquests are on display: an Egyptian-style necklace hangs from his couch; an Elamite bow rests on the table behind him with a sword of Iranian design. A little way off, suspended from the branch of a fragrant pine, is the dismembered head of his arch-enemy, the King of Elam.

HUNTING PARKS

Although the palace courtyard garden was sometimes large enough to accommodate a few attractive animals such as deer and gazelle, the royal urge to collect zoological specimens had generally to be satisfied in a wider landscape. From at least 2000 B.C. Mesopotamian kings who campaigned abroad and received exotic gifts from foreign vassal rulers took a great interest in strange plants and animals which were presumably kept at some distance from the palace, if not outside the city walls. The keenest collector of animals was Tiglath-Pileser I (around 1000 B.C.), who says in his royal inscriptions:

I formed herds of horses, oxen and asses from the booty I took when I gained dominion over lands with the support of the god Assur, my lord. In addition, I got control of and formed herds of *nayalu*-deer, *ayalu*-deer, gazelle and ibex which the gods Ashur and Ninurta, the gods who love me, had given me in the course of the hunt in high mountain ranges. I numbered them like flocks of sheep . . .

I took cedar, box-tree, and Kanish oak from the lands over which I had gained dominion — such trees as none among previous kings, my forefathers, had ever planted — and I planted [them] in the orchards of my land. I took rare orchard fruit which is not found in my land and filled the orchards of Assyria.

... I received tribute from the lands of Byblos, Sidon and Arvad; I received a crocodile and a large, female ape of the sea coast.

... I made replicas in alabaster and basalt of a *nahiru* which is called a sea-horse and which ... I had killed with a harpoon of my own making in the Great Sea of the West; and of a live yak which was brought from the mountain Lumash on the far side of the country Habhu.

CITY GARDENS

Just over a century later another Assyrian king, Assurnasirpal II (883–859 B.C.), undertook enormous waterworks in order to bring water from the foothills and mountain streams to irrigate newly planted orchards in his capital city Nimrud, which lies by the Tigris river in northern Iraq. He has left us his own account of the garden that he planted:

I dug out a canal from the Upper Zab, cutting through a mountain peak, and called it Abundance Canal. I watered the meadows of the Tigris and planted orchards with all kinds of fruit trees in the vicinity. I planted seeds and plants that I had found in the countries through which I had marched and in the highlands which I had crossed: pines of different kinds, cypresses and junipers of different kinds, almonds, dates, ebony, rosewood, olive, oak, tamarisk, walnut, terebinth and ash, fir, pomegranate, pear, quince, fig, grapevine ...

The canal-water gushes from above into the gardens; fragrance pervades the walkways, streams of water as numerous as the stars of heaven flow in the pleasure garden ... Like a squirrel I pick fruit in the garden of delights.

Not all of these saplings came from far-distant countries; we are lucky enough to have a letter of the late eighth century B.C. that indicates a flourishing nursery trade in fruit trees on the Middle Euphrates. When Sargon II (722–704 B.C.) built an entirely new capital city, named Dur-Sharrukin, north-east of Nineveh, he bought up land from local owners who were properly compensated, and had parks and orchards laid out for his royal pleasure, where he and his family could practise hunting lions, and falconry. A letter from one of his governors sent him a report as follows:

I have levied upon the people of Nemat-Istar the supply of 2,350 loads of apple trees, and 450 loads of medlar trees. [The people of Suhu province] are collecting saplings of almond, quince and plum trees, and they are transporting them to Dur-Sharrukin. The people of Suhu are also bringing saplings from the land of Laqe: 1,000 loads of apple trees. Their vanguard has arrived and I have seen it, but their rearguard has not yet arrived.

Although in some areas, the municipal planting was perhaps not very imaginative, for example alongside the banks of rivers or the sides of roads, in other places, particularly in the gardens of royal cities, the planting was varied in every way. It is almost certain that the slopes, an artificial lake, and a pavilion shown on the monumental relief sculptures of Sargon were contrived to give a more interesting landscape (Figure 1). A finely built altar here graces the top of a hill surrounded by a grove of fragrant pines; at the foot of the hill, set out over the water like a boathouse is a splendid little pillared pavilion, backed by fruit trees. The various trees, a hilly terrain, flowing water, and the particular architectural features become characteristic of royal gardens within cities.

Whether Sargon's garden and boating lake were set within the walls of his city or outside it, is not clear. But the style of garden is obviously naturalistic: this is emphatically not the forerunner of the Persian garden with its geometric layout and

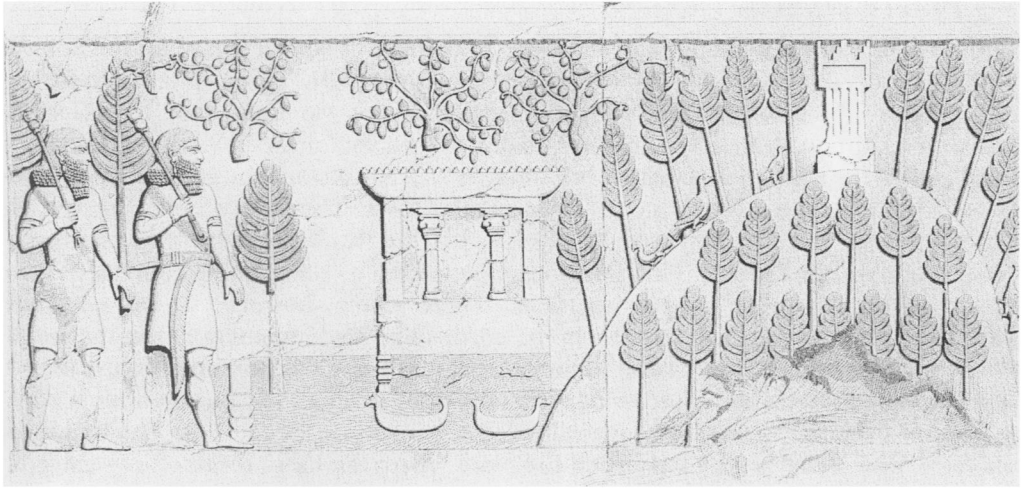


Figure 1. Garden of Sargon II at his new capital Dur-Sharrukin. Drawing from P. E. Botta and E. Flandin, *Monument de Ninive II* (Paris, 1849), pl. 114

symbolic water conduits leading to a central pool. It is a hilly mountainside in which the king can go hunting with falcons, or boating. Like the pillared pavilion which was explicitly a North Syrian or Anatolian borrowing, ‘just as they are in the Hatti-land’, the style of garden may have been adopted from the same area.

Sargon’s successor Sennacherib (704–681 B.C.) brought clear water from a mountain river down to his gardens and parks at Nineveh along channels and aqueducts from a beautiful place called Bavian, north-east of Nineveh. The remains of this aqueduct can still be seen, built in monumental stone, with arches that have pointed tops. Sennacherib described his works in his own words:

I cut through the hills with iron pickaxes and ran a canal over one and a half double-hours (about 10 miles?) of ground . . . and I made the water flow through in channels. To arrest the flow of the water through those orchards, I made a swamp and set out a cane-brake in it: herons, wild boar, beasts of the forests I released into it. By the command of the gods, vines, all kinds of fruit trees and herbs thrived and burgeoned within the gardens. Cypress and mulberry trees grew large and multiplied; cane-brakes grew fast to mighty proportions; sky-birds and water-birds built their nests; and the wild sows and beasts of the forests brought forth their young in abundance. I cut down some mulberries and cypresses that grew in the parks, and reeds from the swamp, and used them as needed in building my royal palaces.

This swamp was a completely artificial creation, inspired by the campaign that Sennacherib had conducted successfully in southern Babylonia. What we can never expect to find out is whether the imported plants and animals thrived in their new situation: cotton and olives which Sennacherib tried to raise may have failed to flourish; his artificial swamp may have nourished more mosquitoes than wild boar; and local fish-pond managers surely protested vehemently at herons who reared their young on fish intended for the royal table.

TEMPLE GARDENS

Sennacherib also built a temple of the New Year Festival within a garden, outside the walls of Assur, the traditional capital of Assyria on the middle Tigris. Thanks to careful excavation of the root-pits, the layout of trees or bushes was discovered by a German expedition, although the type of plant could not be established. Within the central courtyard of the simple, rectangular building, as well as outside it on all four sides, trees or shrubs had been planted very neatly in regular rows. The excavators reconstructed them as bushes, but they may have been trees with slim trunks, to give the impression of a sanctuary within a grove. This single example shows us that temple courtyards, like palace courtyards, were used for gardens. There seems, however, to be a marked difference between Assyrian temples in the north and Babylonian temples in the south; the latter possessed far larger land-holdings, apparently in close proximity to the temple buildings themselves, and those lands were cultivated as small-holdings that took turns to provide offerings to the cult, especially dates, pomegranates and figs. The temple of the New Year Festival may have been the place where the king, representing the god, performed the ritual marriage ceremony with a priestess. That love-making took place in gardens, is clear from the love lyric of Nabu, god of wisdom and his divine spouse, Tashmetu:

‘The shade of the cedar, shade of the cedar, shade of the cedar, is the king’s shelter. The shade of the cypress is for his nobles. The shade of the juniper is shelter for my Nabu and for my games!’

‘For what, O what, are you dressed up, my Tashmetu?’

‘So that I may go into the garden with you, my Nabu, let me go into the garden, into the garden to my lord. Let me go alone into the beautiful garden . . . May my eyes see the plucking of your fruit, May my ears hear the song of your birds . . . Bind your days to the garden and to the Lord! Bind your nights to the beautiful garden.’

‘Let my Tashmetu come with me into the garden.’

Major temples in ancient Mesopotamia have been found decorated with semi-engaged columns imitating the trunks of date palms and the spiral-patterned trunks of a palm with inedible fruit, perhaps *Chamaerops humilis*. The façade of the temple to the Sun god at Larsa, for instance, was adorned in this baroque fashion. The temple of the New Year Festival at Assur, described above, stood in a grove of trees. We can deduce that some urban and suburban temples were given an architectural form and decoration symbolic of a setting in a sacred grove, in the garden of paradise.

Usually the main temple in a big city had a ziggurra or temple tower with several stages and a shrine on top. When Sir Leonard Woolley excavated at Ur, he found that the ziggurra was a mud-brick structure with an outer casing of baked brick. The whole structure was perforated at regular intervals by holes which penetrated right into the brickwork. Woolley interpreted them as drainage holes to carry off water from plants which adorned the various stages of the tower. This was incorrect: the holes are there to enable the brickwork to dry out evenly and so to prevent cracking and collapse. Several more recently discovered representations of ziggurras, both on monumental sculptures and in miniature on cylinder seals, have confirmed that the towers were indeed not planted with trees or bushes. Sometimes they are topped with animal horns as are also the battlements of cities.

Quite apart from the structural problems of planting large plants to grow on a mud-brick tower, and the mechanical problems of raising water so high, it would have been almost impossible to supply them with enough water without washing away the mud-brick of the tower.

THE HANGING GARDENS

Woolley's writings were so popular that it has proved difficult to dislodge this misconception about ziggurat gardens from the public mind. Many people still think that the Hanging Gardens of Babylon were planted on the stages of the ziggurat, so that the foliage hung over the sides, even though there is nothing in the descriptions of Classical writers to support the idea. A part of the problem lies in the English word 'hanging', which implies trailing plants, growing downwards below the place where they are rooted. The Greek word, *kremastos*, is explained in some detail by Diodorus Siculus, Quintus Curtius Rufus, and Philo of Byzantium. It was used for artificial slopes raised up on terraces constructed of stone, bitumen, and timber like a Greek theatre, upon which soil was heaped and trees planted.

For years there has been an embarrassing problem about the location and appearance of the famous Hanging Gardens of Babylon, one of the Seven Wonders of the ancient world. They were described by several Classical authors, among whom are Berossos (known from quotations in the writings of Josephus), Strabo, and others mentioned above. Berossos stated that Nebuchadnezzar had built them; Quintus Curtius Rufus stated that an Assyrian king who conquered Babylon built them. All agreed that they lay in Babylon near the royal palace. They were said to be built upon vaulted stone terraces and to imitate a mountainside with trees. Diodorus Siculus and Strabo emphasized that they were particularly marvellous for a system of watering which carried water invisibly up to the top of the gardens. Strabo specifically said that it was an Archimedean screw.

A German team excavated the centre of Babylon and the palaces of Nebuchadnezzar, so that the layout of the palace area is now particularly well known, and there are cuneiform texts which describe the topography of the city. The excavators did discover a brick vaulted substructure within one of the palaces, but nothing on a scale that might have warranted a description as one of the wonders of the world. Since the Classical texts stated that the gardens lay beside the river, and since an enormous amount of water would have been needed to irrigate such a garden, investigators searched for a site alongside the Euphrates beside the palaces of Nebuchadnezzar, but failed to find any evidence for the famous gardens.

I came to the conclusion that since there was a lot of confusion between Nineveh and Babylon and between Assyria and Babylonia in Classical sources, a solution to the problem might be found by analyzing that confusion. Diodorus Siculus, in describing 'Babylon', seemed to give details that belonged to Nineveh, in particular his description of a palace with walls that were adorned with sculptured stone reliefs depicting scenes of hunting and battles. This is appropriate to the well known palaces of Sennacherib and Assurbanipal at Nineveh, but definitely inappropriate to the palaces of Nebuchadnezzar in Babylon, which were decorated in an entirely different way. When describing

Nineveh, on the other hand, Diodorus Siculus located it on the wrong river, the Euphrates, rather than the Tigris.

Another confusion existed: between Nebuchadnezzar and Sennacherib. This arose mainly from Jewish sources which seem to have conflated the two attacks on Jerusalem described in the Old Testament. A particularly clear example of this confusion is evident in the apocryphal Book of Judith, which opens with the statement that Nebuchadnezzar was king of the Assyrians (Babylonians would be correct) and ruled in Nineveh (Babylon would be correct).

A breakthrough came from a new attempt to understand the technical description given in one of Sennacherib's inscriptions. He described the building of his new 'Palace without a Rival' in Nineveh, the layout of adjacent gardens, and the new invention which, instead of the usual shaduf, watered the gardens. The curious vocabulary, of which previous translators had been able to make no good sense, created new technical meanings. The word 'tree trunks' described cylinders (in fact the word was already attested in this sense in mathematical texts). The name for a palm tree that has a spiral pattern on the trunk where the old fronds have broken away was used to describe a screw. The Babylonian name for this palm, known from other texts to have inedible fruit, is *alamittu*, and it had already been tentatively identified as *Chamaerops humilis*, which does indeed exhibit a spiral effect on the trunk. (There are two particularly fine, mature examples of this tree at present in the palm house at the Botanic Gardens in Oxford.) Proof that this pattern was thought of as a spiral comes from architectural evidence: semi-engaged columns on temples have been excavated at several ancient Mesopotamian sites, giving alternate pairs of imitation date-palm trunks with a scallop pattern and non-edible-fruit palm with a spiral pattern; the two kinds of pattern are made with shaped bricks. Sennacherib described how he cast the two components out of copper or bronze from clay moulds, and put them together to make a water-lifting device.

It is perhaps not surprising to find that the Archimedean screw existed some four centuries before the lifetime of Archimedes himself. Great inventions are commonly attributed to a later person who succeeded in publicizing the discovery or in putting it to a new use. In the case of Archimedes (as also with the theory of Pythagoras), it is likely that he claimed the honour for having been the first to describe mathematically and with precision the physical principles behind the practical application.

Sennacherib's text does not make it clear how the screws were rotated. They were set over cisterns. The inscription does not specify how many there were. It does seem clear that the tremendous problem of watering mountain trees planted upon artificially terraced slopes was solved in this way.

It is significant that Sennacherib gave such prestige to the construction of the gardens and their watering system. This set a precedent for future kings. One of the main arguments for denying that Nebuchadnezzar had ever built the gardens was that his building inscriptions, complete and detailed as they are, never described new gardens or a new system of watering. In the latter respect he restricted his interest to the completion of a municipal shaduf platform beside the Euphrates which his father had begun.

By locating the Hanging Gardens in Nineveh another puzzle has been solved. When Herodotus described the city of Babylon in the fifth century B.C., he failed to mention the Hanging Gardens, and has been vilified for his unreliability in this matter. But with the

gardens at Nineveh, his account is vindicated. By rejecting Nebuchadnezzar in favour of Sennacherib as the builder, we can show that Q. Curtius Rufus was correct in saying that an Assyrian king who conquered Babylon was responsible.

The one remaining problem is to explain how Nineveh came to be called Babylon, and recent evidence has come to light showing that this could be the case. The information comes from ancient astronomical data preserved in Arabic sources and used by Kepler. The standard calculation for the longest day was said to come from 'old Babylon' and was widely used even in India, regardless of latitude. The calculation was made not from the latitude of Babylon, but from the latitude of one of the northern Assyrian cities: Nineveh or Nimrud.

Sennacherib himself described the garden and its watering system as a 'Wonder for all Peoples'. A similar phrase had been used by some of his predecessors as kings of Assyria, from which we may deduce that the idea of having Wonders of the World to demonstrate man's most marvellous constructions dates back to the ancient Assyrians. The Greek word *theamata*, 'sight, wonder', used to describe the Seven Wonders of the World, is a very close translation of the Babylonian word *tabrati*.

Sennacherib's palace garden was the end product of quite a long period of development. His lengthy inscription admits that there was a previous palace on the site, but that it was too small, and was not sufficiently beautiful. This earlier building was almost certainly a palace laid out by one Assur-resh-ishi and completed by his son, the outstanding Assyrian king Tiglath-Pileser I (1114–1076 B.C.); beside the palace a garden was laid out, watered by a canal led from the River Khosr; and the garden boasted a small palace or pavilion. In some ways, therefore, it was a smaller, earlier version. These constructions would then have been 400 years old; Sennacherib describes how the foundations had been undermined by the flow of river water too close to the building, and by a swampy area developing around it. He pulled palace and garden down completely, and carried out extensive canal-building work to bring water in to the new palace and gardens from a mountain river. As for creating an artificial landscape, such a concept had recently been put into practice by his own father Sargon II, whose capital city Khorsabad was built on a virgin site. There he had re-created the changes of level that one expects in an old city, where over time deposits of old building rubble would have been levelled off at various different heights and new buildings set upon them.

Sennacherib's hanging gardens, watered with Archimedean screws from cisterns fed by a canal which brought water from a mountain river, represented mountain slopes planted with various kinds of aromatic trees, expressly attempting to imitate the natural landscape of the Amanus mountains in north-west Syria. There were several pavilions, described in the inscription as small palaces, within the gardens. A small relief sculpture in the British Museum almost certainly represents the garden under his grandson Assurbanipal (668–627 B.C.) in its maturity (Figure 2). Although it is not in very good condition, and may be only about a quarter of the original whole, the sculpture gives a good idea of how the garden looked. The palace is on the left of the picture; a path with an altar runs from the pavilion down to the bottom of the picture, and streams of water trickle across it. A masonry aqueduct with pointed arches brings water into the garden at the middle level; but water also flows out from under one of the arches, so it is not entirely clear whether the arched structure extended back into the hill to support a terrace, or

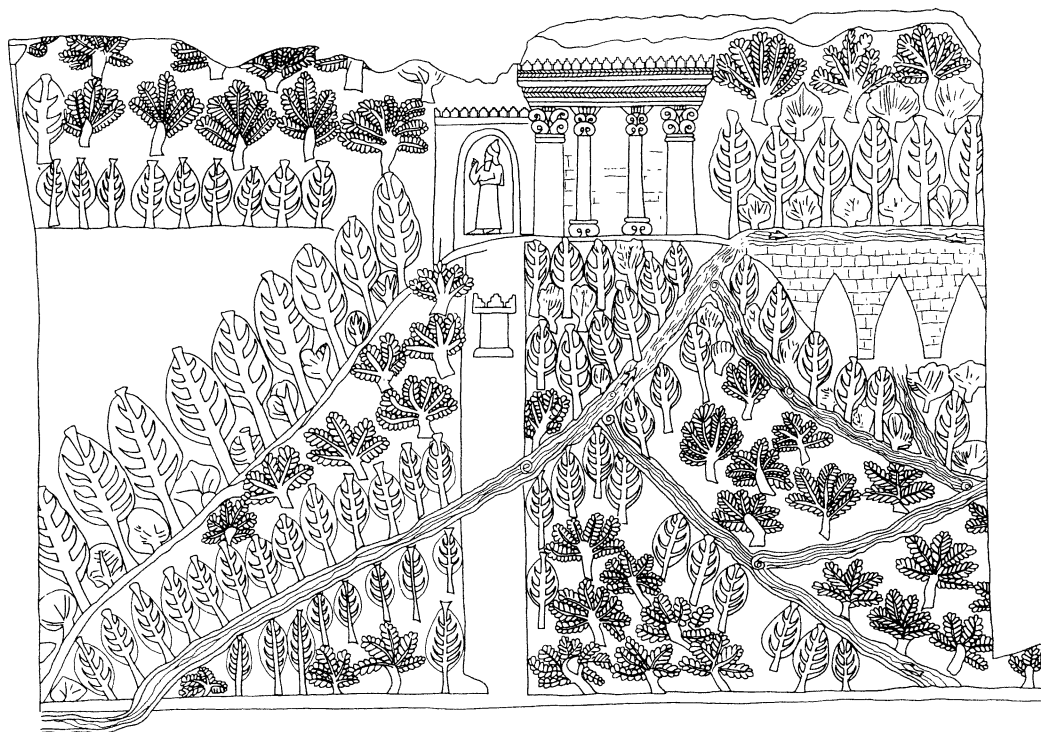


Figure 2. Garden at Nineveh, drawn from a fragment of relief sculpture of Assurbanipal now in the British Museum, showing the garden described by Sennacherib. The corner of Sennacherib's palace is just visible top left

Author's drawing: © Stephanie Dalley

whether it was a simple aqueduct built against the side of the hill and looking as if it supported it. The screws are not shown; as Strabo says, they raised water invisibly; but the mechanisms may have been shown on part of the picture that is now missing. The garden seems to be bowl-shaped, like a Greek theatre, corresponding to the description of Diodorus Siculus.

HERBS AND FLOWERS

Much has been described about trees, but very little about herbs and flowers. There is a curious cuneiform text which lists herbs and vegetables in the garden of Merodach-Baladan II, a contemporary of Sargon II and Sennacherib during the height of Assyrian garden design, who ruled from Babylon. The reason for the order of plants in fifteen different sections is not certain, but it could correspond to an arrangement of plants in different beds. The vocabulary, as far as we understand it, is highly specialized and differentiated: there are at least five different kinds of mint, for instance. Quite a few of the plants have distinctly non-Babylonian names. Although it is possible that all the



Figure 3. Fragment of relief sculpture of Assurbanipal showing rare details of flowers in a hunting park

Author's drawing: © Stephanie Dalley

plants belong to a physic garden, each one having a medicinal use, we cannot be certain of this, nor is the location specified as being in a palace. It expressly belongs to the king. Herbal medicine was certainly developed to a high art in Babylonia by that period, as many esoteric medical texts demonstrate. The garden of Merodach-Baladan was discussed in the pages of this journal by Dr Helen Leach ten years ago.

Least known for ancient Mesopotamia is the vocabulary for flowers. Certainly, they were appreciated: Sargon II's courtiers often hold a flower in one hand; and a sculpture showing lions at rest in a royal garden (Figure 3) definitely shows flowering plants, one a lily. Where art critics have praised certain relief sculptures of Assurbanipal for their modern use of unfilled space, I suspect that details such as flowers were painted on to the smooth stone and have since disappeared. But as trees and shrubs supply the shade, fragrance, and fruit that ancient Mesopotamians required from their gardens, it is possible that the art of growing garden flowers for their own value was less highly esteemed.

PARADISE AND THE GARDEN OF EDEN

The Greeks used a Persian word, *paradeisos*, for an enclosure, a garden, an orchard and for paradise and the Garden of Eden. As we have seen, the idea of an enclosed area was fundamental to the ancient Mesopotamian garden. In the *Epic of Gilgamesh*, on the other hand, the forest of pines or cedars, which stood on the mountain slopes of the Lebanon, was a sacred place guarded by the giant Humbaba, appointed by the highest gods. The

hero Gilgamesh and companion Enkidu committed sacrilege by entering it, killing its guardian, and cutting down its trees. In the *Arabian Nights*' story of Gilgamesh (the Tale of Buluqiya), the giant guards the trees of the Garden of Eden, where Solomon's Tomb lies. This serves to emphasize that the Garden consisted of trees, and shows the connection of trees with the Garden of Eden, and with 'paradise' as the last resting place of great sages.

Does this mean that the 'original' garden of Eden is to be located in Lebanon? Even within the ancient Mesopotamian tradition there are two different places for Humbaba's forest; the Sumerian story puts it in the Zagros mountains between Iraq and Iran. The origin of the word Eden is uncertain; the Sumerian *Edin*, with which it has been compared, is an unlikely proposition, since it is a word for the arid semi-desert beyond the areas of cultivation. A North Syrian state called Bit Adini in Assyrian times has also been suggested; certainly the country there is beautiful, with a profusion of trees, but there is no reason to connect the words except a vague similarity of sound. It has been suggested that Bahrein, an island in the Arabian/Persian Gulf, famous for its fresh water springs (but otherwise rather desolate) is the site of Eden because some Sumerian myths are set there, according to its identification as ancient Dilmun. This seems quite unlikely; in Sennacherib's time Dilmun was well known as a backwater inhabited by roughnecks who still used copper tools in the Iron Age. For the Arabs Ceylon, now Sri Lanka, then known as Serendib, was equated with earthly paradise, perhaps because of the fabulous gardens of Sigiriya, dating from the fifth century A.D. No doubt even in early antiquity many different locations were favoured by different groups of people, according to the most famous gardens and groves in the vicinity.

The place of ancient Mesopotamia in garden history is fundamental. The identification of the elusive Hanging Gardens at Nineveh, alias 'old Babylon', helps to show the character of its tradition. This is quite different from the formal, symbolical, layout of later Persian and other Middle Eastern gardens. It has its own symbolism and a special appeal as the re-creation of paradise, the Garden of Eden. It belongs to a romantic tradition, in creating by artificial means a seemingly natural landscape into which an altar or an elegant pavilion might be inserted, as in a sacred grove, a royal paradise.

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NOTE

The author is writing a detailed account of the Hanging Gardens for a book.

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