Marathon and the Myth of the Same-Day March

James P. Holoka

For R.D.G. & J.L.
σμικρὸν δῶρον

In every description of a battle there is a necessary lie, resulting from the need of describing in a few words the actions of thousands of men spread over several miles, and subject to most violent moral excitement under the influence of fear, shame, and death.

Leo Tolstoy, "Some Words about *War and Peace*" (tr. A. Maude), 1868

THE ANCIENT SOURCES for the Battle of Marathon are often confusing and contradictory. None is contemporary with the event. Herodotus (Book 6), the earliest and best source, composed his account some fifty years after the battle;[1] Cornelius Nepos wrote more than four centuries later,[2] Plutarch nearly six. Nepos and Plutarch may have drawn on the account of Ephorus, writing over a century after the fact. Although we must rely on these sources and assess them with the greatest care, no reconstruction based on them will depict Marathon with real precision. Nonetheless, a more plausible

[1] H. R. Immerwahr, "Historiography," in P. E. Easterling and B. M. W. Knox, edd., *The Cambridge History of Classical Literature* I: *Greek Literature* (Cambridge 1985) 427f: "The work cannot have been published until the early years of the Peloponnesian War. There are, however, at least three reasons why this date is not especially significant: (1) the work was known in Athens prior to publication; (2) it has a long prehistory in oral composition, and conceivably in partial advance 'publication' (or better, circulation); (3) at the time of its ultimate publication the work was something of an anachronism, for it reflected an earlier world view and style of writing. Its 'ideal' date is closer to the 440s than the 420s."

[2] See C. Hanlet, "En Marge de Cornelius Nepos: (i) Miltiade, l'héros de Marathon," *EtCl* 10 (1941) 381–93; E. M. Jenkinson, "Genus scripturae leve: Cornelius Nepos and the Early History of Biography at Rome," *ANRW* I.3 (Berlin 1973) 709–15.

recreation of the battle and its aftermath can be achieved by due appreciation of logistical issues and the extent of human physical endurance. The lack of such an appreciation has been most damaging specifically in scholarly reconstruction of the time-frame of the Battle of Marathon and the march back to Athens.

Plutarch's statement that the Athenians, "fearful that they [the Persians] might take the undefended city, hastened back to town ... and reached it the same day,"[3] has been the cornerstone of a persistent and very influential version of Marathon, particularly because it has shaped many scholars' views of Herodotus' account.[4] The essential elements of what may be called the modern vulgate are as follows:

(1) the battle began at or very shortly after dawn, about 5:30 A.M.;
(2) the battle was completed within three or four hours, *i.e.*, by about 9:00 A.M.;
(3) after the battle, a signal was given to the Persian fleet, encouraging it to sail round Cape Sunion;
(4) the Athenian army, realizing such a run by sea to Athens was underway, made a *ca* twenty-six-mile forced march overland to the city on the very day of the battle;
(5) the Persian force arrived by sea at Phalerum harbor towards evening the day of the battle, but did not disembark for fear of the Greek army, which had already arrived;
(6) the day of the battle and march was 11 September 490.

Up to the nineteenth century, many historians accepted this same-day version of these events. George Grote, in the most influential and widely read Victorian history of ancient Greece,[5] wrote that "on the very day of the battle, the Athenian army marched back with the utmost speed [to Athens] ... which they reached before the arrival of the Persian fleet."[6] But more

[3] *Arist.* 5.4: φοβηθέντες μὴ τὴν πόλιν ἔρημον λάβωσι τῶν ἀμυνομένων, ταῖς μὲν ἐννέα φυλαῖς ἠπείγοντο πρὸς τὸ ἄστυ καὶ κατήνυσαν αὐθημερόν.

[4] Thus *e.g.* N. A. DOENGES, "The Campaign and Battle of Marathon," *Historia* 47 (1998: hereafter 'Doenges') 15 n.27, writes: "Herodotus, 6.116, places the return of the victorious Athenian army to the city on the day of the battle." He does not.

[5] *Cf.* J. Vaio, "George Grote," in W. W. Briggs and W. M. Calder III, edd., *Classical Scholarship: A Biographical Encyclopedia* (New York 1990) 119: Grote's "*History of Greece* fundamentally shaped the perception of ancient Greek culture and history among English-speaking scholars and readers in the Victorian age and had a major impact on the Continent as well, especially in Germany...."

[6] *History of Greece*[2] (New York 1861 [London 1859]) IV 351.

critical scholars challenged such naive acceptance of Plutarch and argued that the return to Athens must have taken place the day after the battle. George Rawlinson, for example, observed that "if the Greeks performed this march, one of seven hours, as Herodotus has been thought to imply, the very same afternoon, it would be about the most remarkable of the events of a very memorable day." He suggested that Athenian knowledge of the intention of the Persian force to sail for Athens "is extremely likely to have been early the next day."[7] Müller-Strübing argued that the same-day march was both "a physical impossibility" and beyond what any commander could in conscience demand of battle-weary troops: "es moralisch unmöglich ist, [daß] der athenische Feldherr diesen Marsch angeordnet haben soll."[8] Among Anglophone scholars, this skepticism is typified by How and Wells in their still unsuperseded (though outdated) commentary on Herodotus: "the distance from Marathon to Athens ... is more than an army could march after a pitched battle.... Both march and voyage ... should be assigned to the following day."[9]

But the same-day myth was given a new, much stronger lease on life beginning in 1959, when the first edition of N. G. L. Hammond's soon-to-be-standard textbook appeared. In his account of Marathon, Hammond reports the results of a personal field test: "I walked fast from Athens to the mound at Marathon in 6 hours and returned the same day to Athens in 7 hours."[10] The march of the Greek army was thus no "physical impossibility" after all.

My purpose here is not to challenge every element in Hammond's reconstruction of the Battle of Marathon; and I shall, in fact, follow his version of the phases of the fighting and the movement of the opposing forces on and around the plain of

[7] *The History of Herodotus* (New York 1860) III 413 n.9; see also H. Müller-Strübing, "Zur Schlacht von Marathon," *Jahrb. f. cl. Phil.* 129 (1879) 433–48, followed by G. Busolt, *Griechische Geschichte*[2] (Gotha 1895: hereafter 'Busolt').

[8] Müller-Strübing (*supra* n.7) 445.

[9] W. W. How and J. Wells, *A Commentary on Herodotus* (Oxford 1912: hereafter 'How and Wells') II 113. J. A. R. Munro, "The Battle and After," *CAH* IV (1926: 'Munro') 250f, represents a half-way house: "the Athenian generals had no time to lose. The Persian fleet would be arriving off Phalerum *on the morning* after the battle. Plutarch is doubtless right in putting the march back to Athens *on the same day* as the battle, and Herodotus implies as much" [my emphases].

[10] *A History of Greece to 322 B.C.* (Oxford 1959, 1967[2], 1986[3]) 216 n.2.

Marathon on the day of battle. Nor shall I be concerned with other problematic features of Herodotus' account: Philippides' run to Sparta and back, the possibility that prevailing Etesian winds in September dictate an October invasion date, or the presence, size, disposition, and movement of the Persian cavalry force.[11]

In 1968, Hammond reinforced his anecdotal evidence for the myth's plausibility in a long paper, which amply attests his control of the ancient sources, exhaustive familiarity with modern scholarly literature on the battle, and detailed knowledge of the topography of Attica. Republished in revised form, it provided the basis for his discussion of Marathon in the second edition of the *Cambridge Ancient History*.[12] Hammond's imprimatur quickly ensured renewed and wide currency for the same-day myth, not only in the specialist literature, but also in books written for wider audiences: Peter Green, in a popular history of the Persian Wars, writes

> as if they had not done enough already, the Athenians once again achieved a near-miracle.... [They] at once set off back to Athens, each man for himself: 'as fast as their feet could carry them,' Herodotus says, and one can well believe it.... They can scarcely have got there before four in the afternoon, and

[11] On the basis of *Suda s.v.* χωρὶς ἱππεῖς, it has been contended that the Athenians (having secretly been informed by Ionians in the Persian host) had to make it back to Athens the very day of the battle, because the Persian cavalry had been dispatched by ship for Athens the night before. P. Green, *per ep. elec.* (14 October 1997): "The knowledge of what Datis was doing, combined with the chance to snatch an unexpected victory, meant that everything was done with maximum speed, and as soon as possible." But this scenario assumes a great deal: that the cavalry was "away" on board ships to Athens and not simply elsewhere on the expansive Marathon plain; that the Persian cavalry contingent was large enough by itself to pose a threat to the city—in fact, we do not have reliable evidence for its numbers; and that ancient sources, both literary (Nep. *Milt.* 5; Paus. 1.32.3) and plastic (the Stoa Poecile painting, a sarcophagus from Brescia, and a frieze from the temple of Athena Nike on the Acropolis), are wrong in representing the cavalry as present at the battle. See, in general, G. Shrimpton, "The Persian Cavalry at Marathon," *Phoenix* 34 (1980) 20–37; J. A. S. Evans, "Herodotus and the Battle of Marathon," *Historia* 42 (1993) 293–99; A. Santosuosso, *Soldiers, Citizens, and the Symbols of War: From Classical Greece to Republican Rome, 500–167 B.C.* (Boulder 1997) 33; Doenges 5, 14.

[12] "The Campaign and the Battle of Marathon," *JHS* 88 (1968) 13–57, revised in *Studies in Greek History: A Companion Volume to A History of Greece to 322 B.C.* (Oxford 1973: hereafter 'Hammond') 170–250; *CAH*² IV: *Persia, Greece and the Western Mediterranean c. 525 to 479 B.C.* (1988) 506–17.

> Datis's squadron may well have sailed into Phaleron roads an hour or less later. Yet that one hour made all the difference....[13]

In what follows, I shall examine, item by item, the chief problems inherent in the durable *fable convenue* of the same-day march.

I. Commencement of Fighting

No ancient author states what time of day the battle began. So far as Herodotus informs us, it could have been 9:00 A.M. or noon as easily as first light. That it might have been dawn does not mean it must have been dawn. In fact the sole reason for assigning commencement of battle to so early an hour is to lend credibility to the same-day myth: the Athenians must have begun fighting at dawn because they must have had time to march back to Athens the same day. Q.E.D. I do not exaggerate the circularity of the argument. Pritchett writes that "the accounts of the precipitous haste with which the victorious Athenians marched home in order to anticipate a Persian landing in the Bay of Phaleron suggest that the battle took place in the morning."[14] So too, Hammond (210f): "if the march took 8 or 9 hours and the army reached Cynosarges in daylight, they

[13] *Xerxes at Salamis* (New York 1970) 36. So too V. Hanson, *The Wars of the Ancient Greeks* (London 1999) 85f: 'To cap off the day's killing, the tired Athenian hoplites then trekked *en masse* for eight hours over the pass to save their unprotected city from the retreating Persian fleet, displaying remarkable endurance and confidence, and so capturing for ever the collective imagination of the West." Also F. Chamoux, *La civilisation grecque à l'époque archaïque et classique* (Paris 1963) 98: "Miltiade et les stratèges ramenèrent l'armée vers Athènes le jour même et arrivèrent à temps pour prévenir une tentative de débarquement au Phalère. Voyant que la côte était défendue, Datis et Artapherne n'insistèrent pas et regagnèrent l'Asie." *Cf.* A. R. Burn, *Persia and the Greeks: The Defense of the West, 546–478 B.C.* (New York 1962: hereafter 'Burn') 251f; J. V. A. Fine, *The Ancient Greeks: A Critical History* (Cambridge [Mass.] 1983: 'Fine') 285; A. B. Lloyd, *Marathon: The Story of Civilizations on Collision Course* (New York 1973) 201f, who apparently thinks the Greeks marched all night: "it was a long tramp for muscles chilled in the open hills and stiffened on the battlefield, but the ranks were in good heart and the necessity urgent." Similarly C. Meier, *Athen: Ein Neubeginn der Weltgeschichte* (Munich 1995) 253: "Nach kurzer Ruhepause, vielleicht noch in der Nacht, brach die Armee in Richtung Athen auf. Sie mußte vor der Persern dort sein."

[14] W. K. Pritchett, "Marathon," *CPCA* 4 (1960) 173.

started about 9 a.m. or 10 a.m.; for darkness fell soon after 6.30 p.m.... The shield signal then was made before 9 a.m.... It follows that the battle started very close to dawn, i.e. very close to 5.30 a.m."

In fact, there is reason to think the Athenians did not attack at first light. Though ancient testimony for this mundane element of daily routine on campaign is lacking, it is very likely they took a meal.[15] Although Marathon may not, like some hoplite battles, have taken all day,[16] according to Herodotus the fighting did take "a long time."[17] Any responsible commander will have seen to it that the troops fortified themselves with nourishment before going into action.

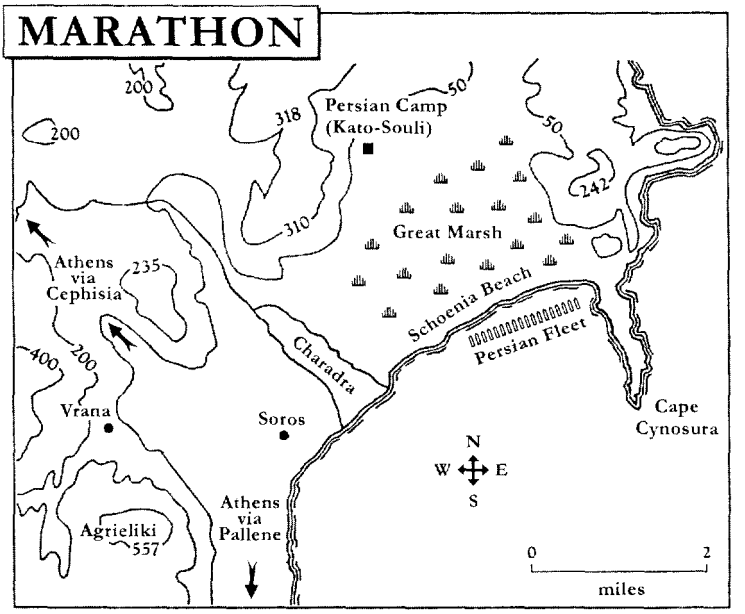
The army's leaders must also have attended to indispensable religious obligations prior to the battle. Greek armies typically prepared for a day's combat by consulting the omens and paying homage to the gods by sacrifice.[18] And Herodotus (6.112) indeed says that the army charged into battle after favorable preliminary sacrifices (τὰ σφάγια ἐγίνετο καλά). Pritchett has distin-

[15] One thinks of Odysseus' admonition to Achilles at *Il.* 19.157ff, 162f: οὐκ ὀλίγον χρόνον ἔσται φύλοπις, εὖτ' ἂν πρῶτον ὁμιλήσωσι φάλαγγες ἀνδρῶν, ἐν δὲ θεὸς πνεύσῃ μένος ἀμφοτέροισιν.... οὐ γὰρ ἀνὴρ πρόπαν ἦμαρ ἐς ἠέλιον καταδύντα ἄκμηνος σίτοιο δυνήσεται ἄντα μάχεσθαι ("For the combat will last no little while once the masses of men meet in battle and the god breathes strength into both sides.... No man unnourished by food will be able to fight his foe all the livelong day to the sun's setting.").

[16] See the table showing duration of land battles according to Greek historians in W. K. Pritchett, *The Greek State at War* I–V (Berkeley 1971–91) at IV 47–50.

[17] 6.113: μαχομένων δὲ τῷ Μαραθῶνι χρόνος ἐγίνετο πολλός.

[18] *Cf.* Socrates at Xen. *Oec.* 5.19: καὶ τοὺς μὲν ἐν τῷ πολέμῳ ὁρᾷς οἶμοι πρὸ τῶν πολεμικῶν πράξεων ἐξαρεσκομένους τοὺς θεοὺς καὶ ἐπερωτῶντας θυσίαις καὶ οἰωνοῖς, ὅ τι τε χρὴ ποιεῖν καὶ ὅ τι μή ("And you observe, I suppose, that men engaged in war try to propitiate the gods before taking action; and with sacrifices and omens seek to know what they ought to do and what they ought not to do," tr. E. C. Marchant (Loeb: Cambridge [Mass.] 1923). *Cf.* Onas. 1025: μήτε δὲ εἰς πορείαν ἐξαγέτω τὸ στράτευμα μήτε πρὸς μάχην ταττέτω, μὴ πρότερον θυσάμενος ("The general should neither lead his army on a journey, nor marshall it for battle without first making a sacrifice," tr. Illinois Greek Club, *Aeneas Tacticus, Aesclepiodotus, and Onasander* (Loeb: Cambridge [Mass.] 1923). M. H. Jameson, "Sacrifice before Battle," in V. Hanson, ed., *Hoplites: The Classical Greek Battle Experience* (London 1991) 197: "Every stage in the process that led up to the clash of hoplite phalanxes on the field of battle was marked by attention to the gods," and *passim*. *Cf.* Lloyd (*supra* n.13) 185ff and, on Macedonian practice, his "Philip II and Alexander the Great: The Moulding of Macedon's Army," in A. B. Lloyd, ed., *Battle in Antiquity* (London 1996) 184.



(a) Map of Marathon

(b) Athenian Tetradrachm, *ca* 480–69, after
C. M. Kraay, *Greek Coins* (New York 1966) pl.119.360

guished two ritual sacrifices in the typical preparations for battle: the first in the camp, "in the course of which ... the omens had to be interpreted as favorable before the action could begin," and the second, "of a supplicatory and propitiatory nature, performed immediately before the action began."[19]

In addition, it must have taken longer than usual to array the troops in line of battle, a line over a mile long,[20] arranged not in the standard phalanx formation eight ranks deep but shallower in the center to ensure sufficient breadth and strength on the wings to forestall envelopment by the Persians' superior numbers.[21] Miltiades could not have made the decision so to array his troops without first observing the deployment of enemy forces confronting him. He waited for the Persians to leave their encampment some three miles away (see Plate 1a), cross the plain, and form up in battle line; he then made the necessary tactical arrangement or rearrangement of his own line in response. Evans maintains that Miltiades "stretched his battle line to make it equal to the Persian front, the length of which he could have estimated only after he saw the Persian army advancing in battle order across the plain." So too, Lazenby points out that Herodotus "says that on the day of battle, the Athenian centre was formed few ranks deep 'in order to make

[19] Pritchett (*supra* n.16) I 110.

[20] J. F. LAZENBY, *The Defence of Greece: 490–479 B.C.* (Warminster 1993: hereafter 'Lazenby') 64: "If the figures given by most of the secondary [scil. ancient] sources for the Greek army are roughly correct (i.e. 9000 Athenians and 1000 Plataians), and we allow about 90 centimetres per man, we would get the following frontages: left wing 315 metres, centre c.1000, right wing c.300 metres." So Pritchett (*supra* n.16) IV 143f and Hammond 178, who notes that modern estimates have ranged from 1,000 meters (Kromayer) to 2,750 meters (Myres).

[21] The question of Persian numbers at Marathon is much vexed. The consensus of scholarly opinion is that the force was in the neighborhood of 20,000–30,000 combatants. See, *e.g.*, Santosuosso (*supra* n.11) 29; J. A. G. van der Veer, "The Battle of Marathon: A Topographical Survey," *Mnemosyne* SER. 4 35 (1982) 309; Doenges 5f. Hans Delbrück, *History of the Art of War* I³, tr. W. J. Renfroe (Berlin 1920; rpt. Lincoln [Nebraska] 1990) 70, contended that "nothing forces us to assume that the Persians had numerical superiority at all at Marathon and Plataea; it is completely possible, in fact even probable—in my opinion, certain—that the Greeks were stronger"; this view has found almost no supporters, chiefly because the figure of 6,400 Persian dead implies a force considerably greater than 10,000.

the army equal to the Median army' (6.111.3), and this surely implies that it was the Persians who were 'first in the field'."[22]

The meal, the two ritual procedures, the movement of the Persian forces from their camp and their formation for engagement, Miltiades' assessment of their dispositions and his own deployment of 10,000 men in line of battle—all this took, at a reasonably conservative guess, at least two hours. Fighting could have commenced no earlier than 7:30 A.M.

II. Duration of the Battle

It is true that the typical hoplite battle of classical Greece was often a short, sharp engagement[23] that yielded a victor—that is, possessor of the field—within two or three hours or even less.[24] This was not, however, invariably the case: the battle of Himera in 480 took "from dawn to late evening" (Hdt. 7.167: ἐξ ἠοῦς ... μέχρι δείλης ὀψίης) and the fighting on Sphacteria in 425 leading up to the Spartan surrender lasted "most of the day" (Thuc. 4.35.4: τῆς ἡμέρας τὸ πλεῖστον). G. L. Cawkwell, adducing other examples of lengthy engagements, concludes that "battles were not short in duration.... Generally ... the historians contented themselves with the phrase 'for a long time,' which some might be disposed to dismiss. But we know what the Greeks knew as a long battle .... There is no reason to think of battles as quickly over."[25] And, too, Marathon was emphatically not a typical case. Greek forces were outnumbered two to one, perhaps three to one. Persian troops were not equipped or trained to fight quite like hoplites.[26] The Greeks had to adjust their tactics and their techniques of hand-to-hand combat to

[22] Hdt. 6.111.3: τὸ στρατόπεδον ἐξισούμενον τῷ Μηδικῷ στρατοπέδῳ, τὸ μὲν αὐτοῦ μέσον ἐγίνετο ἐπὶ τάξιας ὀλίγας, καὶ ταύτῃ ἦν ἀσθενέστατον τὸ στρατόπεδον, τὸ δὲ κέρας ἑκάτερον ἔρρωτο πλήθεϊ; Evans (*supra* n.11) 285; Lazenby 62.

[23] Burn 51: "The time of a hand-to-hand mêlée must be counted in minutes rather than hours." *Cf.* Munro 249: "the 'long time' of conflict described by Herodotus ... is to be measured in minutes, not in hours."

[24] So Veg. 3.9, endorsed (tacitly) by Pritchett (*supra* n.16) IV 46, 49ff.

[25] "Orthodoxy and Hoplites," *CQ* NS. 39 (1989) 376.

[26] For example, they relied more heavily on missile weapons than did Greek infantry.

their enemy's style of fighting, the weaknesses in his protective armor, and the threat posed by his offensive weaponry.[27]

Another anomaly is that the combatants ranged over an unusually large battle ground in the course of the fighting. Consider: we know that the two battle lines collided after the Athenians had crossed an intervening distance of eight stades (*ca* one mile), and that the Greeks likely sustained most of their casualties in the vicinity of the Soros, or burial tumulus.[28] After the Persian forces broke and fled, there was fighting later in and near the Great Marsh some three miles (Hammond 211) northeast of the Soros, as seen in the famous painting by Micon and Panaenus in the Stoa Poecile (built *ca* 460; Paus. 1.15.4). There was also heavy fighting some distance[29] from the marsh, probably at the Persian encampment and again by the ships along the 3,000-yard length[30] of the Schoenia beach up to Cape Cynosura, about four miles from the Soros, and in the sea itself as the Persians struggled to embark. Here the polemarch Callimachus fell.

All told, Greeks forces ranged over a distance of six miles while engaged in heavy fighting, each man burdened by seventy pounds of armor and weapons under the hot sun of a late summer's day. The same-day myth has them then retrace their steps another three to five miles back across the plain of Marathon, depending on where the troops were on the beach after the Persian departure. Hammond imagines the army leaving from Schoenia "three miles east of the [burial] mound," but this

[27] On the diversity of Persian armament see W. W. How, "Arms, Tactics and Strategies in the Persian Wars," *JHS* 43 (1923) 123; Santosuosso (*supra* n.11) 29.

[28] Hammond 178: "honour, as well as convenience in collecting the corpses, required that the memorial was made at the spot where most of the dead had fallen. In practice, too, the presence of Persian arrowheads in the fill of the mound puts the matter beyond any doubt at all." But see Doenges 13 n.21: "It is likely in view of the extensive area over which the battle took place that the Athenians suffered casualties not just at the Soros.... The dead from all over were gathered and cremated, and the mound was erected in a prominent position on the plain of Marathon which had more to do with the road system through the plain than the site of the battle." For a clear general discussion of topographical issues, see van der Veer (*supra* n.21) 310–18.

[29] Hammond (233) places the Persian encampment near Kato-Souli more than two miles from the shore; the Greek hoplites pursuing the Persians will have thus traversed a distance up to two miles in moving from camp to shore along the intervening marsh.

[30] Hdt. 6.113–15; *cf.* Hammond 219f.

is reckoning from the western end of the Schoenia, where the marsh extended nearly to the shore. There is no reason to think that fighting did not occur at other points further east along the whole length of the beach.[31] Merely to march eleven miles in armor would require at least four hours. But the army did not, of course, cover this ground unopposed. Herodotus reports that the Greek hoplites killed 6,400 enemy combatants—not en masse in moments by a hail of missiles, like the Spartans at Thermopylae (Hdt. 7.225), but by pursuing and attacking the enemy at close quarters. The killing was hard work, requiring the hoplites to parry the blows of their opponents and to pierce their protective armor, slashing and stabbing with edged metal in hard-fought hand-to-hand engagements. The Greeks also captured seven Persian ships. If we allow the hoplites two hours (a cautious estimate) for fighting and killing the enemy at sites on and around the plain, near the marsh, and along the shore, we arrive at a total of six hours for the duration of the battle. Fighting ceased at 1:30 P.M. at the earliest; all in all, a good day's work. As Herodotus says, it had taken "a long time." If we—again, conservatively—allow another hour for reassembling of Greek forces in the vicinity of the Soros from scattered positions on the battlefield, we arrive at 2:30 P.M. At most, only four hours of daylight remained for a march to Athens.

Hammond, however, crams the battle into three and a half hours and asks us to believe that it was all over by 9 A.M. and that by 9:30 the Greek force had regrouped and refreshed itself sufficiently to begin the march to the city. In this, he follows Munro (249), who makes the battle seem like a sporting diversion: "the battle from first to last was a brief affair, a morning's work before luncheon."

III. The Signal

"In Athens the Alcmaeonidae were accused of suggesting this move [round Sunion to Athens]; they had, it was said, an understanding with the Persians, and raised a shield as a signal to

[31] Hammond 210, 220, 181 fig. 11; see also E. C. May *et al.*, *Ancient and Medieval Warfare* (=*The West Point Military History Series* [Wayne (New Jersey) 1984]) 18 map 3b.

them when they were already on board" (Hdt. 6.115).[32] The post-battle signal is problematic. As it is hard to imagine that the raised shield was discernible from the Persian fleet standing out to sea, let alone intelligible as conveying any precise message, some historians have conjectured that the Greek traitor was contriving a heliograph and that the signaling apparatus was a polished metal disk reflecting the light of the sun from some high point, perhaps Mt Agrieliki or Pentelikon, adjacent to the Marathon plain (Hammond 210). This so strains the evidence that other historians have simply discounted this detail, especially as Herodotus is at pains to expose the explicitly anti-Alcmaeonid propaganda in the story. Lazenby sensibly argues (*pace* Munro) that "it seems unlikely that there was such a signal, and [likely] that it was one of the rumours used to discredit the Alkmaionidai and their associates in the early 480s, when several of them were ostracized, probably primarily for alleged 'medism'."[33] Busolt (593f) traces the story to the imagination of some overexcited combatant: "Es scheint jedoch auch dieses Zeichen nur in der erregten Phantasie einiger Krieger existiert zu haben." Hammond, however, finds here support for his very-early-morning time frame: the signal must have been given before 10:00 A.M. because afterward the angle of the sun would have prevented the signaler from redirecting its rays in the right direction. This presupposes a traitor-signaler who either (a) knew in advance when the battle would take place and how long it would last or (b) had so little competence as a heliographer as to be unaware that useful transmissions from his position would be impossible after 10:00 A.M. Is it not more likely that the putative signaler thought to equip himself with a

[32] αἰτίη δὲ ἔσχε ἐν Ἀθηναίοισι ἐξ Ἀλκμεωνιδέων μηχανῆς αὐτοὺς ταῦτα ἐπινοηθῆναι· τούτους γὰρ συνθεμένους τοῖσι Πέρσῃσι ἀναδέξαι ἀσπίδα ἐοῦσι ἤδη ἐν τῇσι νηυσί; A. de Sélincourt, tr., *Herodotus: The Histories*, rev. A. R. Burn (Harmondsworth 1972) 429f.

[33] Lazenby 73; *cf.* R. Sealey, *A History of the Greek City-States, ca. 700–338 B.C.* (Berkeley 1976) 202f: "The tradition reaching Herodotus said that this signal was given by the Alcmaeonidae; the historian denied this indignantly, asserting that the Alcmaeonidae had constantly opposed the Peisistratidae, but he insisted that a signal was flashed.... If political animosity ... misrepresented the shield as a signal to the Persians and blamed the Alcmaeonidae, this merely indicates the prestigious and enviable position which the clan had attained." So, too, Fine 286; T. Buckley, *Aspects of Greek History: 750–323 B.C. A Source-Based Approach* (London 1996) 154ff; Doenges 15. Those who think Alcmaeonid complicity likely include Burn (252) and others cited in Lazenby 73 n.65.

second polished disk, so that he could redirect the reflected rays of the sun from the first to the second and thereby send a signal in any direction at any time during daylight hours? If we may conjure up one polished disk, why not two?

IV. The Forced March to Athens

Herodotus says that the Athenian army, having intercepted and correctly deciphered the shield (or heliographic) signal, proceeded to Athens "as fast as their feet would carry them."[34] He does not say that they did so the same day. That detail comes from Plutarch. To preserve the Plutarchan version, Hammond initially proposed the shorter, but more arduous, route via Cephisia: that is, a total of twenty-two miles from the area of the Marathon burial monument to the precinct of Heracles at Cynosarges, where Herodotus says the Athenian army encamped on arrival at Athens. In *CAH*², however, he changed this to the much likelier twenty-five-mile route via Pallene, through lower elevations and along more level ground.[35] But to these twenty-five miles, we must add, to reach the total distance for the day, the ten miles or so covered during the battle itself. Further, though it encamped at Cynosarges,[36] the army must have proceeded to the beach at Phalerum, an additional three-mile march, to prevent the disembarkation of the Persian troops.[37] We thus reach a daunting total of thirty-eight miles for this action-packed day.

We must bear in mind, too, that the army had to convey nearly 600,000 pounds of armor (seventy pounds per man times

[34] Hdt. 6.116: Ἀθηναῖοι δὲ ὡς ποδῶν εἶχον τάχιστα ἐβοήθεον ἐς τὸ ἄστυ.

[35] Hammond, *CAH*² (*supra* n.12) 512: "the victorious army marched ... the 40 km [24.8 miles] to Athens. That evening they were in position in the precinct of Heracles at Cynosarges, when the leading ships arrived off Phalerum"; earlier (507), Hammond distinguishes two routes, "one of about 35 kms [21.7 miles] over the hills between Mt. Parnes and Mt. Pentelicus [*scil.* via Cephisia] ... and the other of about 40 kms over the low pass between Mt. Pentelicus and Mt. Hymettus by Pallene and ... along the coast." See also Doenges 7.

[36] Not at the base of the south slope of Lykabettos (Busolt 594), but in the deme Diomeia, south of the city: see E. Honigmann, "Kynosarges," *RE* 12 (1925) 33; Munro 251; and T. Martin, *Ancient Greece: From Prehistoric to Hellenistic Times* (New Haven 1996) 118 plan 2.

[37] See J. Balcer, *The Persian Conquest of the Greeks: 545–450 B.C.* (Konstanz 1995: hereafter 'Balcer') 221.

8,500 men)[38] over the entire distance. As the hoplites were responsible for procuring their own equipment, which involved considerable expense, there will have been no cache or armory of extra panoplies at Athens. Further, the use of slave armor-bearers or wagons drawn by oxen or mules will have retarded rather than expedited the army's movement. The men also required food and plentiful water to avoid heat prostration and utter physical collapse: at a minimum, two pounds of food and two quarts (about four pounds) of water for each man.[39]

Modern attempts to replicate the conditions of ancient troop movements have yielded informative results. During recent field-tests in England and the Netherlands, though participants held up well under daily march-rates of twenty-five miles, they were carrying only shields and spears, slung over their shoulders on a strap, and walking on good roads in mild temperatures.[40]

Hammond, a "famously fast walker" (Lazenby 74), endorses the same-day myth, because as a young man (in 1930)[41] he hiked from Marathon to Athens and back in one day, "taking the direct route over Mt. Pentelicus"—that is, twenty-two miles via Cephisia[42]—evidently unencumbered by armor or weapons

[38] The initial 10,000 less (a) 192 Athenian dead, (b) another 350–400 (?) too seriously wounded to march, (c) 20 dead and 40 (?) wounded Plataeans, and (d) the *ca* 900 of the tribal regiment (the Antiochis) under Aristides left behind (Plut. *Arist.* 5) to care for the wounded and bury the dead.

[39] See D. W. ENGELS, *Alexander the Great and the Logistics of the Macedonian Army* (Berkeley 1978: hereafter 'Engels') 123–26.

[40] D. Atkinson and L. Morgan, "The Wellington and Nijmegen Marches," in *Roman Military Equipment: The Accoutrements of War* (Oxford 1987) 99–107. E. McGeer, a Byzantinist, describing similar field trials in which researchers wore or carried simulated ancient Roman military equipment during six days of marches, stresses the deleterious effects of lack of water and salt on the participants (*Sowing the Dragon's Teeth: Byzantine Warfare in the Tenth Century* [Washington [DC] 1995] 339):

> Without adequate intake of either, they were initially prone to spells of temporary blindness, disorientation, and dehydration.... Each participant required half a pint of water every hour.... The toll of heat and thirst on Byzantine soldiers ... during campaigns in Syria or the Balkans will certainly have been far heavier by comparison.... The author of the *De re militari* ... insited that ... soldiers proceeding through waterless regions in the heat of summer would not last to the midday meal but would succumb to thirst along with their horses....

[41] While "a student at the British School of Archaeology at Athens": Hammond 210.

[42] See *supra* n.10.

and not bleeding or suffering from exhaustion or heat stroke. The Athenian hoplites, however, were not all young men: they ranged in age from twenty to sixty years old.

> Hesiod's description of a good ploughman in his *Works and Days*, a vigorous well-fed fellow of forty years, who could drive a straight furrow and was not to be distracted by his companions like his younger fellows, evokes the hoplite as well as the farm labourer. Soldiers were not always, or typically, young men, but men in the prime of life, even approaching old age.[43]

Xenophon reports that a mercenary commander once boasted of the physical superiority of his men to the soldiers of city-state armies because "armies made up of citizens must include some men who are already past and some who have not yet reached their prime. And there are very few people in each city who keep constantly in good physical training" (*Hell.* 6.1.5).[44] As Hanson sensibly concludes, "he seems to imply that the aged within the ranks of most hoplite armies were a limiting factor on the mobility ... of the phalanx."[45]

The length of the battle of Marathon—both in elapsed time and distance covered—so depleted the stamina of a middle-aged citizen-soldier as to make a trek back to Athens on the same day at best foolish, at worst lethal. The opening phase of the battle, in the vicinity of the Soros, took place in two stages or movements. In the first, the Persian center pushed the Greek center back some distance, inflicting most of the casualties the Greeks would suffer during the battle, while the Greek wings drove the Persian wings into flight. In the second, the Greek wings either turned on the Persian center in a pincer movement or, on Hammond's interpretation,[46] reversed field, reformed, and attacked the Persian center, driving it in flight toward the marsh.

[43] S. Mitchell, "Hoplite Warfare in Ancient Greece," in Lloyd (*supra* n.18) 96.

[44] ἀλλὰ τὰ μὲν ἐκ τῶν πόλεων στρατεύματα τοὺς μὲν προεληλυθότας ἤδη ταῖς ἡλικίαις ἔχει, τοὺς δ' οὔπω ἀκμάζοντας. σωμασκοῦσι γε μὴν μάλα ὀλίγοι τινὲς ἐν ἑκάστῃ πόλει, tr. R. Warner, *Xenophon: History of My Times (Hellenica)* (Harmondsworth 1966) 248.

[45] V. Hanson, *The Western Way of War: Infantry Battle in Classical Greece* (New York 1989: hereafter 'Hanson') 90: "after all, thirty of forty-two age classes liable to military service were composed of men over thirty years of age."

[46] Hammond 226; *cf.* Santosuosso (*supra* n.11) 36 fig. 2.4.

If the fighting had ceased at this point, we would have to do with a short, sharp engagement, though rather longer than typical hoplite *vs* hoplite battles, because of the change of direction and the regrouping during the struggle. But, as we have seen, the fighting did not end there. Delbrück stipulates that "a rather long pause occurred between the two phases of the battle," because, he maintains, the Athenians were preoccupied with caring for dead and wounded and looting the fallen Persians.[47] But the pause more likely had to do with fatigue and the hoplites' need to rehydrate themselves and to remove their armor for a respite to avoid hyperthermia before following up their victory by determined pursuit of the enemy.[48] The Greeks then chased the Persians across the plain and inflicted heavy losses on them in difficult, wetland terrain. In particular, fighting on damp or muddy ground must have been both slow going and especially taxing. Hanson reports that "modern efforts to duplicate the difficulties faced by men in hoplite armor have shown that ground that is sandy or merely loosely packed—not to mention wet or muddy—requires a 20–25 percent increase in oxygen demands."[49] Further, Sage notes:

> in general, pursuit was carried out only for a short distance in the absence of effective light armed and cavalry support in the major hoplite battles. Hoplite equipment was not suited to swift or lengthy pursuit and the basic concept in Greek warfare was domination of the battlefield and not the extermination of the enemy.[50]

Nonetheless, the Marathon fighters pursued the Persians down to the shore and into the surf, where there was again especially fierce fighting.

The special exertions demanded of the men of Marathon were, to be sure, extraordinary. But hoplite battle, under any conditions, was always a severe test of the combatant's physical

[47] Delbrück (*supra* n.21) 82; *cf.* C. Hignett, *Xerxes' Invasion of Greece* (Oxford 1963) 72.

[48] Hanson remarks (60): "There ... seems to have been a special reluctance on the part of the Greek infantryman to put on his body armor, strap on the shield, and don his helmet until the last possible moment before battle. This expresses his sensible aversion toward wearing arms and armor until their life-saving potential was more significant than their inherent discomfort."

[49] Hanson 81; see also W. Donlan and J. Thompson, "The Charge at Marathon," *CJ* 71 (1979) 420.

[50] M. Sage, *Warfare in Ancient Greece: A Sourcebook* (New York 1996) 95.

endurance. Merely moving any distance, let alone engaging in protracted combat, while encased in the full panoply of helmet, breastplate, greaves, and shield, and wielding spear or sword demanded a great expenditure of a soldier's reserves of physical strength. Hanson reports (56):

> My own students at California State University, Fresno, who have created metal and wood replicas of ancient Greek and Roman armor and weapons, find it difficult to keep the weight [of the armor] under seventy pounds. After about thirty minutes of dueling in mock battles under the sun of the San Joaquin Valley they are utterly exhausted.

Before their march back to Athens, the men of Marathon had fought a long time in difficult conditions; all were exhausted by the physical exertions entailed in killing 6,400 of the enemy in a series of engagements on an exceptionally expansive and varied battlefield; during the battle, all had suffered the effects of exposure to the summer sun, risking dehydration and heat stroke inside their helmets[51] and heavy body armor, which had no provision for ventilation (Hanson 79):

> the solid, continuous plate of metal upon the body gave little relief from either heat or cold. In the summer, perspiration must have soaked the hoplite's inner garment: the shiny bronze which could dazzle the enemy across the battlefield could just as well act as a solar collector of sorts that would make the entire surface hot to the touch.... We often hear, then, of hoplites who came near collapse from dehydration, or became delirious as a result of heat prostration—surely a likely phenomenon for armored men in a country where it is so hot in the spring and summer.

Most men had raw sores from the chafing of armor worn too long;[52] some were suffering from minor wounds and perhaps loss of blood. And the same-day march back to Athens would have spanned the hottest portion of the day.[53]

[51] *Cf.* Hanson 72f: "Besides the loss of perception, the helmet was uncomfortable because of its weight (five or more pounds) on the neck and because of the heat it generated around the eyes, mouth, nose, and ears...."

[52] *Cf.* Hanson 76: "like the awkward leggings of the First World War infantrymen, the greave was likely to chafe when running or even simply walking."

[53] The mean monthly temperature maximum in September in Athens is 34° C (93°F); the overall mean monthly temperature is 24°C (76°F); the average relative humidity is 42%. The climate of the area is classified as "subtropical" (*i.e.*, over 9°C for 8–12 months). See W. Höll, ed., *World-Climates* (Stuttgart

No ancient army ever covered thirty-eight miles on foot on the day of a major battle. This conclusion is corroborated by many investigations of the rate of marching-speed of foot soldiers in other historical eras.

Engels' meticulous study of march rates for the Macedonian army has shown that 19.5 miles per day (mpd) was the *fastest rate* achieved by Alexander's army;[54] the overall average, excluding rest days, was 15 mpd. Granted, the Macedonian infantry in Asia was initially four times larger than the Greek force at Marathon, but it had a deserved reputation for speed of movement.

Other historical studies of march rates for non-mechanized foot armies reach conclusions similar to Engels'. For example, the average rate for Roman armies was no more than eighteen mpd.[55] Byzantine armies, too, appear to have traveled at most

---

1981) 182; M. Conway and L. L. Liston, edd., *The Weather Handbook* (rev. ed.: Atlanta 1990) 405.

[54] Engels 155f: "it is doubtful whether this rate could ever be surpassed under any conditions. Notably, when the army achieved this rate in the Sinai, it was provisioned by the fleet, and hence its transport problems were reduced." But see B. Bar-Kochva, *The Seleucid Army: Organization and Tactics in the Great Campaigns* (Cambridge 1976) 95: "the five days' march of the huge Ptolemaic army under the scorching sun of the Sinai desert from Pelusium to Raphia (Polybius 5.80.1–3) ... works out at 36 km [22 miles] a day."

[55] G. Bodinier and J. Childs, "Transport," in A. Corvisier and J. Childs, edd., *A Dictionary of Military History and the Art of War*, tr. C. Turner (Oxford 1994) 819: "On the march, the average daily stage [for Roman legionaries] was about 18 miles...." G. Horsmann, *Untersuchungen zur militärischen Ausbilding im republikanischen und kaiserzeitlichen Rom* (Boppard am Rhein 1991) 121, maintains that "Durchschnittsleistungen wie die 27 km [16.75 miles] pro Tag bei Caesars siebzehntägigem Marsch von Corfinium nach Brundisium dürften eine Ausnahme sein...." A commonsensical mindfulness of the limits of human endurance dictates rejection of such preposterous claims as Livy's (27.45–50, 28.9) for the marches of the army of Claudius Nero between Apulia and the Metaurus River in 207 (240 miles in six days) or Caesar's (*BG* 7.40–41) for his march of twenty-four miles with four legions and all his cavalry from his camp at Gergovia to confront the rebellious Aedui and back again, with only three hours rest, before sunrise. We have to do in such accounts with patriotic exaggeration and bald self-promotion, respectively. Veg. 1.9 (*militari ergo gradu XX milia passuum quinque horis dumtaxat aestivis conficienda sunt. pleno autem gradu, qui citatior est, totidem horis XXIII milia peragenda sunt*) may seem to be evidence for faster march-rates, but note well G. R. Watson, *The Roman Soldier* (Ithaca 1969) 54f: "It will be noticed that no mention is made by Vegetius of halts on the march. It is hard to believe that a route march of five hours during initial training would be made without a halt of any sort, and we must assume that such halts were in fact made. It is probable that the five hours are exclusive of halts. At any rate

about sixteen mpd.[56] An investigation of the march rates of crusader armies concludes that they "should have [had] no difficulty in averaging 18 miles a day or slightly better on level roads. Speeds would have decreased in the Byzantine region but not too sharply."[57]

Armies have marched farther on foot than twenty-five mpd, but only at a very high price in loss of men from physical exhaustion. During the War of the Spanish Succession, the Duke of Marlborough's infantry penetrated the *ne plus ultra* lines by covering thirty-six miles in a sixteen-hour march to Arleux. However, "men marched until they dropped, fainting or dying by the road. The track was lined with stupefied soldiers, of whom scores expired from their exertions. Little more than half stayed the course."[58]

The average daily march for Napoleon's Grand Armée was between ten and twenty-two miles. It has been calculated that, even with the aid of horse-drawn troop transports, Napoleon's troops could make only twenty-four to thirty mpd.[59] During

---

the marching speed, if due allowance is made for the greater length of the Roman hour in summer and the shorter distance of the Roman mile, is at the military pace very similar to that which is normally adopted in the British army, where three miles are covered in the hour, with one halt of ten minutes included."

[56] McGeer (*supra* n.40) 341: "That he considered sixteen miles (24 km [*sic*]) a very long distance ... for an army to travel in one day, and a journey likely to wear out men and horses, implies that Phokas would not have expected more of his own soldiers in ordinary circumstances."

[57] J. W. Nesbitt, "The Rate of March of Crusading Armies in Europe: A Study and Computation," *Traditio* 19 (1963) 180, with focus on the itineraries of Peter the Hermit and Godfrey of Bouillon. So too D. L. Smith, "Muscovite Logistics, 1462–1598," *Slavonic and East European Review* 71 (1993) 39 n.10: "The average man cannot march more than 12–18 miles a day and carry more than 80 pounds with him."

[58] W. S. Churchill, *Marlborough: His Life and Times*, Book 2 (London 1947) 849f; *cf.* G. W. L. Nicholson, *Marlborough and the Spanish War of Succession* (Ottawa 1955) 149: "the last ten miles under the hot morning sun imposed a terrific strain. The numbers who dropped out of sheer exhaustion ran into the hundreds, and then the thousands."

[59] So Bodinier and Childs (*supra* n.55) 820. Although John Elting, *Swords around a Throne: Napoleon's Grande Armée* (New York 1988) 463, claims (in my opinion, overestimating) that by doubling the *étapes*, the army could reach a peak rate of thirty to thirty-five mpd, he acknowledges that "such marches, especially when made in bad weather on short rations, killed and crippled as many *young* soldiers as a battle ..." [my emphasis]. Thus when General Louis Friant marched his division (of Davout's III Corps) the seventy

the American Civil War, a rate of about two miles per hour (mph) marked the top end for armies on foot, and sustained marches at that speed took their toll on the troops.[60]

British infantry in World War I were expected to be capable of marching twelve to fifteen miles in an eight-hour day.[61] British and American military manuals currently recommend march rates of 1.5 mph when traveling cross-country, 2.5 mph in good weather on optimum surfaces,[62] though a rate of 3 mph is possible.[63]

---

miles from Vienna to Austerlitz in thirty-six hours, "hardly one man out of twenty was still with their [*sic*] eagles at the end ... " (Elting 463). In its earliest days, even motorized transport did not achieve rates much over thirty mpd: J. Huston, *The Sinews of War: Army Logistics 1775–1953* (Washington 1966) 298, notes that "a test run in 1912 of two Army trucks and a privately owned company truck from Washington, D.C. to Fort Benjamin Harrison at Indianapolis, covering 1,524 miles in forty-eight days [31.75 mpd], did not give wholly satisfactory results but did show the trucks had some promise." *Cf.* 266: "After making about fourteen miles the first day, [George] Custer's men rode hard the next two days, covering over thirty miles a day...."

[60] S. Sears, *Landscape Turned Red: The Battle of Antietam* (New Haven 1983) 285f: "[General A. P. Hill's] Light Division's remarkable march from Harper's Ferry—seventeen miles in less than eight hours—rivaled the best marks of Jackson's famous foot cavalry.... To be sure, uncounted hundreds were left by the roadside exhausted...." *Cf.* S. Foote, *The Civil War: A Narrative,* I: *Fort Sumter to Perryville* (New York 1958) 464, on Stonewall Jackson's Shenandoah Valley campaign: "Since March 22, the eve of Kernstown, his troops had covered 646 miles of road in forty-eight marching days," that is, an average of 13.5 mpd.

[61] D. Winter, *Death's Men* (London 1978) 70–74. *Cf.* Huston (*supra* n.59) 388: "Marching two corps abreast, the divisions moving on parallel roads when possible, the Third Army advanced across Lorraine and across Luxembourg to reach the German frontier.... While on this move, men marched an average of about twelve miles a day."

[62] Dept. of the U. S. Army, *FM 21–18: Foot Marches* (Washington 1990 <http://www.adtdl.army.mil/cgi-bin/atdl.dll/fm/21-18/fm2118.htm>) 4.20: "a normal foot march day is 8 hours, for a distance of 32 km [19.87 miles] at a rate of 4 kph [2.48 mph]. The maximum distances recommended for forced marches are: 56 km [34.78 miles] in 24 hours; 96 km [59.62 miles] in 48 hours; or 128 km [79.49 miles] in 72 hours. A forced march usually exceeds this distance by increasing the hours marched rather than by increasing the rate of march"; the manual then advises a period of 21.84 hours, including time for rest and meals, to cover 52 km [32.29 miles]. See also Nesbit (*supra* n.57) 175 n.29; McGeer (*supra* n.40) 341 n.12.

[63] R. S. Rush, *per ep. elec.* (20 December 1997), describing the training of a cohort battalion of newly recruited soldiers: "Age ranged from 18 to 44 with the average about 24.... We marched 50 minutes and took a 10-minute break. Average speed was 3 miles per hour.... (Eight hours [for 20 miles] was the

At 2.5 mph, the Marathon hoplites required ten hours for the route via Pallene to Phalerum: at 1.5 mph over the more difficult terrain via Cephisia, they needed over fourteen hours. Even if we improve these rates by an additional 1.0 mph owing to the exigent tactical situation and patriotic fervor, they still required over seven hours via Pallene, almost nine hours via Cephisia. They had no more than four hours. Moreover, as we have seen, the Greeks at Marathon were in no shape for a faster-than-average march.

No Athenian *strategos* was stupid enough or cruel enough to put badly battle-fatigued men through the ordeal of a same-day march back to Athens under such conditions. Had he done so, he would have fielded a force so reduced in numbers and broken down with fatigue that it could not have prevented the disembarkation of the Persian army, which may still have enjoyed numerical superiority. The same-day version of the battle and the march, if it existed in some source earlier than Plutarch, likely resulted from the tendency of battles perceived to be turning points in history to inspire romanticizing and mythologizing retellings and of victorious commanders, like Miltiades, to undergo concomitant lionizing.[64]

V. The Persian Voyage to Athens

The same-day Persian voyage is as implausible[65] as the Athenian march overland. Again, Hammond imagines a best-case scenario: the Persian forces, despite their truly catastrophic defeat, had sufficient presence of mind and determination to

---

standard that could not be missed; the time was usually around seven hours.) Other standards: 12 miles in 3 hours (that was cooking, and soldiers needed several hours to recover from the speed march). The longest I can remember was about 35 miles; it occurred in the Donau region in Germany (very hilly), began about 1200 [hours] and ended about 0800 the next day. We also accomplished one 100-mile march each year (5×20-mile marches in 5 days)."

[64] For this phenomenon in the case of Marathon see the astute analysis by K.-J. Hölkeskamp, "Marathon—von Monument zum Mythos," in D. Papenfuss and V. M. Strocka, edd., *Gab es das griechische Wunder? Griechenland zwischen dem Ende des 6. und der Mitte des 5. Jahrhunderts v. Chr.*, forthcoming; *cf.* Fine 287: "Before long the traditions of the battle became enshrouded in legend"; Balcer 221: "For the Athenians, the Battle of Marathon ... rapidly unfolded as the initial step in the Great Event in Western Historiography, embellished, gilded, and glorified beyond measure."

[65] It is flatly called "unglaubwürdig" by F. Schachermeyr, "Marathon und die persischer Politik," *HZ* 172 (1951) 29.

make a dash for Athens round Cape Sunion, a distance of about seventy miles.[66] This disregards the horrendous dimensions of the military disaster suffered by the Persians and the attendant dire effect on morale, for they had lost between a third and a fourth of their combatants—that is, more than *thirty times* the Greek casualties. Typically, defeated armies suffered only about three times the casualties of their victorious opponents. Krentz has shown that the defeated side in hoplite battles averaged losses of 14%, as against 5% for the victors.[67] Low morale alone will have unfitted the Persian forces for any further engagement in their immediate future.[68]

Hammond also downplays the detour to Aigilia (Hdt. 6.115) to pick up Eretrian prisoners, whose embarkation will have occupied some time. He reckons a sailing rate of five knots, in part because of a favorable wind from the northeast—favorable for the journey from Marathon to Sunion, *unfavorable* for the run up the west coast of Attica from Sunion to Phalerum. The truth is that we do not know that Persian vessels could have made such speed. Casson has compiled statistics showing a two- to three-knot rate of speed as the norm for ancient sailing vessels.[69]

In fact, the Persian fleet could not have made the journey around Sunion to Athens on the same day as the battle.[70] If they set out before first light on the following day, they might just have made it to Phalerum by dusk. If it is true that the Athenian army and the Persian fleet arrived at Athens the same day, it was the day after or, more likely, the second day after the battle (Balcer 221).

[66] So Sealey (*supra* n.33) 191; *cf.* Hammond 221: "fifty-eight nautical miles" [*ca* 67 terrestrial miles].

[67] P. Krentz, "Casualties in Hoplite Battles," *GRBS* 26 (1985) 13–20. Persian losses exceeded even those sustained in the more lethal atmosphere of modern warfare: *cf.* J. McPherson, *Battle Cry of Freedom: The Civil War Era* (Oxford 1988) 472: "The casualty rate in Lee's army was 20 percent in its major battles and campaigns.... The figure for Ulysses S. Grant's troops was 16 percent.."

[68] *Cf.* Doenges 16: "It is ... not clear why Datis after embarking the remnants of his defeated army decided to sail to Athens.... At that point he lacked the military force to seize and hold the city. His purpose almost certainly was reconnaissance only." Morale as well as numbers was a critical deficiency.

[69] L. Casson, "Speed under Sail of Ancient Ships," *TAPA* 82 (1951) 136–49.

[70] See, in general, the meticulous calculations in A. T. Hodge, "Marathon: The Persians' Voyage," *TAPA* 105 (1975) 155–73.

VI. The Date of the Battle

The dating of the battle to 11 September is based on two items of information and a plausible guess. The first item is that the Athenians took the decision to defend their city against the Persian invasion force at Marathon on the festival day of Artemis Agrotera.[71] This we know to have been the sixth day of Boedromion (roughly, the last day of August). The second is that the Spartan relief force requested by the Athenians did not leave immediately owing to a religious observation. It arrived a day late for the battle (Pl. *Leg.* 698E) after a march of three days (Isoc. *Paneg.* 87), having set out from Sparta only after the appearance of the full moon. The plausible guess is that the Spartan religious festival was the Karneia, which occurred in September. As the full moon rose shortly after sunset on the ninth of September,[72] the Spartans therefore left on the tenth, marched a second day on the eleventh, and arrived on the twelfth, a day late for the battle. Thus, we arrive at an absolute date for the battle: 11 September, that is, the day before the Spartan arrival.

This reconstruction must be rejected on logistical grounds: the Spartan force of 2,000 hoplites and their entourage (likely one or more helot armor-bearers and other attendants per hoplite)[73] cannot have marched from Sparta to Marathon (via Athens according to Hdt. 6.120: ἦκον ἐς τὰς Ἀθήνας) in three days. Curiously, even historians who mistrust the same-day Marathon-to-Athens march blithely accept the utterly improbable Spartan three-day march,[74] though How and Wells allow that "the feat is wonderful"; Herodotus says only that the Spartans were "in Attica" on the third day out.[75] The distance involved is about 176 miles (about 150 from Sparta to Athens,

[71] See Hammond 217 for a discussion of the sources (especially Ar. *Eq.* 660, Xen. *An.* 3.2.12).

[72] See Hammond 216 n.3 for comparative tabulations of moonrise/moonset and sunrise/sunset; on 9 September 490, the sun set at 6:26 and the moon rose at 6:32.

[73] Though known for their spare life-style at home, the Spartans enjoyed the luxury of personal servants while on campaign. At Plataea in 479, for example, the Spartan force of 5,000 was attended by 35,000 helots (Hdt. 9.29); the intent here, however, may have been to forestall revolt at home.

[74] *E.g.*, most recently, Doenges 16.

[75] How and Wells 115; Hdt. 6.120: τριταῖοι ἐκ Σπάρτης ἐγένοντο ἐν τῇ Ἀττικῇ.

an additional twenty-six to Marathon from Athens).[76] Even if the force had come on horseback,[77] it could not have made the journey in less than four or five days. A reasonable guess for an army moving on foot is eight days at least; twenty-two mpd under heavy loads is no mean feat.[78] Fifty-eight mpd is more than "a heroic piece of marching,"[79] it is an utter impossibility.[80] The battle of Marathon thus took place at the earliest on 17 September, that is, no less than eight days after the full moon.

Such a revised date both avoids the glaring *adynaton* of the three-day march and better fits another piece of evidence. Sometime after Marathon, Athens began to issue tetradrachms[81]

[76] Had the Spartans proceeded directly to Marathon, and not first to Athens, they would have saved only five or six miles.

[77] This would have required 4,000 mounts, allowing one helot armor-bearer to each hoplite. If the typical rider weighed at least 150 pounds and helot and hoplite each carried half the seventy-pound panoply, we reach a total weight of 185 pounds per horse, leaving out of account any provisions or other supplies the army may have needed en route (including ten pounds of grain per horse per day). Two hundred pounds represents the maximum carrying capacity of a horse. Such heavily burdened animals could not have managed the forty-five or fifty mpd that Engels (153–56) has calculated as the fastest rate achieved by Alexander's Macedonian cavalry. *Cf.* M. Speidel, *Riding for Caesar: The Roman Emperor's Horse Guards* (Cambridge [Mass.] 1994) 117: "Cavalry could travel up to 65 km (40 miles) a day without overtaxing the horses. Longer marches ... wore out the hooves of the often unshod horses."

[78] Exceeding the fastest daily march rate achieved by Alexander's infantry moving on foot; see *supra* n.54.

[79] Burn 253; *cf.* How and Wells 115. Munro (251) thinks "the rapidity of [the Spartan] march is remarkable," and suggests, without any ancient testimony, that the three days may refer only to the time taken to march from frontier to frontier, that is, 108 miles; he claims "thirty-six miles a day is hard marching, but not unparalleled," but cites no parallels. In another context, R. D. Milns, "Alexander's Pursuit of Darius through Iran," *Historia* 15 (1966) 256, says that a "march rate ... of 36 miles per day is a physical impossibility."

[80] Milns (*supra* n.79: 256) calls fifty-two mpd "an absurdity." The examples adduced against Milns by C. Neumann, "A Note on Alexander's March-Rates," *Historia* 20 (1971) 196ff, are convincingly disposed of by Engels 154ff.

[81] Illustrations in C. M. Kraay, *Greek Coins* (New York 1966) pl. 119. The dating of the introduction of coins of this type remains uncertain. C. T. Seltman, *Greek Coins: A History of Metallic Currency and Coinage down to the Fall of the Hellenistic Kingdoms*[2] (London 1955) 91, says "in the autumn of 490 B.C.," followed by Hammond 215f: "commemorative coins struck from 490 B.C. onwards showed a waning moon behind the owl of Athena." G. K. Jenkins, *Archaic and Classical Greek Coins* (London 1976) 81, prefers a date "around 480 B.C." C. M. Kraay, *Archaic and Classical Greek Coins* (London 1976) 62, cautions that "it is perhaps unlikely that the designing and the minting of a new coinage was given as high a priority by the returning

that (apparently) commemorate the Athenians' victory[82] by the inclusion of a waning crescent moon beside Athena's owl on the reverse (see Plate 1b).[83] Hammond thinks this is an indirect allusion to the date of the battle and offers a complicated scenario involving Persian miscalculations in pre-dawn cavalry movements owing to the time of moonset the night before the battle.[84] All others who believe the coin is commemorative see the lunar symbol as a more direct allusion to date. Seltman, for example, argues as follows that the battle commemorated is in fact Marathon, not, as others have maintained, Salamis:

> The tiny waning moon, now introduced for the first time upon the coins, is ... a reference to the date [of Marathon], which impressed the average Athenian mind far more even than Salamis.... While Marathon was probably fought with a moon already into its third quarter, Salamis was certainly fought with a full moon and could, therefore, not have been the occasion which caused the adoption of a waning moon as part of the Athenian coinage.[85]

The coin designer has clearly shown a waning crescent, not a waning gibbous moon. If it is in fact commemorative, the coin type indicates a battle following the full moon by at least a week, not the day or two of the traditional dating scheme, which is based on a patently impossible rate of march for the Spartan army of reinforcement.

Athenians [after 480] as it is given by many numismatists. Shelter, food and defence were more urgent, so that the appearance of the new coins may have been delayed until near 475."

[82] So Seltman (*supra* n.81) 91; *cf.* Burn 255f.

[83] Some numismatists doubt that the lunar symbol has any topical reference. See Kraay (*supra* n.81 [1976]) 61f: "The moon has been declared to be a waning moon and to refer to the phase under which Marathon or Salamis were [*sic*] fought.... More probably the moon was added to the larger flan of the tetradrachms alone, simply as a reference to the nocturnal character of the owl"; also E. J. P. Raven, "Problems of the Earliest Owls of Athens," in C. M. Kraay and G. K. Jenkins, edd., *Essays in Greek Coinage Presented to Stanley Robinson* (Oxford 1968) 51f; Jenkins (*supra* n.81) 81f.

[84] Hammond 216f, 227; *cf. CAH*[2] (*supra* n.12) 511.

[85] Seltman (*supra* n.81) 92; *cf.* his *Athens: Its History and Coinage before the Persian Invasion* (Cambridge 1924) 103f.

A really precise knowledge of the events of the battle of Marathon and its immediate aftermath remains beyond our grasp. We can, however, demythologize accounts of the battle and reduce the proportions of the necessary lie in our inferences from the ancient testimonia by a realistic assessment of logistical exigencies and the limits of human physical endurance. This will result in not only the correction of a chronological distortion but also a more accurate historical grasp of the achievement of the men of Marathon. To imagine that the Greek forces could have fought and marched on the same day is both to misrepresent the nature of hoplite warfare and to belittle the victory won through the astounding physical effort that 10,000 infantry exerted against the superior numbers of an unfamiliar opponent.[86]

EASTERN MICHIGAN UNIVERSITY
November, 1999

[86] I am most grateful to Eastern Michigan University for a Research Award in support of my work on this essay, preliminary versions of which were read at annual meetings of the Michigan Academy of Science, Arts, and Letters at Calvin College, Grand Rapids, on 21 March 1997, and the American Philological Association in Chicago on 29 December 1997; and at the Geburtstag Symposion for Joachim Latacz in Basel on 18 May 1999, and the 15 October 1999 meeting of the Military Studies Group in the University of Michigan History Department. The following friends and colleagues patiently fielded many inquiries and offered constructive criticisms: George Cassar, Robert Citino, Peter Green, Karl-Joachim Hölkeskamp, Donald Lateiner, Jonathan Marwill, Reinaldo Pérez, and David Potter. On military logistics, I have had the benefit of comment by Lieutenant Colonel Brian Hoxie and Command Sergeant Major (ret.) Robert S. Rush, U. S. Army. The anonymous reader for *GRBS* made salutary recommendations at the penultimate stage. My son Christian was instrumental in producing both map and illustration. The dedication of these pages to Richard D. Goff and Joachim Latacz is a token return on lavish investments of advice and encouragement.