

# The death of Alexander the Great

## Summary

The circumstances of Alexander's death are reviewed. Since contemporary sources vary in their accounts of the reason for his death, they are briefly reviewed and assessed. The account of Alexander's final illness is then as recorded by the two major sources, namely the *King's Journal* and the *Liber de Morte Testamentumque Alexandri Magni*. The theory that he was poisoned is rejected, as is the hypothesis that he drank himself to death. His final illness shows symptoms characteristic of malignant tertian malaria (*Plasmodium falciparum*), possibly precipitated by recent wounds, exhaustion and heavy drinking.

## Die dood van Alexander die Grote

Die omstandighede rakende Alexander se dood word in oënskou geneem. Aangesien tydgenootlike bronne verskillende redes vir die oorsaak van sy dood aangee, word hulle kortliks bespreek en geëvalueer. Die beskrywing van Alexander se laaste siekte soos dit voorkom in die twee belangrikste bronne, die *Koning se Joernaal* en die *Liber de Morte Testamentumque Alexandri Magni*, word dan bespreek. Die teorie dat hy vergiftig is, word verwerp, asook die hipotese dat hy homself doodgedrink het. Sy laaste siekte toon simptome kenmerkend van maligne tersiëre malaria (*Plasmodium falciparum*), moontlik vererger deur onlangse wonde, uitputting en drank.

Alexander, King of Macedonia, conqueror of the Persian empire, died in Babylon at sunset on the 10th of June, 323 BC.<sup>1</sup> He was not yet 33 years old, had been king for twelve years and eight months and had shown himself to be a truly remarkable figure, deserving of the title 'The Great'. Educated by Aristotle, trained in warfare by his father Philip II, he invaded Asia at the age of 22 and defeated Darius III within three years. He never returned to Macedonia; instead, he established an Asian empire based on Hellenistic culture but incorporating the best elements of the cultures of the Persians and other conquered nations. With a few exceptions, he was remarkably magnanimous towards his former enemies, performing acts of justice far in advance of his time. As Tarn (1948, 1: 124-5) puts it:

[This] was probably the most important thing about him: he was a great dreamer. To be mystical and intensely practical, to dream greatly and to do greatly, is not given to many men; it is this combination which gives Alexander his place apart in history.

Alexander's sudden death left his large and heterogeneous empire without a predetermined successor. This caused a protracted power struggle among his generals. Furthermore, the circumstances of his death soon became controversial — rumours of foul play and poisoning arose almost immediately — and were exploited by his contemporaries to further their own ends. The aim of this paper is to review this historical event.

## 1. Relevant literary sources

Our interpretation of the information about the last days and the death of Alexander will depend on the value we attach to the various ancient sources. Modern historians still vary in their assessment of these sources, which results in different views of the reasons for the death of Alexander. A brief overview of the ancient sources will be given.

1 On the controversy surrounding the exact date of Alexander's death, cf Hamilton 1969: 210.

## 1.1 Contemporary sources

Callisthenes was Aristotle's nephew, and an experienced writer appointed by Alexander to prepare a history of the Asian campaign. When he was executed in 327 BC for complicity in a plot, his history covered the period up to 331 BC, and possibly even up to 329 BC. It is probable that his death led to growing animosity between Alexander and his former tutor, Aristotle, as well as between the emperor and the Peripatetic school in Athens.

Ptolemy was one of Alexander's generals and became King of Egypt in 304 BC. He published his *History* in the years 285-283 BC, making extensive use of the *King's Journals*, also known as the *Royal Ephemerides*. Although scholars have questioned the authenticity of this document,<sup>2</sup> it is accepted that Macedonian kings, at least from the time of Philip II, kept daily records of state.<sup>3</sup> Responsible secretaries, of whom Eumenes was best known, travelled with Alexander and after his death the records would normally have accompanied his body back to Pella (capitol of Macedonia) or Aegae, for burial in the cemetery of the Macedonian kings.<sup>4</sup> We know, however, that after Alexander's body had been prepared by Egyptian and Mesopotamian embalmers, it was diverted to Egypt by Ptolemy on its way back to Macedonia, late in 322 BC, or early in 321 BC. With it presumably went the *King's Journals*.<sup>5</sup> Ptolemy was thus the only general (and one of very few historians) to have sight of these documents after 322 BC.

Cleitarchus of Alexandria was a most influential contemporary writer, but he did not accompany Alexander. He collected second-hand information which he published as dramatic and sensational (often fantastic) stories — at times very negatively disposed towards

2 Cf Samuel 1965: 1-12 & Bosworth 1971: 112-6.

3 Thus Pearson (1954: 434): "[T]here is certainly no reason to doubt that some kind of diary was kept, recording the events of each day, the king's conferences, the orders he issued, the reports he received, and so on." Also cf Tarn 1948, 1: 1 & Hammond 1983: 5-6.

4 Hammond 1980: 248.

5 Pausanias 1.6.3, quoted by Hammond 1983: 9.

Alexander. These appeared as a total history of more than twelve books, between 322 and 314 BC. He was widely read and quoted but held in low esteem by serious scholars. Cicero, for instance, remarked that he was a better orator than historian, and quite ready to lie if it made the story more lively (*Brutus* 11.42), while Quintilian called him "brilliantly ingenious but notoriously untrustworthy" (*Institutiones* X.1.74).

Aristobulus was a Greek engineer in Alexander's service. He deserves special mention because of his meticulous history, published between 305 and 290 BC. However, its emphasis was a scientific and geographical rather than military.

Hieronymus was a follower of Eumenes and a dependable historian who had much influence on Diodorus.

The Alexander Romance is a body of literature which arose over a considerable period. It is a highly romanticised work, containing fables and obvious fiction about Alexander's life and exploits.<sup>6</sup> However, it also contains much factual data. Cleitarchus's stories form part of this literature.

The *Liber de Morte Testamentumque Alexandri Magni* is a potentially very significant document which circulated after Alexander's death. It was written, possibly in 317 BC, by an author called Holkias, and was included at a later stage in various versions of the Alexander Romance.<sup>7</sup> This pamphlet, which purports to record the true history of Alexander's death and his final testament, suggests that he was poisoned, and implicates in the plot various influential personalities involved in the struggle for succession. It is dealt with in more detail below.

6 Cf Hammond 1980: 4.

7 Cf Heckel (1988) for the full text (as it occurs in the so-called Metz Epitome and in Recension A of Pseudo-Callisthenes) and for a discussion of the date, purpose and authorship of this document.

## 1.2 Sources from the Roman era

None of the contemporary sources discussed above have survived; they are known to us only as references in the works of later authors. These historians, who lived some 400 years later during the late periods of the Roman Republic and the early Empire, are our only extant sources for the life and times of Alexander.

Diodorus Siculus (1st century BC) was a Greek historian who wrote a universal history, the *Bibliothêkê*, covering the period from mythological times to 60 BC. His main source was Cleitarchus, but he also quoted from Aristobulus and Hieronymus, as well as from sources said to have originated from Greek mercenaries fighting for Darius III.

Quintus Curtius Rufus (1st/2nd century AD) was a Roman rhetorician and historian who wrote a ten-book history of Alexander, the *Historiae Alexandri*. He relied very heavily on Cleitarchus; apart from this the exigencies of rhetoric determined the selection of his source material.

Plutarch (46-120 AD), the Greek biographer and moral philosopher, is known mainly for his *Fifty parallel lives*, written to exemplify virtue (or vice) in the careers of great men in Greek and Roman history; in this work Alexander is compared with Julius Caesar. Plutarch reported objectively from every source available, "from the best to the worst" (Tarn 1948, 2: 296).

Arrian (Lucius Flavius Arrianus, 95-180 AD) was a Greek historian; one of the most distinguished writers of his day. His most famous work deals with the age of Alexander the Great; the only extant part is the *Anabasis of Alexander*, a seven-book history of Alexander from his accession to his death, based on the *King's Journal* and Ptolemy's rendering of it, supplemented mainly by Aristobulus.

Justin (Marcus Junianus Justinus, 2nd, 3rd or 4th century AD) was the author of a Latin epitome of the otherwise lost *Philippic Histories* of Pompeius Trogus; a less significant and accurate contribution.

### 1.3 An assessment of the sources

In his book, *Three historians of Alexander the Great: The so-called Vulgate authors, Diodorus, Justin and Curtius* (1983), Hammond set himself the task of assessing the value of each of the five main accounts of the life of Alexander which have survived (those of Arrian, Diodorus, Justin, Curtius and Plutarch). It very soon emerges from these authors' accounts of Alexander's last days that two groups can be distinguished (Hammond 1983: 4-5). On the one hand there are Arrian and Plutarch. In his rendering of the final illness of Alexander, Arrian abbreviates and paraphrases the relevant passage in the *King's Journal*, and finally remarks that "the accounts of Ptolemy and Aristobulus were not far from this [account]" (*Anabasis* 7.26.3). Plutarch's account (*Alexander* 6-77.1) is so similar to Arrian's that there is little doubt that each was drawing independently on the same passage in the *King's Journal*. On the other hand, the accounts of Diodorus, Justin and Curtius are totally incompatible with the first group.

Which group is to be regarded as correct? This depends mainly on one's assessment of the authenticity of the *King's Journal*. Scholars like Samuel (1965), Hamilton (1969) and Bosworth (1971) maintain that the *King's Journal* was a forgery made in antiquity, and they therefore favour the latter group of authors. Hammond (1983: 4-11), however, makes out a very convincing case for the authenticity of the *King's Journal*,<sup>8</sup> and thus believes that Arrian and Plutarch are to be regarded as dependable.

Two of the contemporary sources were particularly hostile to Alexander and recorded a very negative image of him in many respects. The sensational stories of Cleitarchus still had wide appeal,

8 Cf Hammond's (1988: 6) scathing remark in this regard: "It is, of course, an exciting idea that a modern scholar, operating only with paraphrased fragments, may be able to prove an ancient work to have been a forgery so ingeniously constructed that it deceived four ancient scholars (Plutarch, Arrian, Aelian VH 3.23, and Athenaeus 10.434b ...) But excitement is not enough; we need very strong arguments to support the idea." He then convincingly refutes the arguments against the genuineness of the *King's Journal* (Hammond 1983: 6-11).

although he was not held in high regard by serious historians. And after the execution of Callisthenes, Aristotle's nephew, the Peripatetic School in Athens proceeded to slander Alexander, *inter alia* by picturing him as a debaucher and tyrant, and attributing his achievements to luck and to the efforts of others. This view was still very popular in the Roman era until Plutarch and Arrian, in particular, proposed the contrary view.

The account of Alexander's final illness as recorded by the two major sources, the *King's Journals* (preserved in *inter alia* Plutarch and Arrian) and the *Liber de morte Alexandri Magni* (in which the views of Cleitarchus and others are represented), will now be discussed. In an attempt to find the most likely reason for his death, information provided by these two sources will be evaluated carefully in the light of modern medical knowledge and circumstantial evidence such as the place where he died, the season, and prevalent diseases at that time. It must be emphasized that absolute certainty cannot be reached in view of the inadequate medical descriptions given by historians more than 2 000 years ago.

## 2. The last days of Alexander

### 2.1 Medical history according to the sources

Alexander was of less than average stature, well built, and very fair with a tendency towards a ruddy complexion (Plutarch *Alexander* 4.3). In battle he led by example; he shared all hardships with his troops, with whom he was extremely popular throughout his career (Plutarch *Alexander* 42.7-10 & Arrian *Anabasis* 6.26.1-3). He was wounded often and seriously (Plutarch *Alexander* 58.1). At Granicus (334 BC) his life was saved by Cleitus after serious injury (Plutarch *Alexander* 16.11 and Arrian *Anabasis* 16).

In his Parthian campaign (331 BC) he was hit in the lower leg by an arrow which so shattered the bone that fragments had to be removed (Plutarch *Alexander* 45.5 & Curtius *Historiae Alexandri* 7.6.3). Plutarch also tells of an occasion when he suffered dimmed vision after a severe blow to the nape of the neck (Plutarch *Alexander* 45.5 & Curtius *Historiae Alexandri* 7.6.22). During the assault on Malli (India, 325 BC) an arrow pierced his breastplate and the chest

wall above the nipple, probably damaging the lung. When the arrow was cut out with a sword, Alexander bled profusely and fainted (Plutarch *Alexander* 43.6-12 & Arrian *Anabasis* 6.10-11). Tarn (1948, 1: 103) maintains that he never fully recovered from this incident and that his weakened state contributed to his death.

Apart from an attack of severe diarrhoea, we know of only one other serious illness prior to the final incident. During his assault on Tarsus (333 BC) he fell dangerously ill with symptoms very similar to those of his final illness. According to Arrian he was eventually cured by a physician who had been a boyhood friend, but not before he had lost the power of speech and become comatose (*Anabasis* 2.4 & Plutarch *Alexander* 19.4-10).

Cleitarchus and the Peripatetic school of Aristotle were mainly responsible for creating the negative image of Alexander as an alcoholic.<sup>9</sup> It is probable that Alexander (like his fellow officers), did drink heavily from time to time and it is true that he murdered Cleitus (who had saved his life at Granicus) in a drunken brawl (Plutarch *Alexander* 50.1-51.11). But Alexander was no drunkard, and Plutarch's remark in this regard that the king let nothing hinder him when there was work to be done (*Alexander* 23.1-2) should be taken seriously.<sup>10</sup>

- 9 Cf Hammond 1983: 78. Ephippus of Olynthus also wrote a hostile pamphlet, *On the end of Alexander and Hephaestion*, in which he attributed Alexander's death to excessive drinking (*Fragmente der griechischen Historiker* 126 F 3); this view is also found in Nicobulus (*Fragmente der griechischen Historiker* 127 F 1 & F 2) and passed as truth into the Alexander Romance. This theory still has its adherents in modern times: Lane Fox (1975: 467) refers to Alexander's last months as "a continuous record of carousing" and to "Alexander's final month of debauchery". Bosworth (1971: 122) refers to this period as "a drinking marathon unique in history, in which the king spent his life alternately drinking himself to insensibility and sleeping off the results". This view, which is based on certain passages in the *King's Journals*, is examined in detail by Hammond, who comes to the conclusion that these passages refer to three dinner parties which Alexander attended within a month and at which he drank with his friends — "hardly an excessive programme for royalty" (Hammond 1980: 298-9), and definitely not a justification for the views of Lane Fox and Bosworth.
- 10 Cf too Plutarch *Moralia* 337f and 623e where he gives the view of Alexander's



## 2.2 The final illness

According to the *King's Journals* Alexander returned to Babylon in May 323 BC after journeying through the marshy Tigris-Euphrates delta. Within weeks he developed his final illness, which lasted approximately ten days. In summary, Arrian's description (*Anabasis* 7.25-27) is as follows:

After banqueting with friends far into the night during a time of general festivity for the whole army, he was invited to join in a carousal in honour of a god (probably Heracles) at the home of his close friend, Medius. After leaving the party, he bathed, slept most of the next day and then rejoined the festivities at Medius's home, which continued far into the next night. He then bathed again, ate a snack and slept on the spot, because he had a fever. On waking, he was carried by stretcher to a sacrificial ceremony (which was a daily event in his life). After this he remained lying in the men's room till nightfall. During this time he was actively involved in issuing orders to commanding officers in preparation for a military operation (to Arabia) which was to take place in five days' time. He was then carried by stretcher to the Euphrates River to sail and bathe before resting. During the next three days he became more feverish, but still made the customary daily sacrifices, bathed and discussed military operations. Finally, very ill, he was carried past his grief-stricken soldiers into the palace. Unable to speak, he nevertheless still received his commanding officers. The fever continued unabated and two days later the army, fearing his death, insisted on seeing him. As the soldiers filed past his bed, he was unable to speak to them but nevertheless welcomed each of them, raising his head with difficulty and greeting them with his eyes. Some of his generals, keeping an all-night vigil at the shrine of Serapis, asked the god whether Alexander should be brought there. The god indicated that it was better for him to stay where he was. Shortly afterwards Alexander died.

contemporary, Aristobulus, which has the same drift. Cf further Arrian *Anabasis* 7.29.4: "As for his reputed heavy drinking, Aristobulus declares that his drinking bouts were prolonged not for their own sake — for he was never, in fact, a heavy drinker — but simply because he enjoyed the companionship of his friends."

The *Liber de Morte* document contains the details of the fateful dinner party at the house of Alexander's friend, Medius. It may be summarised as follows:

When Alexander invaded Asia he left the able but elderly Antipater in Macedonia to manage the European sector of his domain and to look after the interests of his mother, the strong-willed and vindictive Olympias. She was displeased with Antipater's handling of affairs and continually complained to her son. Eventually (in 324 BC) Alexander heeded her complaints and sent one of his best commanders, Craterus, with 10 000 Macedonian veterans, to replace Antipater. Expecting to be killed in the process, an alarmed Antipater plotted with Aristotle to assassinate Alexander, and sent his son, Cassander, to Babylon, ostensibly to argue his father's case, but in fact to murder Alexander. For this purpose an exceedingly powerful poison had been prepared from the icy springwater near Nonakris in Arcadia — a poison so virulent that it destroyed metal, and had to be transported in a mule's hoof. In Babylon Cassander's brother Iolaos, the cupbearer of Alexander, then poisoned his master at the banquet of Medius, where most of the guests were party to the plot. On taking the poison Alexander felt a sharp pain in his back, cried out loudly and left the dinner. Excruciating pain then set in and Alexander died slowly over five days, during which time Iolaos succeeded in administering further doses of the poison. In his agony Alexander attempted to drown himself in the Euphrates but was saved by his Bactrian wife, Roxana. Cassander then fled to Cilicia to await the arrival of Iolaos. In the presence of his loyal followers, Alexander then composed his last will. He divided his empire among his generals and appointed Perdikkas as his successor and Roxana's future husband. As in the version of the *King's Journal*, his mourning troops then filed past him before he died.

The salient point of this document is the accusation of murder against the family of Antipater and identified collaborators at Medius's banquet. Heckel (1988) makes a convincing case for its being a cleverly prepared forgery designed to benefit certain persons in the complicated struggle to succeed Alexander, while attempting to eliminate others. He considers that it probably originated in 317 BC. Cleitarchus (cf Diodorus Siculus 17.118.1 & Curtius *Historiae*

*Alexandri* 10.10.14-19), Plutarch (*Alexander* 77.5) and Arrian (*Anabasis* 7.27) all knew of the poisoning theory, but rejected it. Furthermore, Engels (1978: 224-5) points out that it is most unlikely that Alexander, who was very swift in acting against conspiracies against his life — whether real or alleged — would allow himself to be poisoned slowly, over five or more days, while placidly drawing up his testament. Neither the alleged accomplices, nor anyone else for that matter, suffered any harm during the king's terminal illness. Bosworth (1971: 115-6 & 134-6) also rejects the *Liber de Morte* document, but hypothesises that Alexander may well have been assassinated by disgruntled followers, alarmed at his progressive megalomania and autocratic tendencies. He presents evidence of a junta which was formed and brought off a successful *coup d'état* aimed at establishing a balance of power among the plotting coalition members. This planned equilibrium ensued for a year but was abruptly shattered by Perdicas's bid for supremacy.

### 2.3 A medical perspective

The theory that Alexander was poisoned has thus not yet been finally laid to rest, as is also evident from Milns's (1968: 256-6) suggestion that strychnine was administered at Medius's banquet in unmixed wine — a procedure apparently recommended by Theophrastus.<sup>11</sup> However, Engels (1978: 224) points out that Theophrastus refers to the non-lethal variety of strychnine — the lethal variety was extremely bitter and would have been detected immediately. Furthermore, the symptoms of strychnine poisoning are very obvious<sup>12</sup> and do not match those recorded before Alexander's death (a violent intermittent fever, loss of voice and severe back pain). Neither do the symptoms of small doses of poison given over a period of time accord with those of Alexander.<sup>13</sup>

11 *Historia Plantarum* 9.11.5-6; reference in Engels 1978: 224 n 4.

12 Engels (1978: 224): "muscular convulsions within fifteen to thirty minutes of ingestion, followed in a short time by unconsciousness and death".

13 Engels (1978: 224): "subfebrile temperatures, muscular rigidity, photophobia, hypersensitivity to noise, and lassitude".

Similarly, the hypothesis that Alexander actually drank himself to death cannot be substantiated. The view that he was an alcoholic has already been refuted (*cf* pp 65-6 and footnotes 9 and 10), but Plutarch's report regarding his final illness merits further comment: "[...]Aristobulus says that he had a raging fever, and that when he got thirsty, he drank wine, whereupon he became delirious, and died on the 30th day of the month Daesius" (*Moralia* 337). In Curtius (*Historiae Alexandri* 10.10.10-11) we read that in the hot plain of Babylon the water was not as pure as in the mountain springs of Macedonia; it is understandable that what Alexander drank daily was wine, not water. And when he became feverish, one can imagine that he quenched his thirst with wine. It is thus possible that Alexander's constitution was weakened by sporadic heavy drinking, and that this contributed towards his final illness.

The fact that Alexander's symptoms resemble those of malaria was noted as early as 1872 by the French physician Emile Littré<sup>14</sup> and has recently been re-examined by Engels (1978: 224-8). The malarial parasite is known to have existed on earth since antiquity and malaria has been endemic to the eastern Mediterranean at least since the sixth century BC (Grmek 1991: 280). Alexander's final illness shows symptoms characteristic of malignant tertian malaria (*Plasmodium falciparum* infection): a violent intermittent fever, severe back pain, and progressive loss of consciousness leading to death (Woodruff 1974: 49). His presence in the swampy Euphrates/Tigris delta immediately before the onset of the disease would be corroborative evidence. Malaria is known to have been common in that area, particularly in the summer months of June and July. Engels (1978: 225) points out that Alexander's weakened condition, due to recent wounds, exhaustion and possibly heavy drinking, would have precipitated the infection. He probably died of the well known and deadly cerebral complications of *falciparum* malaria. Disease was indeed very common among Alexander's troops. Engels (1978: 227) quotes Arrian (*Anabasis* 5.27.6) as stating that more soldiers died of

14 *Médecine et médecins* (Paris 1872: 406-15), reference in Engels (1978: 225 footnote 8).

illness than in battle. Although Alexander's final illness could conceivably have been caused by other febrile illnesses of the time, Sallares (1991: 271) claims that malaria was the commonest cause of fevers in antiquity, and the symptoms known to us would be compatible with this diagnosis.

It is possible that this was at least the second time Alexander had contracted malaria (Engels 1978: 225). When he entered Tarsus in Cilicia (a most virulent malarial location even in modern times) in September 333 BC, he became seriously ill with a febrile condition and symptoms very similar to those of his final illness, including loss of speech and unconsciousness.<sup>15</sup> Recovery from severe cerebral malaria is rare, but he was then younger and probably more physically fit, which could have contributed to his survival — ironically, only to succumb to a re-infection almost exactly ten years later.

15 Recorded by Plutarch (*Alexander* 19.1-9), Arrian (*Anabasis* 2.4.7-8), and Curtius (*Historiae Alexandri* 3.5.3 - 3.6.13).

## Bibliography

### BADIAN E

1967. A king's notebooks. *Harvard Studies in Classical Philology* 72: 183-204.

### BOSWORTH A B

1971. The death of Alexander the Great: rumour and propaganda. *Classical Quarterly* 21: 112-36.

### ENGELS D

1978. A note on Alexander's death. *Classical Philology* 73: 224-8.

### GRMEK M D

1991. *Diseases in the ancient Greek world*. Translated by M & L Mueller. Baltimore: Johns Hopkins University Press.

### HAMMOND N G L

1980. *Alexander the Great: king, commander and statesman*. London: Chatto and Windus.
1983. *Three historians of Alexander the Great: The so-called Vulgate authors, Diodorus, Justin and Curtius*. Cambridge: Cambridge University Press.

### HAMILTON J R

1969. *Plutarch, Alexander: a commentary*. Oxford: The Clarendon Press.

### HECKBL W

1988. The last days and testament of Alexander the Great: a prosopographic study. *Historia* 56: 1-114.

### LANE FOX R

1975. *Alexander the Great*. Los Angeles: Omega Books.

### MILNS R D

1968. *Alexander the Great*. London: Robert Hale.

### PEARSON L

1954. *The lost histories of Alexander the Great*. Oxford: Blackwell.

### PLUTARCH'S LIVES

1961. With an English translation by B Perrin. The Loeb Classical Library VII. London: Heinemann.

### SALLARES R

1991. *The ecology of the ancient Greek world*. New York: Cornell University Press.

### SAMUEL A E

1965. Alexander's 'Royal Journals'. *Historia* 14: 1-12.

### TARN W W

1948. *Alexander the Great*, 1 & 2. Cambridge: Cambridge University Press.

### WOODRUFF A W

1974. *Medicine in the tropics*. Edinburgh: Churchill Livingstone.