



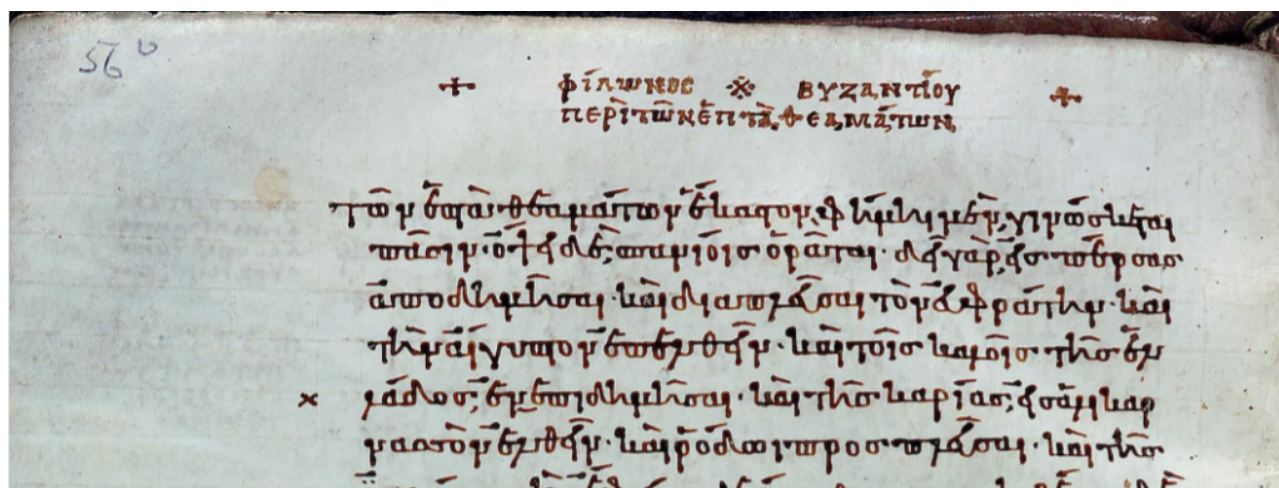
PHILO OF BYZANTIUM, ON THE SEVEN WONDERS OF THE WORLD: AN ENGLISH TRANSLATION AND SOME NOTES

Approximately 50,000 Greek manuscripts survive, containing a mass of literature from the ancient and medieval period. Among these is a curious little work, *On the Seven Wonders of the World*, *De septem orbis miraculis*, or *peri ton hepta theamatou* (Τῶν ἑπτὰ θαυμάτων ἐκάστου φήμη μὲν). This is the first literary account of the seven wonders of the world.

Unfortunately it is largely rhetorical, rather than descriptive.^[1]

There is an English translation of this work, which I will give at the end. However I wondered what the text was and how it reached us.^[2]

The transmission of our text has been discussed by Aubrey Diller.^[3] It survives in a single 9th century manuscript, Heidelberg 398 (= A), starting on folio 56v, where it is ascribed clearly to “Philo of Byzantium”.



Heidelberg 398, f.56v.

Philo of Byzantium, or Philo Mechanicus, was a writer of the second century BC, author of some works on technology. However a study by von Rohden in 1875 showed that the attribution must be wrong.^[4] The text carefully avoids any use of “hiatus”. This is the technical term in rhetoric for the situation where a word or syllable ending in a vowel is followed by a word or syllable starting with a vowel. The word “hiatus” itself contains a hiatus, for instance. Hiatus is a normal feature of Greek, but it was avoided by the rhetoricians, and most carefully so in late antiquity. Von Rohden therefore concluded that the author was a late antique rhetorician, and felt able to date the work even as late as the 5-6th centuries AD. The author is therefore sometimes referred to as pseudo-Philo of Byzantium.

The work is incomplete. There is an introduction, and there should be seven chapters. But the text breaks off in the 6th chapter at the bottom of a page without any colophon to mark the ending. Analysis of the binding has shown that the last page begins a new quire of leaves, but that the other leaves have all been removed. It seems that A originally contained

the full text.

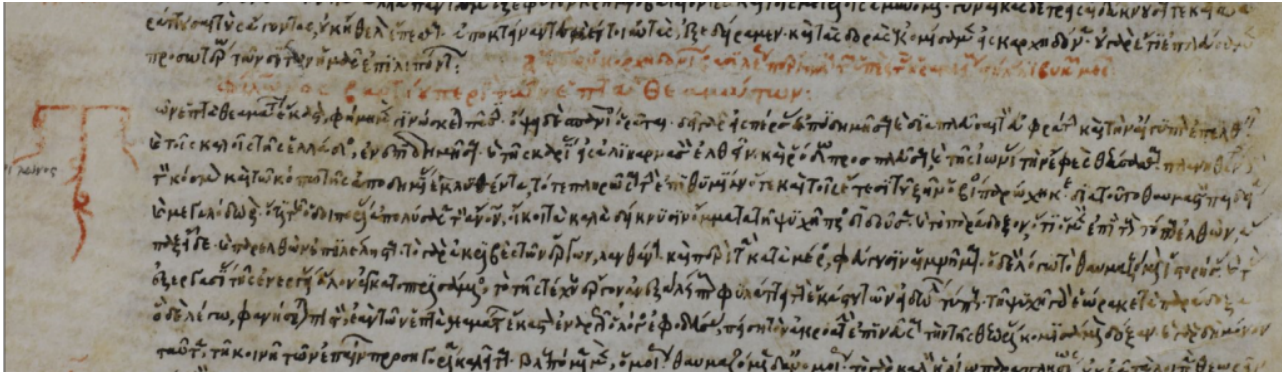


Heidelberg 398 f.59v, bottom – the point where the text breaks off.

The marginalia mainly consist of chapter titles. These are in small uncials, and are probably from the renaissance Paris circle of Platonists.

A has had an exciting history.^[5] It comes from Constantinople. In the 1530s it was in the hands of the printer, Hieronymus Froben in Basle in Switzerland. Froben printed a couple of works from it, but then presented various manuscripts – presumably including this one – to Ottheinrich, Elector of the Palatinate (d. 1558) who founded the Palatine Library in Heidelberg. It remained there until the Thirty Years War. At the conclusion of the war, the manuscripts of Heidelberg were transferred to the Vatican. In 1623 the papal agent, Leo Allatius, removed all the covers from the Heidelberg manuscripts in order to do so. Books are heavy, and in this period were often shipped in barrels, which could be rolled. It was then rebound in the Vatican. There it was studied by Allatius who wrote a Latin translation, a copy of which is also in the Vatican. A remained in the Vatican until 1798, when it was looted by the revolutionary French and transferred to Paris. After the Napoleonic wars were over, in 1816 it returned to Heidelberg where it is today, and has recently appeared online.

There is also a 13th century copy of A, most of which is at Vatopedi on Mount Athos in Greece: Vatopedi 655. The portion of the Vatopedi manuscript that concerns us is contained in 21 leaves which were stolen by none other than Constantine Simonides. After attempting and failing to sell bogus manuscripts to the British Museum, he sold some genuine ones, including these leaves. They are today in the British Library, where they are Additional Manuscript 19391. (= B).^[6] This too is online [here](#). That it is no more than a copy of A may readily be seen, because it breaks off at exactly the same point as A. There are also some renaissance copies, of no value. One of these that is online is [Vat. Barb. gr. 69](#).



British Library Additional 19391, fol. 12v. Start of Philo.

The text has been printed a number of times, usually as an appendage to other works. The *editio princeps* was in Rome in 1640, by Leo Allatius, with parallel Latin translation. The standard edition seems to be that of Hercher (1858),^[7] from which, I find, the translation was in fact made.



Start of Hercher text.

The translation I found as an appendix in a popular paperback,^[8] translated by a certain “Jean Blackwood” whom I have been unable to identify. I give it in full, with the introductory remarks. There are no footnotes.

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APPENDIX I
ON THE SEVEN WONDERS OF THE WORLD
by Philon of Byzantium

The following is a free translation by Jean Blackwood of the text of *De Septem Orbis Spectaculis* as it appears in *Aelianus Praenestinus* compiled by Rudolf Hercher and published in 1858.

Everyone knows of the renowned Seven Wonders of the World, but few have set eyes on them, for, in order to do so you have to arrange a long journey to the land of the Persians on the far side of the Euphrates; you have to visit Egypt; you must then change direction and go to Elis in Greece. Then you must see Halikarnassos, a city-state in Caria, and Ephesos in

Ionia, and you have to sail to Rhodes, so that, being exhausted by lengthy wanderings over the Earth's surface, and growing tired from the effort of these journeys, you finally fulfil your heart's desire only when life is ebbing away, leaving you weak through the weight of years.

Thus, learning is a quality which is truly to be admired and to be treasured as a great gift because, at the same time as it gives their minds insight, it may show men, freed from the burden of travelling, the most remarkable of sights which are to be seen at home, and it designates the sight that is worthy of admiration. For the traveller who reaches these places sees them once, and as soon as he leaves, he forgets, because he has not firmly grasped the delicate beauty of the works he has gazed upon, and the individual details escape his memory. Whereas he, who by selective reading has become acquainted with a worthy sight knows the details of its form and has thus set eyes upon a complete work of art, and, because these sights have been seen in his mind's eye they remain, imprinted on his mind, each single image, never to be destroyed.

I must add something else that in no way departs from the truth. Where I have managed to describe the Seven Wonders of the World as accurately as possible, my words, surveying the scene, are associated by the listener in such a way that it may seem to him that he has looked upon them with his own eyes. For these wonders are the only things which diminish the worth and reputation of other distinguished sights, for, truly, ordinary men may see them in the same way as other sights, but they do not marvel at other sights in the same way. For beauty, like the sun, dazzles by its own brilliance and does not allow one to see the others.

I.

The garden which is called the Hanging Garden suspends its plants in the air, having shoots which are supported away from the ground. The tree roots which hang above the ground, assuredly cover the earth and take the place of a floor. Here is a description of this work. First of all stone columns are supported on a general foundation and made firm. This is done in such a way that the engraved bases of the columns cover the whole area given over to the garden.

Then beams made from palm trees are set down in different places, separated from one another by only a small space. For palm is absolutely the only kind of wood which does not rot. It is moistened so that it will bend back after being pressed upwards by weights. Moreover it feeds the fibres and tendrils of the roots which mix with the matter in its own cells and sinews.

A vast and deep mass of earth is poured over the beams; trees are planted with their broad leaves nearly touching to help foster the Garden. There are all kinds of varieties of flowers, and, so that it will be enjoyed by all, whatever is the most delightful, agreeable and pleasant to the eyes is there. The whole of the place is ploughed like a normal field and it is no less fertile than other ground. Yet it is done in such a way that the land can be ploughed above the heads of those walking amongst the supporting columns.

Whilst the upper layer of soil is trodden on underfoot, in places the deep, lower layers remain untouched, and that which lies at the bottom remains virgin ground. The waters gush forth from lofty fountains and sink right down through the ground and are then forced up high in twists and spirals, rushing and swirling through the circuits of the pipes of certain mechanical devices. And so the water having been collected on high in numerous ample containers irrigates the whole garden and, with its bountiful moisture, it bathes the roots of

the trees which are pressed into the top layer of the ground and thus keeps the soil perpetually moist.

Here grow grasses which are perennially green, and trees whose leaves move in the breeze. The branches are made soft by constant moisture and so the leaves grow more densely. The roots, which are never removed, exude water continuously, and this circulates through the pores of the roots which are buried and pressed into the ground, keeping the trees naturally firm and thick. And so the cultivator, in his many ways, has created strength through nature; this certainly is a work of regal splendour giving much pleasure suspended above the heads of onlookers.

II.

The construction of the Pyramids at Memphis is beyond the strength of men and their description is beyond belief, for they are mountains placed on top of mountains, and it is not easy for the mind to grasp how the huge masses of hewn stone could have been raised; and all have doubts concerning the huge force of the mechanical devices needed to bring the massive structures together.

After a quadrangular base had been laid down, those very stones needed to support the construction and keep it off the ground were interred, and, as the pyramid rises, the superstructure decreases proportionately in size and the whole work turns visibly into a pyramid, assuming a tapering shape. The whole of the work of joining the stones together has been so cleverly and elegantly accomplished that the whole monument seems to have sprung from one hewn stone. Different kinds of stone are joined together in turns, for here is pure marble whilst there is a black Ethiopian stone. The stone which they call blood-like is not present. The one that is brought from Arabia is there, changing colour, translucently fresh and green. Some take on a radiant glossy blue colour, and there are others which, like the apple tree, turn golden. Some are a purple colour, not dissimilar to those stained with the marine purple dye of sea-shells. For the rest, delight is enhanced by astonishment, excellence of artistic inspiration by admiration, and distinction by extravagance. Climbing to the top tires one as much as a real journey, and if anyone stands at the highest point and looks down, dizziness veils his sight. Regal wealth adds splendour to the very pleasing variety of the range of colours. Let fortune smile while she believes that she can touch the very stars by spending extravagantly. For by works of this kind, either men rise to the level of gods, or the gods come down to man.

III.

As Kronos is Zeus's father in heaven, so Phidias is his father in Elis. Immortal nature gave birth to the former, but the hands of Phidias, which alone have satisfied the gods, begat the latter. Blessed is Phidias who, alone, has seen the king of the world and has re-created his awesome presence for all to see. If it belittles Zeus to call him the son of Phidias, might we still not consider his mother to be Art, by which means Phidias created (Zeus's) likeness. With this in mind Nature provided the elephant, and filled Africa with abundant herds so that Phidias might fashion their curved teeth. We honour the other Wonders of the World with our admiration, but this is the only one that we venerate. For however much a work of art is to be admired, the image of Zeus is sacrosanct. If labour is worthy of praise, then an immortal being must truly be worthy of reverence.

O to the Grecian Age which will abound in works dedicated to the honouring of gods for many centuries to come and which has had as the creator of immortality the artist whose like has not been seen again. You have been able to show mortals the features of the gods,

and whoever has looked upon them will look more soberly at the works of others. For no other has been superior to Phidias in the way he laid Olympus at his feet. For as we know that evidence is preferable to opinion, and fact to fiction, so sight is superior to hearsay.

IV.

Out to sea lies the island of Rhodes which, long ago, was submerged in the deep and which the Sun raised up to the light and demanded it as his own from the gods. Here stands the Colossus, seventy cubits high, executed in the likeness of the Sun, for it is recognized to be an effigy of the god as it bears his own special features. The artist used so much bronze for the work that there was almost a shortage of metals, for all the earth's mines were exploited in carrying out the project.

You will remember that Zeus deluged the Rhodians with great wealth so that they might devote it to honouring the Sun as they had undertaken to produce a statue of the god that would stretch right from the earth to the sky.

The workmen fortified the statue of the Colossus from the inside by hewn stones joined together by iron bolts, and the bars which are used on the stones to bring the joins together seem to have been fashioned by the hammers of the Cyclops. Whatever part of the work remains hidden is greater than that which can be seen; for the onlooker, transfixed in admiration, can only doubt that such vast masses of bronze could have been melted down and cast, wonder by what clamps they have been held, to what kind of blows they have been subjected and what strenuous exertions have brought them into being.

A pedestal of pure marble was laid down and on this, calculating the proportion, the artist first fixed the feet of the Colossus as far as the ankle, on to which the god was to be erected, seventy cubits high. At this (foot) level the base was already greater than other statues and it was not possible to lift the rest of the statue into place above; yet there were so many people helping that the whole rose up, in one continuous movement, like the temples of the gods, as if of its own accord.

So, in order to achieve this, the artist cast the rest of the statue beforehand, and it was reassembled piece by piece. One piece was fixed to the part already cast, and a third piece was added when this was finished, and then each further part, just as it had been fashioned, was completed with the same skill. For whole parts of bronze could not be moved from the place where they were cast.

Seeing that the pieces were joined correctly, the artist ensured that the joins and connecting rods were secured after the statue had been made even more firm by the stone laid in place to hold the work steady.

But the artist had to preserve the shape of the work in his mind for, as parts of the Colossus were finished he poured a huge quantity of earth about the base hiding that part already completed, so that he might finish the next parts from ground level. He gradually ascended to the very topmost point of his desire making a god-like image from 500 talents of bronze and 300 talents of iron, so freeing a great work of art from the bold mind of its creator; for in the world a second Sun stood face to face with the first.

V.

Queen Semiramis created majesty and regal splendour with her immense wealth, for she paid no heed to jewels and treasure and so left behind a Wonder of the World. For she surrounded Babylon with walls, the foundations of which were 360 stadia in diameter so that running around the city exhausted the daily courier. But they are to be admired not

only because of their size but also truly on account of the solidity of their construction and the width achieved with the materials, for the walls have been built out of baked brick and bitumen.

The height of the wall certainly exceeds fifty cubits, and truly the width of the course is such that four quadrigas can drive along them at the same time. There are numerous multi-storeyed towers stretching in an unbroken link of sufficient size to house within them a large army. For this reason the city-state is a fortress for the Persians and, generally speaking, the city seems more or less self-sufficient, so many people live within its walls. Truly other states scarcely till as much land as Babylon covers with dwellings alone, and only at that place can the inhabitants walk about inside the walls.

VI.

The unique Temple of Artemis at Ephesos is the abode of gods. Whoever has gazed upon it will believe that the heavenly world of the immortals has changed places with the earth. The Giants, or Aloidae, who undertook to conquer Olympus with mountains, have now built not a temple but a dwelling fit for gods. Just as work in progress surpasses its foundation, so art, by its boldness, surpasses the work in progress.

The artist, isolated from everyone because his work was known only to him, dug trenches to an immense depth and exhausted the mountain quarries in laying his extensive foundations. A supporting structure, solid and firm, was placed down with immense sculptured columns (*Atlantes*) to support the heavy superstructure; initially he constructed a base raised by ten steps placed outside to serve as a platform ...

(Here the manuscript ends, and the remainder of this section, as well as that covering the Mausoleum, are missing.)

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It is useful to have this translation, and very interesting to see the history of this little work.

1. ^[1]G. Sarton, *Hellenistic Science and Culture in the Last Three Centuries B.C.*, 1993, [p.26](#).↵
2. ^[2]I happened to see on Twitter a splendid depiction of the Colossus of Rhodes. This led me to seek out the literary sources, and the Wikipedia article advised me of the existence of the translation. I purchased a copy of the paperback, which arrived this week.↵
3. ^[3]A. Diller, *The Tradition of the Minor Greek Geographers*, 1952.↵
4. ^[4]Hermann von Rohden, *De mundi miraculis quaestiones selectae*, Bonn 1875. Online [here](#). Pp. 32-43 dates Philo in the fifth or sixth century because of his rigorous avoidance of hiatus.↵
5. ^[5]These details all from Aubrey Diller's fascinating monograph.↵
6. ^[6]Seven leaves were stolen by a Greek adventurer, Minoides Mynas in September 1841 and ended up in Paris, as BNF supp. gr. 443A.↵
7. ^[7]Rudolf Hercher (ed.), *Aeliani De natura animalium, Varia historia, Epistolae et Fragmenta. Porphyrii Philosophi De abstinencia et De antro Nympharum. Philonis Byzantii De septem orbis spectaculis*, 1858. Online [here](#). Critical notes on p.lxx (p.80 of the PDF);

the text is numbered strangely; Philo is labelled p.101-5. (p.728 of the PDF)↩

8. ^[8]Michael Ashley, *The Seven Wonders of the World*, Glasgow: Fontana Paperbacks, 1980.↩
