Appendix 1: Terminology concerning cybersecurity and espionage

Clava	Latin equivalent for Greek '*scytale*'.
Caesar cipher	Type of encryption attributed to Julius Caesar. A Caesar cipher encryption is a simple substitution technique for encryption whereby each letter of a plaintext is replaced by a letter taken from a fixed number of positions down the alphabet.[1]
Cipher	In cryptography, the disguised message created by converting individual letters, or small groups of letters into other (groups of) letters.[2]
Ciphertext	The disguised message in cryptography.[3]
Ciphertext alphabet	Sequence of letters used for encryption and decryption to create ciphertext.[4]
Code	In cryptography, the disguised message created by converting words or phrases into other words or phrases.[5]
Cryptography	Cryptography, from the Greek words κρυπτός (*kryptos*), meaning 'hidden from' or 'secret', and γράφειν (*graphein*), meaning 'to write', is the practice of techniques for securing communication by enciphering a text.[6]

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[1] Mollin 2005, 11; Stinson 1995, 4.

[2] Churchhouse 2002, 64.

[3] Mollin 2005, 1; Reba & Shier 2015, 480.

[4] Bauer 2007-I, 382; Reinke 1962, 113; Singh 1999, 5.

[5] Churchhouse 2002, 64.

[6] Bauer 2013, xix; Hodges 1985, 146; Reba & Shier 2015, 479-480; Reinke 1962, 113; Seyfarth 1970, 181; Smith 1955, 16.

Key	In cryptography, the information needed to encipher and decipher messages.[7]
King's Eyes and Ears	Type of ancient secret service, most likely in the form of a group of high ranking officials through whom (in the view of the Greeks) Near Eastern kings received all sorts of information on agitation throughout their kingdoms (Aeschylus, *The Persians*, 979; Herodotus, *Histories*, 1.114.2; Xenophon, *Cyropaedia*, 8.2.10-12; 8.6.17-18).[8] This type of official institution is known from a number of ancient (Near) Eastern Empires, including Assyria, Egypt, Persia, India and China.[9]
Linguistic steganography	Any form of steganography in which language is used.'[10] There are several forms of linguistic steganography, which can be divided into two basis categories called open codes and semagrams.

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[7] Piper 2002, entry '*cryptography*'.

[8] Bowie 2007, 160. The earliest references to officials called 'Eyes' and 'Ears' of Near Eastern kings come from Egyptian sources datable to the second half of the second millennium BCE which refer to the 'Eyes of the Pharaoh', showing that the system was not only used in Persia (RA 19 104 AO 7094: 21 (letter from Amarna addressed to the pharaoh)); see also *Ägyptisches Wörterbuch* entry *jr . t* (p. 107) and *'nh* (p. 205; Law 2010, 111, note 276).

[9] On secret services throughout ancient (Near) Eastern Empires see Oppenheim 1968; Schaeder 1934. We can also find references to the 'King's Eyes' or 'Eyes of the Lord' in the Bible (2 Chronicles 16.9; Zechariah 1.8; 1.10-11; 4.2; 4.10; 4.12). However, these passages do this in connection with God rather than with a king (Oppenheim 1968, 175). Here the 'Eyes' are described as a golden candle-stick, with a bowl upon the top of it, and his seven lamps thereon, and seven pipes to the seven lamps, which are upon the top thereof (Zechariah, 4.2). According to an angel speaking to the prophet Zechariah these lamps are the eyes of God, which run to and fro through the whole earth (Zechariah, 4.10). See also: Job, 1.7; 2.2; Zechariah, 3.1; 6.5; 6.7; 1 Kings 21.10; 21.13. According to Oppenheimer, the explanation for divine omnipresence offered in the characteristic expression of the lamps watching the earth, seems to be on a more 'rational' level than that of the more mythological 'candlestick' (Oppenheim 1968, 175). On the idea of the biblical Satan being a kind of 'secret agent' or 'provocateur' see e.g., Brock-Utne 1945; Lods 1939; Torzcyner 1937.

[10] Kipper 2004, 42.

Monoalphabetic encryption	Type of encryption whereby only one ciphertext alphabet is used to encrypt and decrypt the entire message.[11]
Open code	An open code is a non-secret text in which certain letters, words or sentences form a secret message.[12]
Plaintext	A normal, non-encrypted messaged in cryptography.[13]
Polyalphabetic encryption	Type of encryption whereby more than one ciphertext alphabet is used to encrypt and decrypt the entire message.[14]
Real semagram	An object that represents a message without using text.[15]
Skytale	See '*Scytale*'.
Scytale	In Greek literally 'stick' or 'staff', used for a variety of purposes from a messenger authentication device to a weapon. Also used as a cryptographic device by the Spartans in the 5th/4th century BCE, according to Plutarch (*Life of Lysander*, 19.5-7), and Aulus Gellius (*Attic Nights*, 17.9.6-16).
Semagram	A semantic symbol (picture or glyph) associated with a concept.
Steganography	From the Greek words στεγανός (*steganos*) meaning 'covered' or 'concealed' and γράφειν (*graphein*) meaning 'to write', is the practice of concealing a message within another message, an image, or an object, without giving the idea that a secret message is hidden in it.[16]

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[11] Apelbaum 2007, 54; Bauer 2007-I, 382; Salomon 2003, 59; Salomon 2006, 243.

[12] Chatton 2010, 43 Bauer 2007-I, 13-17; Kipper 2004, 43, Lunde, 2012,42: In case the first letter of every word, line, or paragraph is used to do so this is called an acrostic. An ancient example of an acrostic is the Greek word *ichthus*, in Greek spelling ἰχθύς. This was an acrostic for the phrase Ἰησοῦς Χριστός, Θεοῦ Υἱός, Σωτήρ (*Iēsous Christos theou hyios sōtēr*; *Jesus Christ Son of God Saviour*).

[13] Mollin 2005, 1; Reba & Shier 2015, 480.

[14] Apelbaum 2007, 54; Bauer 2007-I, 382; Salomon 2003, 59; Salomon 2006, 243.

[15] Bauer 2007-I, 10; Kipper 2004, 42.

[16] In the 9th edition of the *Encyclopaedia Britannica* (1878) cryptography and steganography are incorrectly seen as the same practice (p. 669).

Steganogram	The hidden message that is created in this way by means of steganography. [17]
Substitution ciphers	Method of cryptography whereby the letters of a plaintext message are substituted with other letters, characters, or symbols that are not necessarily found in the original text.[18]
Technical steganography	Every method of steganography in which a tool or device is used to conceal a secret message. This can be anything except text.[19]
Text semagram	Method of steganography whereby letters, words and/or sentences in a text are used to form a message. This is usually done by using a different type of script for the parts of the text that form the intended message or by marking these parts by dots or stripes.
Transposition cipher	Method of cryptography whereby the normal sequence of letters of a plaintext is rearranged. Hereby, alphabetic letters are not typically substituted by any other letters, numbers, or symbols.[20]

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[17] Cox, Kalker et. al. 2014, 158.

[18] Bauer 2007-I, 382; Reinke 1962, 113; Singh 1999, 5.

[19] Bauer 2007-I, 9: Kipper 2004, 47-48.

[20] Bauer 2007-I, 382; Reinke 1962, 113; Singh 1999, 5.

Appendix 2: Greco-Roman and Medieval sources on the Spartan *scytale* in alphabetic order per author

Greek sources

1: Aristophanes (late 5th/early 4th century BCE)

4.1: *Birds* (ca. 414 BCE)

πρὶν μὲν γὰρ οἰκίσαι σε τήνδε τὴν πόλιν,

ἐλακωνομάνουν ἅπαντες ἄνθρωποι τότε,

ἐκόμων ἐπείνων ἐρρύπων ἐσωκράτουν

σκυτάλι᾿ ἐφόρουν, νυνὶ δ᾿ ὑποστρέψαντες αὖ

ὀρνιθομανοῦσι, πάντα δ᾿ ὑπὸ τῆς ἡδονῆς

ποιοῦσιν ἅπερ ὄρνιθες ἐκμιμούμενοι (Aristophanes, *Birds*, 1280-1285)

Before you built this city all men were crazy about the Spartans:

they wore their hair long, went hungry,

never bathed, acted like Socrates,

brandished batons [*scytalae*].

But now they've about-faced and gone bird-crazy,

and they're having a wonderful time imitating birds in everything they do.

2: Athenaeus of Naucratis (*The Learned Banqueters*, early 3rd century CE)

Ἀχαιὸς δ᾿ ὁ Ἐρετριεὺς γλαφυρὸς ὢν ποιητὴς περὶ τὴν σύνθεσιν ἔσθ᾿ ὅτε καὶ μελαίνει τὴν φράσιν καὶ πολλὰ αἰνιγματωδῶς ἐκφέρει, ὥσπερ ἐν Ἴριδι σατυρικῇ. λέγει γάρ·

λιθάργυρος

δὄλπη παρηωρεῖτο χρίματος πλέα

τὸν Σπαρτιάτην γραπτὸν ἐν διπλῷ ξύλῳ

κύρβιν.

τὸν γὰρ λευκὸν ἱμάντα βουληθεὶς εἰπεῖν, ἐξ οὗ ἡ ἀργυρᾶ λήκυθος ἐξήρτητο, Σπαρτιάτην γραπτὸν ἔφη ἀντὶ τοῦ Σπαρτιᾶτιν σκυτάλην. ὅτι δὲ λευκῷ ἱμάντι περιειλοῦντες τὴν σκυτάλην οἱ Λάκωνες ἔγραφον ἃ

ἠβούλοντο, εἴρηκεν ἱκανῶς Ἀπολλώνιος ὁ Ῥόδιος ἐν τῷ Περὶ Ἀρχιλόχου (Athenaeus of Naucratis, *The Learned Banqueters*, 451c-d)

Although Achaeus of Eretria is a poet who composes elegantly, he occasionally uses obscure language and expresses himself in a confusing fashion, as for example in the satyr play Iris, where he says: A flask made of litharge[1] and full of oil was suspended alongside the inscribed Spartiate tablet on a double peg. Because when he [Achaeus] wanted to refer to the white thong from which [a] silver oil-flask was hanging, he referred to it as an "inscribed Spartiate" rather than as a "Spartan message-staff". As for the fact that the Spartans wrapped their message-staffs in white thongs and wrote what they wanted on them, Apollonius of Rhodes discusses this at length in his *On Archilochus*.

3: Diodorus Siculus (*Library of History*, 1st century BCE)

Ἐπὶ δὲ τοὺς εἰς Σηστὸν καταφυγόντας Ἀθηναίους στρατεύσας τὴν μὲν πόλιν εἷλε, τοὺς δ' Ἀθηναίους ὑποσπόνδους ἀφῆκεν. Εὐθὺς δὲ τῇ δυνάμει πλεύσας ἐπὶ Σάμον αὐτὸς μὲν ταύτην ἐπολιόρκει, Γύλιππον δὲ τὸν εἰς Σικελίαν τοῖς Συρακοσίοις τῷ ναυτικῷ συμπολεμήσαντα ἀπέστειλεν εἰς Σπάρτην τά τε λάφυρα κομίζοντα καὶ μετὰ τούτων ἀργυρίου τάλαντα χίλια καὶ πεντακόσια. Ὄντος δὲ τοῦ χρήματος ἐν σακίοις, καὶ ταῦτ' ἔχοντος ἑκάστου σκυτάλην ἔχουσαν τὴν ἐπιγραφὴν τὸ πλῆθος τοῦ χρήματος δηλοῦσαν, ταύτην ἀγνοήσας ὁ Γύλιππος τὰ μὲν σακία παρέλυσεν, ἐξελόμενος δὲ τάλαντα τριακόσια, καὶ διὰ τῆς ἐπιγραφῆς γνωσθεὶς ὑπὸ τῶν ἐφόρων, ἔφυγε καὶ κατεδικάσθη θανάτῳ (Diodorus Siculus, *Library of History*, 13.106.8-9)

After this, advancing against the Athenians who had found refuge in Sestus, he [Lysander] took the city but let the Athenians depart under a truce. Then he sailed at once to Samos with his troops and himself began the siege of the city, but Gylippus, who with a flotilla had fought in aid of the Syracusans in Sicily, he dispatched to Sparta to take there both the booty and with it fifteen hundred talents of silver. The money was in small bags, each of which contained a *scytale* which carried the notation of the amount of the money. Gylippus, not knowing of the *scytale*, secretly undid the bags and took out three hundred talents, and when, by means of the notation, Gylippus was detected by the *ephors*, he fled the country and was condemned to death.

4: Plutarch (late 1st/early 2nd century CE)

4.1: *Life of Agesilaus*

καθ' ὁδὸν ὢν σκυτάλην δέχεται παρὰ τῶν οἴκοι τελῶν κελεύουσαν αὐτὸν ἄρχειν ἅμα καὶ τοῦ ναυτικοῦ. τοῦτο μόνῳ πάντων ὑπῆρξεν Ἀγησιλάῳ (Plutarch, *Life of Agesilaus*, 10.5)

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[1] Eastaugh, Walsh et. al. 2004, 241. Litharge is one of the natural mineral forms of lead (II) oxide with a yellowish colour. Since Antiquity litharge has been used for dying purposes.

On the road he [Agesilaus] received a dispatch-roll [*scytale*] from the magistrates at home, which bade him assume control of the navy as well as of the army. This was an honour which no one ever received but Agesilaus.

Ἀλέξανδρος δὲ καὶ προσεπέσκωψε πυθόμενος τὴν πρὸς Ἆγιν Ἀντιπάτρου μάχην, εἰπών· "Ἔοικεν, ὦ ἄνδρες, ὅτε Δαρεῖον ἡμεῖς ἐνικῶμεν ἐνταῦθα, ἐκεῖ τις ἐν Ἀρκαδίᾳ γεγ Ἀλέξανδρος δὲ καὶ ὀνέναι μυομαχία·" πῶς οὐκ ἦν ἄξιον τὴν Σπάρτην μακαρίσαι τῆς Ἀγησιλάου τιμῆς πρὸς ταύτην καὶ πρὸς τοὺς νόμους τῆς εὐλαβείας; ὃς ἅμα τῷ τὴν σκυτάλην ἐλθεῖν εὐτυχίαν τοσαύτην καὶ δύναμιν παροῦσαν καὶ τηλικαύτας ἐλπίδας ὑφηγουμένας ἀφεὶς καὶ προέμενος εὐθὺς ἀπέπλευσεν "ἀτελευτήτῳ ἐπὶ ἔργῳ," πολὺν ἑαυτοῦ πόθον τοῖς συμμάχοις ἀπολιπών, καὶ μάλιστα δὴ τὸν Ἐρασιστράτου τοῦ Φαίακος ἐλέγξας λόγον, εἰπόντος ὡς εἰσὶ δημοσίᾳ μὲν Λακεδαιμόνιοι βελτίονες, ἰδίᾳ δὲ Ἀθηναῖοι (Plutarch, *Life of Agesilaus*, 15.4-6)

Alexander [the Great] actually went so far as to jest when he heard of Antipater's battle with Agis, saying: "It would seem, my men, that while we were conquering Darius here, there has been a battle of mice there in Arcadia." Why, then, should we not call Sparta happy in the honour paid to her by Agesilaus, and in his deference to her laws? No sooner had the dispatch-roll [*scytale*] come to him than he renounced and abandoned the great good fortune and power already in his grasp, and the great hopes which beckoned him on, and at once sailed off, "with task all unfulfilled," leaving behind a great yearning for him among his allies, and giving the strongest confutation to the saying of Erasistratus the son of Phaeax, who declared that the Lacedaemonians were better men in public life, but the Athenians in private.

4.2: *Life of Alcibiades*

τέλος δὲ Κριτίας ἐδίδασκε Λύσανδρον ὡς Ἀθηναίων οὐκ ἔστι δημοκρατουμένων ἀσφαλῶς ἄρχειν Λακεδαιμονίοις τῆς Ἑλλάδος· Ἀθηναίους δέ, κἂν πράως πάνυ καὶ καλῶς πρὸς ὀλιγαρχίαν ἔχωσιν, οὐκ ἐάσει ζῶν Ἀλκιβιάδης ἀτρεμεῖν ἐπὶ τῶν καθεστώτων. οὐ μὴν ἐπείσθη γε πρότερον τούτοις ὁ Λύσανδρος ἢ παρὰ τῶν οἴκοι τελῶν σκυτάλην ἐλθεῖν κελεύουσαν ἐκ ποδῶν ποιήσασθαι τὸν Ἀλκιβιάδην, εἴτε κἀκείνων φοβηθέντων τὴν ὀξύτητα καὶ μεγαλοπραγμοσύνην τοῦ ἀνδρός, εἴτε τῷ Ἄγιδι χαριζομένων (Plutarch, *Life of Alcibiades*, 38)

Critias tried to make it clear to Lysander that as long as Athens was a democracy the Lacedaemonians could not have safe rule over Hellas; and that Athens, even though she were very peacefully and well disposed towards oligarchy, would not be suffered, while Alcibiades was alive, to remain undisturbed in her present condition. However, Lysander was not persuaded by these arguments until a dispatch-roll [*scytale*] came from the authorities at home bidding him put Alcibiades out of the way; either because they too were alarmed at the vigour and enterprise of the man, or because they were trying to gratify Agis.

4.3: *Life of Artaxerxes*

ὐχ ἧττον οὖν τοῖς ἄνω πιστεύων ὁ Κῦρος ἢ τοῖς. περὶ αὐτόν, ἐπεχείρει τῷ πολέμῳ· καὶ Λακεδαιμονίοις ἔγραφε, παρακαλῶν βοηθεῖν καὶ συνεκπέμπειν ἄνδρας, οἷς ἔφη δώσειν, ἂν μὲν πεζοὶ παρῶσιν, ἵππους,

ἂν δ' ἱππεῖς, συνωρίδας· ἐὰν δ' ἀγροὺς ἔχωσι, κώμας· ἐὰν δὲ κώμας, πόλεις· μισθοῦ δὲ τοῖς στρατευομένοις οὐκ ἀριθμόν, ἀλλὰ μέτρον ἔσεσθαι. μεγαληγορῶν δὲ περὶ αὑτοῦ πολλά, καὶ καρδίαν ἔφη τοῦ ἀδελφοῦ φορεῖν βαρυτέραν, καὶ φιλοσοφεῖν μᾶλλον, καὶ μαγεύειν βέλτιον, οἶνον δὲ πλείονα πίνειν καὶ φέρειν· ἐκεῖνον δ' ὑπὸ δειλίας καὶ μαλακίας ἐν μὲν τοῖς κυνηγεσίοις μηδ' ἐφ' ἵππου, ἐν δὲ τοῖς κινδύνοις μηδ' ἐπὶ τοῦ θρόνου καθῆσθαι. Λακεδαιμόνιοι μὲν οὖν σκυτάλην πρὸς Κλέαρχον ἀπέστειλαν, ὑπηρετεῖν Κύρῳ πάντα κελεύοντες. ὁ δὲ Κῦρος ἀνέβαινεν ἐπὶ βασιλέα, βαρβαρικήν τε πολλὴν ἔχων δύναμιν καὶ μισθοφόρους Ἕλληνας ὀλίγῳ τρισχιλίων καὶ μυρίων ἀποδέοντας, ἄλλας ἐπ' ἄλλαις ποιούμενος. προφάσεις τῆς στρατείας. οὐ μὴν ἔλαθέ γ' εἰς πολὺν χρόνον, ἀλλ' ἧκε βασιλεῖ Τισσαφέρνης αὐτάγγελος, καὶ πολὺς θόρυβος εἶχε τὰ βασίλεια, τῆς τε Παρυσάτιδος τὴν πλείστην αἰτίαν τοῦ πολέμου φερομένης, καὶ τῶν φίλων. αὐτῆς ἐν ὑποψίαις ὄντων καὶ διαβολαῖς (Plutarch, *Life of Artaxerxes*, 6.2-5)

Cyrus relied quite as much upon the people of the interior as upon those of his own province and command, when he began the war. He also wrote to the Lacedaemonians, inviting them to aid him and send him men, and promising that he would give to those who came, if they were footmen, horses; if they were horsemen, chariots and pairs; if they had farms, he would give them villages; if they had villages, cities; and the pay of the soldiers should not be counted, but measured out. Moreover, along with much high-sounding talk about himself, he said he carried a sturdier heart than his brother, was more of a philosopher, better versed in the wisdom of the Magi, and could drink and carry more wine than he. His brother [Artaxerxes], he said, was too effeminate and cowardly either to sit his horse in a hunt, or his throne in a time of peril. The Lacedaemonians, accordingly, sent a dispatch-roll [*scytale*] to [their general] Clearchus ordering him to give Cyrus every assistance. So Cyrus marched up against the king with a large force of Barbarians and nearly thirteen thousand Greek mercenaries, alleging one pretext after another for his expedition. But the real object of it was not long concealed, for Tissaphernes [a Persian general and statesmen] went in person to the king and informed him of it. Then there was a great commotion at the court, Parysatis [Cyrus's mother] being most blamed for the war, and her friends undergoing suspicion and accusation.

4.4: *Life of Lysander*

ὁ δὲ Λύσανδρος […], αὐτὸς μὲν ἐπὶ Θρᾴκης ἐξέπλευσε, τῶν δὲ χρημάτων τὰ περιόντα καὶ ὅσας δωρεὰς αὐτὸς ἢ στεφάνους ἐδέξατο, πολλῶν, ὡς εἰκός, διδόντων ἀνδρὶ δυνατωτάτῳ καὶ τρόπον τινὰ κυρίῳ τῆς Ἑλλάδος, ἀπέστειλεν εἰς Λακεδαίμονα διὰ Γυλίππου τοῦ στρατηγήσαντος περὶ Σικελίαν. ὁ δέ, ὡς λέγεται, τὰς ῥαφὰς τῶν ἀγγείων κάτωθεν ἀναλύσας καὶ ἀφελὼν συχνὸν ἀργύριον ἐξ ἑκάστου πάλιν συνέρραψεν, ἀγνοήσας ὅτι γραμματίδιον ἐνῆν ἑκάστῳ τὸν ἀριθμὸν σημαῖνον. ἐλθὼν δὲ εἰς Σπάρτην ἃ μὲν ὑφῄρητο κατέκρυψεν ὑπὸ τὸν κέραμον τῆς οἰκίας, τὰ δὲ ἀγγεῖα παρέδωκε τοῖς ἐφόροις καὶ τὰς σφραγῖδας ἐπέδειξεν. ἐπεὶ δὲ ἀνοιξάντων καὶ ἀριθμούντων διεφώνει πρὸς τὰ γράμματα τὸ πλῆθος τοῦ ἀργυρίου καὶ παρεῖχε τοῖς ἐφόροις ἀπορίαν τὸ πρᾶγμα, φράζει θεράπων τοῦ Γυλίππου πρὸς αὐτοὺς αἰνιξάμενος ὑπὸ τῷ κεραμικῷ κοιτάζεσθαι πολλὰς γλαῦκας. ἦν γάρ, ὡς ἔοικε, τὸ χάραγμα τοῦ πλείστου τότε νομίσματος διὰ τοὺς Ἀθηναίους γλαῦκες. ὁ μὲν οὖν Γύλιππος αἰσχρὸν οὕτω καὶ ἀγεννὲς ἔργον ἐπὶ λαμπροῖς τοῖς ἔμπροσθεν καὶ μεγάλοις ἐργασάμενος μετέστησεν ἑαυτὸν ἐκ Λακεδαίμονος (Plutarch, *Life of Lysander*, 16-17.1)

Lysander, […], sailed for Thrace himself, but what remained of the public moneys, together with all the gifts and crowns which he had himself received, — many people, as was natural, offering presents to a man who had the greatest power, and who was, in a manner, master of Hellas, — he sent off to Lacedaemon by Gylippus, who had held command in Sicily. But Gylippus, as it is said, ripped open the sacks at the bottom, and after taking a large amount of silver from each, sewed them up again, not knowing that there was a writing in each indicating the sum it held. And when he came to Sparta, he hid what he had stolen under the tiles of his house, but delivered the sacks to the *ephors*, and showed the seals upon them. When, however, the *ephors* opened the sacks and counted the money, its amount did not agree with the written lists, and the thing perplexed them, until a servant of Gylippus made the truth known to them by his riddle of many owls sleeping under the tiling. For most of the coinage of the time, as it seems, bore the forgery of an owl, owing to the supremacy of Athens. Gylippus, then, after adding a deed so disgraceful and ignoble as this to his previous great and brilliant achievements, removed himself from Lacedaemon.

ἐπεὶ δὲ Φαρνάβαζος ἀδικούμενος ὑπ' αὐτοῦ τὴν χώραν ἄγοντος καὶ φέροντος ἀπέστειλεν εἰς τὴν Σπάρτην κατηγόρους, ἀγανακτήσαντες οἱ ἔφοροι τῶν μὲν φίλων αὐτοῦ καὶ συστρατήγων ἕνα Θώρακα λαβόντες ἀργύριον ἰδίᾳ κεκτημένον ἀπέκτειναν, ἐκείνῳ δὲ σκυτάλην ἔπεμψαν ἥκειν κελεύοντες (Plutarch, *Life of Lysander*, 19.4)

When Pharnabazus, who was outraged by Lysander's pillaging and wasting his territory, sent men to Sparta to denounce him, the *ephors* were incensed, and when they found Thorax, one of Lysander's friends and fellow-generals, with money in his private possession, they put him to death, and sent a dispatch-scroll [*scytale*] to Lysander, ordering him home.

ἔστι δὲ ἡ σκυτάλη τοιοῦτον. ἐπὰν ἐκπέμπωσι ναύαρχον ἢ στρατηγὸν οἱ ἔφοροι, ξύλα δύο στρογγύλα μῆκος καὶ πάχος ἀκριβῶς ἀπισώσαντες, ὥστε ταῖς τομαῖς ἐφαρμόζειν πρὸς ἄλληλα, τὸ μὲν αὐτοὶ φυλάττουσι, θάτερον δὲ τῷ πεμπομένῳ διδόασι. ταῦτα δὲ τὰ ξύλα σκυτάλας καλοῦσιν. ὅταν οὖν ἀπόρρητόν τι καὶ μέγα φράσαι βουληθῶσι, βιβλίον ὥσπερ ἱμάντα μακρὸν καὶ στενὸν ποιοῦντες περιελίττουσι τὴν παρ' αὐτοῖς σκυτάλην, οὐδὲν διάλειμμα ποιοῦντες, ἀλλὰ πανταχόθεν κύκλῳ τὴν ἐπιφάνειαν αὐτῆς τῷ βιβλίῳ καταλαμβάνοντες. τοῦτο δὲ ποιήσαντες ἃ βούλονται καταγράφουσιν εἰς τὸ βιβλίον, ὥσπερ ἐστὶ τῇ σκυτάλῃ περικείμενον· ὅταν δὲ γράψωσιν, ἀφελόντες τὸ βιβλίον ἄνευ τοῦ ξύλου πρὸς τὸν στρατηγὸν ἀποστέλλουσι. δεξάμενος δὲ ἐκεῖνος ἄλλως μὲν οὐδὲν ἀναλέξασθαι δύναται τῶν γραμμάτων συναφὴν οὐκ ἐχόντων, ἀλλὰ διεσπασμένων, τὴν δὲ παρ' αὐτῷ σκυτάλην λαβὼν τὸ τμῆμα τοῦ βιβλίου περὶ αὐτὴν περιέτεινεν, ὥστε, τῆς ἕλικος εἰς τάξιν ὁμοίως ἀποκαθισταμένης, ἐπιβάλλοντα τοῖς πρώτοις τὰ δεύτερα, κύκλῳ τὴν ὄψιν ἐπάγειν τὸ συνεχὲς ἀνευρίσκουσαν. καλεῖται δὲ ὁμωνύμως τῷ ξύλῳ σκυτάλη τὸ βιβλίον, ὡς τῷ μετροῦντι τὸ μετρούμενον (Plutarch, *Life of Lysander*, 19.5-7)

The dispatch-scroll [the *scytale*] is of the following character. When the *ephors* send out an admiral or a general, they make two round pieces of wood exactly alike in length and thickness, so that each corresponds to the other in its dimensions, and keep one themselves, while they give the other to their envoy. These pieces of wood they call "*scytalae*". Whenever, then, they [the *ephors* of Sparta] wish to send some secret and important message, they make a scroll […], long and narrow, like a leathern strap,

and wind it round their "*scytale*," leaving no vacant space thereon, but covering its surface all round with the parchment. After doing this, they write what they wish on the parchment, just as it lies wrapped about the "*scytale*"; and when they have written their message, they take the parchment off, and send it, without the piece of wood, to the commander. He, when he has received it, cannot otherwise get any meaning of it, — since the letters have no connection, but are disarranged, — unless he takes his own "*scytale*" and winds the strip of parchment about it, so that, when its spiral course is restored perfectly, and that which follows is joined to that which precedes, he reads around the staff, and so discovers the continuity of the message. And the parchment, like the staff, is called "*scytale*," as the thing measured bears the name of the measure

ὁ […] Λύσανδρος, ἐλθούσης τῆς σκυτάλης πρὸς αὐτὸν εἰς τὸν Ἑλλήσποντον, διεταράχθη, καὶ μάλιστα τὰς τοῦ Φαρναβάζου δεδιὼς κατηγορίας, ἐσπούδασεν εἰς λόγους αὐτῷ συνελθεῖν, ὡς λύσων τὴν διαφοράν. καὶ συνελθὼν ἐδεῖτο γράψαι περὶ αὐτοῦ πρὸς τοὺς ἄρχοντας ἑτέραν ἐπιστολὴν ὡς οὐδὲν ἠδικημένον οὐδ' ἐγκαλοῦντα. πρὸς Κρῆτα δὲ ἄρα, τὸ τοῦ λόγου, κρητίζων ἠγνόει τὸν Φαρνάβαζον. ὑποσχόμενος γὰρ ἅπαντα ποιήσειν, φανερῶς μὲν ἔγραψεν οἵαν ὁ Λύσανδρος ἠξίωσεν ἐπιστολήν, κρύφα δὲ εἶχεν ἑτέραν αὐτόθι γεγραμμένην. ἐν δὲ τῷ τὰς σφραγῖδας ἐπιβάλλειν ἐναλλάξας τὰ βιβλία μηδὲν διαφέροντα τῇ ὄψει, δίδωσιν ἐκείνην αὐτῷ τὴν κρύφα γεγραμμένην. ἀφικόμενος οὖν ὁ Λύσανδρος εἰς Λακεδαίμονα καὶ πορευθείς, ὥσπερ ἔθος ἐστίν, εἰς τὸ ἀρχεῖον, ἀπέδωκε τοῖς ἐφόροις τὰ γράμματα τοῦ Φαρναβάζου, πεπεισμένος ἀνῃρῆσθαι τὸ μέγιστον αὐτοῦ τῶν ἐγκλημάτων: ἠγαπᾶτο γὰρ ὁ Φαρνάβαζος ὑπὸ τῶν Λακεδαιμονίων, προθυμότατος ἐν τῷ πολέμῳ τῶν βασιλέως στρατηγῶν γεγενημένος. ἐπεὶ δὲ ἀναγνόντες οἱ ἔφοροι τὴν ἐπιστολὴν ἔδειξαν αὐτῷ, καὶ συνῆκεν ὡς - οὐκ ἄρ' Ὀδυσσεύς ἐστιν αἱμύλος μόνος (Plutarch, *Life of Lysander*, 20)

Lysander, when the dispatch-scroll [*scytale*] reached him at the Hellespont, was much disturbed, and since he feared the denunciations of Pharnabazus above all others, he hastened to hold a conference with him, hoping to compose their quarrel. At this conference he begged Pharnabazus to write another letter about him to the magistrates, stating that he had not been wronged at all, and had no complaints to make. But in thus "playing the Cretan against a Cretan," as the saying is, he misjudged his opponent. For Pharnabazus, after promising to do all that he desired, openly wrote such a letter as Lysander demanded, but secretly kept another by him ready written. And when it came to putting on the seals, he exchanged the documents, which looked exactly alike, and gave him the letter which had been secretly written. Accordingly, when Lysander arrived at Sparta and went, as the custom is, into the senate-house, he gave the *ephors* the letter of Pharnabazus, convinced that the greatest of the complaints against him was thus removed; for Pharnabazus was in high favour with the Lacedaemonians, because he had been, of all the King's generals, most ready to help them in the war. But when the *ephors*, after reading the letter, showed it to him, and he understood that: "Odysseus, then, is not the only man of guile"[2]

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[2] The text 'Odysseus, then, is not the only man of guile' is an iambic trimeter of some unknown poet (Perrin 1916, 288-289).

5: Polyaenus (*Stratagems of War*, second half 2nd century CE)

Φαρνάβαζος κατὰ Λυσάνδρου Λακεδαιμονίοις ἔγραψεν. Οἱ δὲ ἀπό τῆς Ἀσίας αὐτόν ἀνεκαλέσαντο σκυτάλην πέμψαντες. Λύσανδρος ἱκετεύει Φαρνάβαζον ἄλλην ἐπιστολὴν ὑπὲρ αὐτοῦ γράψαι φιλάνθροπου. Φαρνάβαζος ὑποχόμενος φανερῶς μὲν ἔγραψεν οἵαν ὁ Λύσανδρος ἠξίωσε, κρύφα δὲ εἶχεν ἑτέραν γεγραμμένην, ἐν δὲ τῷ τὴν σφραγίδα ἐπιβάλλειν ὑπαλλάξας τὰ βιβλιά μηδὲν διαφέροντα τῇ ὄψει δίδωσιν αὐτῷ τὴν κρύφα γεγραμμένην. Λύσανδρος ἐπανελθὼν ἐς Λακεδαίμονα τοῖς ἐφόροις κατὰ τὸ ἔθος ἀπέδωκε τὰ γράμματα, οἱ δὲ ἀναγνόντες ἔδειξαν αὐτῷ τὴν ἐπιστολὴν προειπόντες μηδὲν ἀπολογίας δεισθαι αὐτὸν καθ' αὑτοῦ ἐπιστολὴν κομίσαντα (Polyaenus, *Stratagems of War*, 7.19)

Pharnabazus, having preferred charges of misdemeanor against Lysander, the Lacedaemonians sent him letters [*scytalae*] to recall from Asia. When Lysander importuned him to be less severe on his representation of his conduct; Pharnabazus promised he would; and addressed a letter to the Lacedaemonians of the purport Lysander desired. But at the same time, he privately wrote another letter, giving a very different account. In sealing the letter, he contrived to slip that which he had privately written, and which was in shape exactly the same with that Lysander had derived his letter to the *Ephori*; which as soon as they had read, they shewed him; observing at the same time that there was no room for any defense, the very letter, which he himself produced, concerning him.

6: Xenophon (*Hellenica*, late 5th/early 4th century BCE)

ἀκούσαντες ταῦτα οἱ ἔφοροι ἐσκεμμένα τε λέγειν ἡγήσαντο αὐτὸν καὶ ἐξεπλάγησαν, καὶ οὐδὲ τὴν μικρὰν καλουμένην ἐκκλησίαν συλλέξαντες, ἀλλὰ συλλεγόμενοι τῶν γερόντων ἄλλος ἄλλοθι ἐβουλεύσαντο πέμψαι τὸν Κινάδωνα εἰς Αὐλῶνα σὺν ἄλλοις τῶν νεωτέρων καὶ κελεῦσαι ἥκειν ἄγοντα τῶν Αὐλωνιτῶν τέ τινας καὶ τῶν εἰλώτων τοὺς ἐν τῇ σκυτάλῃ γεγραμμένους. ἀγαγεῖν δὲ ἐκέλευον καὶ τὴν γυναῖκα, ἣ καλλίστη μὲν αὐτόθι ἐλέγετο εἶναι, λυμαίνεσθαι δ' ἐῴκει τοὺς ἀφικνουμένους Λακεδαιμονίων καὶ πρεσβυτέρους καὶ νεωτέρους (Xenophon, *Hellenica*, 3.3.8)

Upon hearing […] statements the *ephors* came to the conclusion that he [an informant] was describing a well-considered plan, and were greatly alarmed; and without even convening the Little Assembly, as it was called, but merely gathering about them—one *ephor* here and another there—some of the senators, they decided to send Cinadon to Aulon along with others of the younger men, and to order him to bring back with him certain of the Aulonians and Helots whose names were written in the official dispatch [*scytale*]. And they ordered him to bring also the woman who was said to be the most beautiful woman in Aulon and was thought to be corrupting the Lacedaemonians who came there, older and younger alike.

ἀλλὰ μὴν καὶ πρὸς Ὀλυνθίους εἰδότες ὑμᾶς πόλεμον ἐκφέροντας συμμαχίαν ἐποιοῦντο, καὶ ὑμεῖς γε τότε μὲν ἀεὶ προσείχετε τὸν νοῦν πότε ἀκούσεσθε βιαζομένους αὐτοὺς τὴν Βοιωτίαν ὑφ' αὑτοῖς εἶναι: νῦν δ' ἐπεὶ τάδε πέπρακται, οὐδὲν ὑμᾶς δεῖ Θηβαίους φοβεῖσθαι: ἀλλ' ἀρκέσει ὑμῖν μικρὰ σκυτάλη ὥστ' ἐκεῖθεν πάντα ὑπηρετεῖσθαι ὅσων ἂν δέησθε, ἐὰν ὥσπερ ἡμεῖς ὑμῶν, οὕτω καὶ ὑμεῖς ἡμῶν ἐπιμελῆσθε (Xenophon, *Hellenica*, 5.2.34-35)

[Leontiades addresses the Lacedaemonians:] Again, knowing that you [the Lacedaemonians] were making war upon the Olynthians, they [the Thebans] undertook to conclude an alliance with them, and you in those past days were always uneasily watching for the time when you should hear that they were forcing Boeotia to be under their sway; but now that this stroke has been accomplished, there is no need of your fearing the Thebans; on the contrary, a brief message [*scytale*] from you will suffice to secure from that quarter all the support that you may desire, provided only you show as much concern for us as we have shown for you.

οἱ Λακεδαιμόνιοι πολὺ προθυμότερον τὴν εἰς τὴν Ὄλυνθον στρατιὰν συναπέστελλον. καὶ ἐκπέμπουσι Τελευτίαν μὲν ἁρμοστήν, τὴν δ᾽ εἰς τοὺς μυρίους σύνταξιν αὐτοί τε ἅπαντας συνεξέπεμπον, καὶ εἰς τὰς συμμαχίδας πόλεις σκυτάλας διέπεμπον, κελεύοντες ἀκολουθεῖν Τελευτίᾳ κατὰ τὸ δόγμα τῶν συμμάχων. καὶ οἵ τε ἄλλοι προθύμως τῷ Τελευτίᾳ ὑπηρέτουν, καὶ γὰρ οὐκ ἀχάριστος ἐδόκει εἶναι τοῖς ὑπουργοῦσί τι, καὶ ἡ τῶν Θηβαίων δὲ πόλις, ἅτε καὶ Ἀγησιλάου ὄντος αὐτῷ ἀδελφοῦ, προθύμως συνέπεμψε καὶ ὁπλίτας καὶ ἱππέας (Xenophon, *Hellenica*, 5.2.37)

The Lacedaemonians with much more spirit set about dispatching the joint army to Olynthus [after the speech of Leontiades]. They sent out Teleutias as governor, and not only sent with him their own full contingent of the total ten thousand men, but also transmitted official dispatches [scytalae] to the various allied states, directing them to follow Teleutias in accordance with the resolution of the allies. And all the states gave their hearty support to Teleutias, — for he was regarded as a man not ungrateful to those who performed any service, — while the Theban state in particular, inasmuch as he was a brother of Agesilaus, eagerly sent with him both hoplites and horsemen.

Latin sources[3]

1: Aulus Gellius (*Attic Nights*, ca. 177 CE)[4]

Lacedaemonii autem veteres, cum dissimulare et occultare litteras publice ad imperatores suos missas volebant, ne, si ab hostibus eae captae forent, consilia sua noscerentur, epistulas id genus factas mittebant. Surculi duo erant teretes, oblonguli, pari crassamento eiusdemque longitudinis, derasi atque tornati consimiliter; unus imperatori in bellum proficiscenti dabatur, alterum domi magistratus cum iure atque cum signo habebant. Quando usus venerat litterarum secretiorum, circum eum surculum lorum modicae tenuitatis, longum autem quantum rei satis erat, conplicabant, volumine rotundo et simplici, ita uti orae

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[3] Notice that in the Latin sources we find the Latin equivalent '*clava*' for the word '*scytale*'.

[4] The latest textual edition from Holford-Strevens (2019) largely preserves the standard text for this section. Any changes are highlighted in bold. The minor changes to the text introduced in his edition (based on the *Gryphius* 1537 and Salmasius manuscripts), prefer 'tornati' to 'ornati' at 17.9.7. However, this slight modification does not suggest any change to the standard translation here. In the translation offered below, Aulus Gellius describes the *scytale* as 'smoothed and prepared' (*derasi atque ornati*); the recommendation from Holford-Strevens would give us 'smoothed and turned [as upon a lathe]' (*derasi atque **t**ornati*).

adiunctae undique et cohaerentes lori, quod plicabatur, coirent. Litteras deinde in eo loro per transversas iuncturarum oras versibus a summo (*surculo*) ad imum proficiscentibus inscribebant. Id lorum litteris ita perscriptis revolutum ex surculo imperatori commenti istius conscio mittebant; resolutio autem lori litteras truncas atque mutilas reddebat membraque earum et apices in partis diversissimas spargebat. Propterea, si id lorum in manus hostium inciderat, nihil quicquam coniectari ex eo scripto quibat; sed ubi ille ad quem erat missum acceperat, surculo conpari quem habebat (a) capite ad finem, proinde ut debere fieri sciebat, circumplicabat, atque ita litterae per eundem ambitum surculi coalescentes rursum coibant integramque et incorruptam epistulam et facilem legi praestabant. Hoc genus epistulae Lacedaemonii σκυτάλην appellant (Aulus Gellius, *Attic Nights*, 17.9.6-16)

The ancient Lacedaemonians, when they wanted to conceal and disguise the public dispatches sent to their generals, in order that, in case they were intercepted by the enemy, their plans might not be known, used to send letters written in the following manner. There were two thin, cylindrical wands of the same thickness and length, smoothed and prepared so as to be exactly alike. One of these was given to the general when he went to war, the other the magistrates kept at home under their control and seal. When the need of more secret communication arose, they bound about the staff a thong of moderate thickness, but long enough for the purpose, in a simple spiral, in such a way that the edges of the thong which was twined around the stick met and were joined throughout. Then they wrote the dispatch on that thong across the connected edges of the joints, with the lines running from the top to the bottom. When the letter had been written in this way, the thong was unrolled from the wand and sent to the general, who was familiar with the device. But the unrolling of the thong made the letters imperfect and broken, and their parts and strokes were divided and separated. Therefore, if the thong fell into the hands of the enemy, nothing at all could be made out from the writing; but when the one to whom the letter was sent had received it, he wound it around the corresponding staff, which he had, from the top to the bottom, just as he knew that it ought to be done, and thus the letters, united by encircling a similar staff, came together again, rendering the dispatch entire and undamaged, and easy to read. This kind of letter the Lacedaemonians called σκυτάλη.

2: Ausonius (*Epistles*, 4th century CE)

Vel si tibi proditor instat
aut quaesitoris gravior censura timetur,
occurre ingenio, quo saepe occulta teguntur.
Thraeicii quondam quam saeva licentia regis
fecerat elinguem, per licia texta querellas
edidit et tacitis mandavit crimina telis.
et pudibunda suos malo commisit amores
virgo nec erubuit tacituro conscia pomo.
depressis scrobibus vitium regale minister

credidit idque diu texit fidissima tellus:

inspirata dehinc vento cantavit harundo.

lacte incide notas: arescens charta tenebit

semper inaspicuas; prodentur scripta favillis.

vel Lacedaemoniam *scytalen* imitare, libelli

segmina Pergamei tereti circumdata ligno

perpetuo inscribens versu, qui deinde solutus,

non respondentes sparso dabit ordine formas,

donec consimilis ligni replicetur in orbem.

Innumeras possum celandi ostendere formas

et clandestinas veterum reserare loquellas:

si prodi, Pauline, times nostraeque vereris

crimen amicitiae […] (Ausonius, *Epistles*, 28.10-31)

If an informer is beside thee,

and if ’tis an inquisitor’s too stern rebuke is feared,

baffle it with a device whereby secrets are oft concealed.

She whom the brutal outrage of the Thracian king

had robbed of her tongue, revealed her sorrows

by means of woven threads

and committed the story of her wrongs to the silent loom.

Also a shamefast maid entrusted the tale of her love to an apple,

and blushed not to share her secret with fruit which could never speak.

To deep-dug pits a servant revealed his royal lord’s deformity,

and long the earth hid the secret most faithfully:

hereafter the reed, breathed on by the wind, sang the story.

Trace letters with milk:

the paper as it dries will keep them ever invisible;

yet with ashes the writing is brought to light.

Or imitate the Spartan *scytale*,

writing on strips of parchment

wound about a rounded stick in continuous lines,

which, afterwards unrolled,

will show characters incoherent because sequence is lost,

until they are rolled again about just such another stick.

I can show thee countless codes of the ancients

for concealing and unlocking secret messages;

if thou, Paulinus, fearest to be betrayed

and dread’st the charge of my friendship.

3: Cicero (*Letters to Atticus*, 68-44 BCE)

Habes σκυτάλην Λακωνικήν. omnino excipiam hominem. erat autem v Non. venturus vesperi, id est hodie; cras igitur ad me fortasse veniet. temptabo, audiam: nihil properare, missurum ad Caesarem. clam agam, cum paucissimis alicubi occultabor; certe hinc istis invitissimis evolabo, atque utinam ad Curionem! σύνες ὅ τοι λέγω. magnus dolor accessit. efficietur aliquid dignum nobis (Cicero, *Letters to Atticus*, 10.10 (Letter 201)).

There's a Laconian dispatch [*σκυτάλην Λακωνικήν*] for you! To be sure I shall lie in wait for him—he is coming on the evening of the 3rd, i.e. today, so perhaps he will call on me tomorrow. I shall sound him, listen to him. I shall say that I am in no hurry, that I shall send to Caesar. I shall act by stealth and conceal myself somewhere with a very few companions. At all events I shall escape from here, however much they want to stop me, and I only hope it will be to Curio. Mark my words. Intense vexation has been added to my other motives. I shall bring off something worthy of myself.[5]

4: Cornelius Nepos (*The Book on the Great Generals of Foreign Nations. Pausanias*, 1ˢᵗ century BCE)

Spartam redire nolebat; Colonas, qui locus in agro Troade est, se contulerat; ibi consilia cum patriae tum sibi inimica capiebat. Id postquam Lacedaemonii rescierunt, legatos cum clava ad eum miserunt, in qua more illorum erat scriptum: nisi domum reverteretur, se capitis eum damnaturos. Hoc nuntio commotus, sperans se etiam tum pecunia et potentia instans periculum posse depellere, domum rediit. Huc ut venit, ab ephoris in vincla publica est coniectus; licet enim legibus eorum cuivis ephoro hoc facere regi. Hinc tamen se expedivit, neque eo magis carebat suspicione; nam opinio manebat eum cum rege habere societatem (Cornelius Nepos, *The Book on the Great Generals of Foreign Nations,* 4.3.4; see also Thucydides, *History of the Peloponnesian War*, 1.131.1)

To Sparta he [Pausanias] would not return, but withdrew to Colonae, a place in the country of Troas, where he formed designs pernicious both to his country and himself. When the Lacedaemonians knew of his proceedings, they sent deputies to him with a *scytale* [*clava*], on which it was written, after their fashion, that "if he did not return home, they would condemn him to death." Being alarmed at this communication, but hoping that he should be able, by his money and his influence, to ward off the danger that threatened him, he returned home. As soon as he arrived there, he was thrown into the public prison by the *Ephori*, for it is allowable, by their laws, for any one of the *Ephori* to do this to a king. He however got himself freed from confinement, but was not cleared from suspicion, for the belief still prevailed, that he had made a compact with the king of Persia.

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[5] Significantly, the words 'Laconian dispatch' (*σκυτάλην Λακωνικήν*) are written in Greek instead of Latin, something that Cicero often did in his letters. In this letter (*Letters to Atticus,* 10.10) one can find five more instances in which Cicero changed Latin words for Greek ones.

Appendix 3: Greco-Roman sources on cryptography and steganography

The following is an alphabetic overview of Greco-Roman sources on cryptography and steganography.

1: Aeneas Tacticus (*How to Survive under Siege*, ca. 360 BCE)

Περὶ δὲ ἐπιστολῶν κρυφαίων παντοία μέν εἰσιν αἱ πέμψεις, προσυγκεῖσθαι δὲ δεῖ τῷ πέμψαντι καὶ δεχομένῳ ἰδίᾳ· αἱ δὲ λανθάνουσι μάλιστα τοιαίδε ἂν εἶεν (Aeneas Tacticus, *How to Survive Under Siege*, 31.1)

In regard to secret messages, there are all sorts of ways of sending them, but a private arrangement must be previously made between the sender and the receiver.

ἐπέμφθη ἐπιστολὴ ὧδε. εἰς φορτία ἢ ἄλλα σκεύη ἐνεβλήθη βυβλίον ἢ ἄλλο τι γράμμα τὸ τυχὸν καὶ μεγέθει καὶ παλαιότητι. ἐν τούτῳ δὲ γέγραπται ἡ ἐπιστολὴ ἐπιστιζομένων γραμμάτων τοῦ πρώτου στίχου ἢ δευτέρου ἢ τρίτου, ἐπιστιγμαῖς δὲ ἐλαχίσταις καὶ ἀδηλοτάταις πλὴν τῷ πεμπομένῳ. εἶτα ἀφικομένου τοῦ βυβλίου παρ᾽ ὃν δεῖ, ἐξεγράφετο καὶ τὰ ἐπισεσημασμένα γράμματα τιθεὶς ἐφεξῆς τὰ ἐκ τῷ πρώτου στίχου καὶ δευτέρου καὶ τὰ ἄλλα ὡσαύτως, ἐγνώριζε τὰ ἐπισταλέντα. ὀλίγα δ᾽ ἄν τις θέλων ἐπιστεῖλαι καὶ ὧδε ποιήσαι, παρόμοιον τούτῳ. ἐπιστολὴν γράψαντα περί τινων φανερῶς ἐν πλείοσιν, ἐν ταύτῃ τῇ ἐπιστολῇ τὸ αὐτὸ ποιεῖν ἐπισημαινόμενον γράμματα, δι᾽ ὅτων ἐμφανεῖς ἅπερ ἂν βούλῃ. τὴν δὲ ἐπισημασίαν εἶναι ὡς ἀδηλοτάτην ἐπιστιγμαῖς διὰ πολλοῦ ἢ γραμμαῖς παραμήκεσιν. ἃ τοῖς μὲν ἄλλοις μηδεμίαν ὑπόνοιαν ἕξει, τῷ δὲ πεμπομένῳ γνωστὴ ἔσται ἡ ἐπιστολή (Aeneas Tacticus, *How to Survive Under Siege*, 31.1-3)

In one case a message was sent in this way: in with merchandise or other baggage there was inserted a book, or some other chance document, of any size or age, and in this the message had been written by marking the letters of the first, second, or third line with dots, very small and discernible only to the recipient. Then, when the person intended received the book, he made a transcript, and by setting down in order the marked letters from the first line and the second and the others in the same way he discovered the message. But should anyone wish to send a brief message, he might use also the following method, which is similar to the preceding. Writing in detail and undisguisedly on some subject, in this message you may reach the same result by marking letters by which you will indicate whatever you may wish. And the marking must be made as inconspicuous as possible, by dots placed far apart or by rather long dashes. These will arouse no suspicion whatsoever in others, but the letter will be clear to the recipient.

πεμπέσθω ἀνὴρ ἀγγελίαν φέρων τινὰ ἢ καὶ ἐπιστολὴν περὶ ἄλλων φανερῶν· τοῦ δὲ μέλλοντος πορεύεσθαι κρυφαίως αὐτοῦ εἰς τὸ τῶν ὑποδημάτων πέλμα ἐντεθήτω εἰς τὸ μεταξὺ βυβλίον καὶ καταρραπτέσθω, πρὸς δὲ τοὺς πηλοὺς καὶ τὰ ὕδατα εἰς κασσίτερον ἐληλασμένον λεπτὸν γραφέσθω πρὸς τὸ μὴ ἀφανίζεσθαι ὑπὸ τῶν ὑδάτων τὰ γράμματα. ἀφικομένου δὲ παρ᾽ ὃν δεῖ, καὶ ἀναπαυομένου

ἐν τῇ νυκτί, ἀναλυέτω τὰς ῥαφὰς τῶν ὑποδημάτων, καὶ ἐξελὼν καὶ ἀναγνούς, ἄλλα γράψας λάθρᾳ ἔτι καθεύδοντος καὶ ἐγκαταρράψας ἀποστελλέτω τὸν ἄνδρα, ἀνταγγείλας ἢ καὶ δούς τι φέρειν φανερῶς. οὕτως οὖν οὔτε ἄλλος οὔτε ὁ φέρων εἰδήσει· χρὴ δὲ τὰς ῥαφὰς τῶν ὑποδημάτων ὡς ἀδηλοτάτας ποιεῖν (Aeneas Tacticus, *How to Survive Under Siege*, 31.4-5)

Let a man be sent bearing some message or even a letter ostensibly about general matters, not secret, and, just before he starts, without his knowledge let a letter be inserted in the sole of his sandals and be sewed in, and, to guard against mud and water, have it written on a piece of thin-beaten tin, so that the writing will not be effaced by the water. And when he reaches the one intended and goes to rest for the night, this person should pull out the stitchings of the sandals, take out and read the letter, and, writing another secretly while the man is still asleep, sew it in and send him back, having given him some message in reply or even something to carry openly. In this way, then, neither the messenger nor anyone else will know the message. It is necessary, however, to make the sewings of the sandals as inconspicuous as possible.

Εἰ Ἔφεσον […] εἰσεκομίσθη γράμματα τρόπῳ τοιῷδε. ἄνθρωπος ἐπέμφθη ἐπιστολὴν ἔχων φύλλοις ἐγγεγραμμένην, τὰ δὲ φύλλα ἐφ᾽ ἕλκει καταδεδεμένα ἦν ἐπὶ κνήμην (Aeneas Tacticus, *How to Survive Under Siege*, 31.6)

A letter was brought to Ephesus in some such manner as this: a man was sent with a message written on leaves which were bound to a wound on his leg.

εἰσενεχθείη δ᾽ ἂν γραφὴ καὶ ἐν τοῖς τῶν γυναικῶν ὠσὶν ἔχουσιν ἀντ᾽ ἐνωτίων ἐλασμοὺς ἐνειλημένους λεπτοὺς μολιβδίνους (Aeneas Tacticus, *How to Survive Under Siege*, 31.7)

Writing could be brought in also on thin pieces of beaten lead rolled up and worn in women's ears in place of ear-rings.

ἐκομίσθη δὲ ἐπιστολὴ περὶ προδοσίας εἰς στρατόπεδον ἀντικαθημένων πολεμίων ὑπὸ τοῦ προδιδόντος ὧδε. τῶν ἐξιόντων ἱππέων ἐκ τῆς πόλεως εἰς προνομὴν τῶν πολεμίων ἑνὶ ἐγκατερράφη ὑπὸ τὰ πτερύγια τοῦ θώρακος βιβλίον· ᾧ ἐντέταλτο, ἐάν τις ἐπιφάνεια τῶν πολεμίων γένηται, πεσεῖν ἀπὸ τοῦ ἵππου ὡς ἄκοντα καὶ ζωγρηθῆναι. καὶ γενομένου δ᾽ ἐν τῷ στρατοπέδῳ ἀποδοθῆναι τὸ βυβλίον ᾧ ἔδει. ὑπηρέτησεν δ᾽ ὁ ἱππεὺς ἀδελφὸς ἀδελφῷ (Aeneas Tacticus, *How to Survive Under Siege*, 31.8)

A letter having to do with betrayal was once conveyed by the traitor to the camp of the beleaguering enemy in this way. As the horsemen were going out of the city for a raid upon the enemy one of them had a sheet of papyrus sewn under the flaps of his breastplate, and he was instructed, if the enemy should appear, to fall from his horse as though by accident, and to be captured alive; and when he was taken into camp he was to give the sheet of writing to the proper person. The horseman assisted as a brother would a brother.

ἄλλος δὲ ἱππέα ἐκπέμπων εἰς τὴν ἡνίαν τοῦ χαλινοῦ βυβλίον ἐνέρραψεν. ἐγένετο δὲ περὶ ἐπιστολὴν τοιόνδε. πόλεως γὰρ πολιορκουμένης ἐπεὶ παρῆλθεν ἔσω τῆς πόλεως ὁ κομίζων τὰς ἐπιστολὰς τῷ μὲν προδιδόντι καὶ τοῖς ἄλλοις οἷς ἔφερεν οὐκ ἀποδίδωσιν, πρὸς δὲ τὸν ἄρχοντα τῆς πόλεως ἦλθεν μηνύων

καὶ τὰς ἐπιστολὰς ἐδίδου. ὁ δ’ ἀκούσας ἐκέλευεν ταύτας μὲν τὰς ἐπιστολὰς οἷς ἔφερεν ἀποδοῦναι, τὰ δὲ παρ’ ἐκείνων, εἰ ἀληθές τι μηνύει, παρ’ αὐτὸν ἐνεγκεῖν· καὶ ὁ μηνύων ταῦτα ἔπραξεν. ὁ δὲ ἄρχων λαβὼν τὰς ἐπιστολὰς καὶ ἀνακαλεσάμενος τοὺς ἀνθρώπους τὰ σημεῖά τε ἐδείκνυεν τῶν δακτυλίων, ἅπερ ὡμολόγουν αὐτῶν εἶναι, καὶ λύων τὰ βιβλία ἐδήλου τὸ πρᾶγμα. τεχνικῶς δὲ δοκεῖ φωρᾶσαι, ὅτι τὰς πεμπομένας παρὰ τοῦ ἀνθρώπου οὐκ ἀπέλαβεν· ἦν γὰρ αὐτοῖς ἀρνηθῆναι καὶ φάσκειν ἐπιβουλεύεσθαι ὑπὸ τινος. τὰς δ’ ἀνταποστελλομένας λαβὼν ἀναντιλέκτως ἤλεγξεν (Aeneas Tacticus, *How to Survive Under Siege*, 31.9-9b)

Another man, when sending out a horseman, sewed a sheet of papyrus to the bridle-rein. And the following incident happened about a letter. During the siege of a city, when the man carrying the message entered the town, he did not give the letters to the traitor and to the others to whom he was bringing it, but went to the commanding officer of the city, disclosed the matter, and handed over the letters. When the officer heard it, he ordered him to deliver these letters to those to whom he was bringing them, but to bring to him their answer as evidence that he was telling the truth. The informer did so, and the officer, taking the letters, called the men to him, showed them the marks of the seals which they admitted to be their own, and, opening the letters, exposed the matter. And he seems to have detected this skilfully in that he did not accept from the man the letters that were sent. For then it would have been possible for the men to deny it and claim that someone was plotting against them. But by taking the letters that were sent in answer he proved the case incontestably.

Κομίζεται δὲ καὶ ὧδε. κύστιν ἰσομεγέθη ληκύθῳ ὁπόση ἂν βούλῃ πρὸς τὸ πλῆθος τῶν γραφησομένων φυσήσαντα καὶ ἀποδήσαντα σφόδρα ξηρᾶναι, ἔπειτα ἐπ’ αὐτῆς γράψαι ὅ τι ἂν βούλῃ μέλανι κατακόλλῳ. ξηρανθέντων δὲ τῶν γραμμάτων ἐξελεῖν τὴν πνοὴν τῆς κύστιδος καὶ συμπιέσαντα εἰς τὴν λήκυθον ἐνθεῖναι· τὸ δὲ στόμα τῆς κύστιδος ὑπερεχέτω τοῦ στόματος τῆς ληκύθου. ἔπειτα φυσήσαντα τὴν κύστιν ἐν τῇ ληκύθῳ ἐνοῦσαν, ἵνα διευρυνθῇ ὡς μάλιστα, καὶ ἐλαίου ἐμπλήσαντα περιτεμεῖν τῆς κύστιδος τὸ ὑπερέχον τῆς ληκύθου καὶ προσαρμόσαι τῷ στόματι ὡς ἀδηλότατα, καὶ βύσαντα τὴν λήκυθον κομίζειν φανερῶς. διαφανές τε οὖν τὸ ἔλαιον ἔσται ἐν τῇ ληκύθῳ καὶ οὐδὲν ἄλλο φανεῖται ἐνόν. ὅταν δὲ ἔλθῃ παρ’ ὃν δεῖ, ἐξεράσας τὸ ἔλαιον ἀναγνώσεται φυσήσας τὴν κύστιν· καὶ ἐκσπογγίσας καὶ κατὰ ταὐτὰ εἰς τὴν αὐτὴν γράψας ἀποστελλέτω (Aeneas Tacticus, *How to Survive Under Siege*, 31.10-13)

Messages are sent also in this way. Take a bladder in size equal to a flask large enough for your purpose; inflate it, tie it tightly, and let it dry; then write on it whatever you wish, in ink mixed with glue. When the writing is dry, let the air out of the bladder, and press it into the flask, letting the mouth of the bladder protrude from the mouth of the flask. Then inflate the bladder inside the flask in order to expand it as much as possible, and filling it with oil, cut off the part of the bladder that comes over the top of the flask, fitting it in the mouth as inconspicuously as you can, and, corking the bottle, carry it openly. Hence the oil will be visible in the flask, but nothing else. When it comes to the appropriate person, he will pour out the oil, inflate the bladder, and read the writing. And washing it off with a sponge, let him write on it in the same manner and send it back.

ἤδη δέ τις ἐν δέλτου ξύλῳ γράψας κηρὸν ἐπέτηξεν καὶ ἄλλα εἰς τὸν κηρὸν ἐνέγραψεν. εἶτα ὅταν ἔλθῃ παρ’ ὃν ἔδει, ἐκκνήσας τὸν κηρὸν καὶ ἀναγνοὺς γράψας πάλιν ὡσαύτως ἐπέστειλεν. ἐνδέχεται δὲ καὶ εἰς

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πυξίον γράψαντα μέλανι ὡς βελτίστῳ ἐᾶν ξηρανθῆναι, ἔπειτα λευκώσαντα ἀφανίζειν τὰ γράμματα. ὅταν οὖν ἀφίκηται παρὰ τὸν πεμπόμενον, λαβόντα εἰς ὕδωρ θεῖναι τὸ πυξίον· φανεῖται οὖν ἐν τῷ ὕδατι ἀκριβῶς ἅπαντα τὰ γεγραμμένα. (Aeneas Tacticus, *How to Survive Under Siege*, 31.14)

It has actually happened that someone has written on the wooden part of a tablet, poured wax over it, and written something else on the wax. Then when it came to the appointed person, he, scraping off the wax and reading the writing, again in this way has sent back a message.

φανεῖται οὖν ἐν τῷ ὕδατι ἀκριβῶς ἅπαντα τὰ γεγραμμένα. γράφοιτο δ᾽ ἂν καὶ εἰς πινάκιον ἡρωϊκὸν[6] ἅπερ ἂν βούλῃ. ἔπειτα καταλευκῶσαι καὶ ξηράναντα γράψαι ἱππέα φωσφόρον ἢ ὅ τι ἂν βούλῃ, ἔχοντα ἱματισμὸν λευκὸν καὶ τὸν ἵππον λευκόν· εἰ δὲ μή, καὶ ἄλλῳ χρώματι, πλὴν μέλανος. ἔπειτα δοῦναί τινι ἀναθεῖναι ἐγγὺς τῆς πόλεως εἰς ὃ ἂν τύχῃ ἱερὸν ὡς εὐξάμενος. ὃν δὲ δεῖ ἀναγνῶναι τὰ γεγραμμένα, χρὴ ἐλθόντα εἰς τὸ ἱερὸν καὶ γνόντα τὸ πινάκιον συσσήμῳ τινὶ προσυγκειμένῳ, ἀπενέγκαντα εἰς οἶκον θεῖναι εἰς ἔλαιον· πάντα οὖν τὰ γεγραμμένα φανεῖται (Aeneas Tacticus, *How to Survive Under Siege*, 31.14-16)

It would be possible, also, to write on a boxwood tablet with the best quality of ink, let it dry, and then by whitening the tablet to make the letters invisible. When, then, the tablet comes to the recipient, he should take it and put it into water; and so in the water there will clearly appear all that was written. You might also write on a tablet for a hero's chapel whatever you desire. Then it should be whitened and dried, and a light-bringing horseman painted on it, or anything else you please, with white apparel and his horse white; or if not white, any colour except black. Then it should be given to somebody, to be hung up near the city in whatever shrine he may chance upon, as though it were a votive offering. And he whose part it is to read the message must go to the shrine, and recognizing the tablet by some prearranged sign, must take it back home and put it into oil. And so everything written on it will become visible.

Πασῶν δὲ ἀδηλοτάτη πέμψις, πραγματωδεστάτη δὲ νῦν μοι ἡ δι᾽ ἀγραμμάτων ἐμφανισθήσεται· ἔστι δὲ τοιάδε. ἀστράγαλον εὐμεγέθη τρυπῆσαι τρυπήματα εἴκοσι καὶ τέτταρα, ἓξ εἰς ἑκάστην πλευρὰν τοῦ ἀστραγάλου· ἔστω δὲ τὰ τρυπήματα τοῦ ἀστραγάλου στοιχεῖα. διαμνημόνευε δ᾽ ἀφ᾽ ἧς ἂν πλευρᾶς ἄρξῃ τὸ ἄλφα καὶ τὰ ἐχόμενα ἅπερ ἐν ἑκάστῃ πλευρᾷ γέγραπται. μετὰ δὲ ταῦτα, ὅταν τινὰ θέλῃς ἐν αὐτοῖς τίθεσθαι λόγον, λίνον διείρειν, οἷον, ἐὰν θέλῃς Αἰνείαν δηλοῦν ἐν τῇ διέρσει τοῦ λίνου ἀρξάμενος ἐκ τῆς πλευρᾶς τοῦ ἀστραγάλου ἐν ᾗ τὸ ἄλφα ἐστίν, δίειρον, καὶ παρελθὼν τὰ ἐχόμενα τούτου παραγράμματα, ὅταν ἔλθῃς εἰς πλευρὰν οὗ τὸ ἰῶτά ἐστιν, δίειρον πάλιν, παρεὶς δὲ τούτου τὰ ἐχόμενα, ὅπου συμβαίνει τὸ νῦ εἶναι, δίειρον καὶ πάλιν παρεὶς τὰ ἐχόμενα τούτου, ὅπου τὸ εἶ ἐστιν, δίειρον τὸ λίνον, καὶ οὕτω τὰ ἐπίλοιπα τοῦ λόγου ἀντιγράφων ἔνειρε εἰς τὰ τρυπήματα, ὥσπερ ὃ ἄρτι ἐθέμεθα ὄνομα. ἔσται οὖν περὶ τὸν ἀστράγαλον ἀγαθὶς λίνου τετολοπευμένη, δεήσει δὲ τὸν ἀναγιγνώσκοντα ἀναγράφεσθαι εἰς δέλτον τὰ δηλούμενα γράμματα ἐκ τῶν τρυπημάτων. ἀνάπαλιν δὲ γίγνεται ἡ ἔξερσις τῇ ἐνέρσει. διαφέρει δὲ οὐδὲν τὰ γράμματα ἀνάπαλιν γραφῆναι εἰς τὴν δέλτον· οὐδὲν γὰρ ἧττον γνωσθήσεται. καταμαθεῖν δὲ πλεῖον ἔργον ἐστὶν τὰ γεγραμμένα ἢ τὸ ἔργον αὐτὸ γενέσθαι. δ᾽ […]ἂν τοῦτο γίγνοιτο ξύλου ὡς σπιθαμιαίου τρυπηθέντος ὅσα γε τὰ στοιχεῖα τῶν γραμμάτων· ἔπειτα ὡσαύτως ἐνείρειν τὸ λίνον εἰς τὰ τρυπήματα. ὅπου δ᾽ ἂν εἰς τὸ αὐτὸ τρύπημα συμβῇ δὶς ἐνείρεσθαι, ὥσπερ τὸ αὐτὸ γράμμα δὶς ἐφεξῆς γράφεσθαι, προπεριελίξαντα τὸ λίνον περὶ τὸ ξύλον ἐνείρειν. γίγνοιτο δ᾽ ἂν καὶ ὧδε. ἀντὶ τοῦ ἀστραγάλου καὶ ξύλου ποιήσαντα κύκλον ξύλινον λεᾶναι, καὶ τρῆσαι ἐφεξῆς κύκλῳ τὰ στοιχεῖα τῶν

γραμμάτων τέτταρα καὶ εἴκοσι· ὑποψίας δ' ἕνεκεν καὶ ἄλλα ἐν μέσῳ τοῦ κύκλου τρυπῆσαι, ἔπειτα οὕτω εἰς τὰ στοιχεῖα ἐφεξῆς ὄντα τὸ λίνον ἐνείρειν. ὅταν δὲ δὶς τὸ αὐτὸ γράμμα συμβαίνῃ γράφειν, ἐκ τῶν ἐν μέσῳ τρυπημάτων προενείραντα εἰς τὸ αὐτὸ γράμμα ἐνεῖραι· γράμμα δὲ λέγω τὸ τρύπημα (Aeneas Tacticus, *How to Survive Under Siege*, 31.16-22)

The most secret method of all for sending messages, but the most difficult, namely, that without writing, I shall now make clear. It is this: In a sufficiently large astragal bore twenty-four holes, six on each side. Let the holes stand for letters, and note clearly on which side begins Alpha and the following letters that have been written on each particular side. Then, whenever you wish to communicate any word by them, draw a thread through them, as, for instance, if you wish to express Αἰνείαν by the drawing through of a thread, begin from the side of the astragal on which Alpha is found, pass the thread through, and omitting the characters placed next to Alpha, draw through again when you come to the side where Iota belongs; and disregarding the characters following this, again pass the thread through where Nu happens to be. And again passing by the succeeding letters draw the thread through where Epsilon is found. Now continuing in this way to write the rest of the communication, pass the thread into the holes in such a manner as that in which we just now wrote the name. Accordingly, there will be a ball of thread wound around the astragal, and it will be necessary for the one who is to read the information to write down upon a tablet the characters revealed by the holes. The unthreading takes place in the reverse order to that of the thread. But it makes no difference that the letters are written upon the tablet in reverse order, for none the less will the message be read, although to understand what has been written is a greater task than to prepare it. But this would be accomplished more easily if a piece of wood about a span long were perforated just as many times as there are letters in the alphabet, and the thread were then in the same way drawn into the holes. Wherever two insertions occur, the same character being written twice in succession, you should wind the thread around the wood before inserting it. Or it could even be done as follows. Instead of the astragal or the piece of wood, make a disc of wood, polish it, and bore successively on the disc the twenty-four characters of the alphabet; but to avoid suspicion you should bore other holes also in the centre of the disc, and then in this way run the thread through the characters, which are in their regular order. But whenever the writing of the same letter occurs twice in succession, you must insert the thread in the holes bored in the centre of the disc before running it into the same letter; and by letter I mean the hole.

Ἤδη δέ τινες εἴς τι βιβλίον γράψαντες ὡς λεπτότατον μακροὺς στίχους καὶ λεπτὰ γράμματα, ἵν' ὡς εὐογκοτάτη γένηται ἡ ἐπιστολή, εἶτα ἐπὶ τῷ ὤμῳ τοῦ χιτῶνος ὑποθέντες καὶ ἀποπτύξαντες τοῦ χιτωνίσκου ἐπὶ τῷ ὤμῳ, ἀνύποπτος δὴ δοκεῖ εἶναι ἡ κομιδὴ τῆς ἐπιστολῆς ἐνδεδυκότος τινὸς τὸν χιτωνίσκον καὶ οὕτω φερομένου.

Some persons, after writing long lines with fine characters upon some very thin papyrus, so that the message may be as compact as possible, have then placed it on the shoulder of the tunic and spread a part of the over-tunic out on the shoulder. Naturally the transmitting of the letter is unsuspected, if one puts on an over-tunic and wears it in this manner (Aeneas Tacticus, *How to Survive Under Siege*, 31.23).

Ποτίδαιαν γὰρ θέλων προδοῦναι Τιμόξενος Ἀρταβάζῳ προσυνέθεντο ἀλλήλοις ὁ μὲν τῆς πόλεώς τι χωρίον, ὁ δὲ τοῦ στρατοπέδου, εἰς ὅπερ ἐτόξευον πᾶν ὅ τι ἤθελον ἀλλήλοις ἐμφανίσαι. ἐτεχνάζετο δὲ ὧδε[6] τοῦ τοξεύματος περὶ τὰς γλυφίδας ἑλίξαντες τὸ βιβλίον καὶ πτερώσαντες ἐτόξευον εἰς τὰ προσυγκείμενα χωρία. ἐγένετο δὲ καταφανὴς ὁ Τιμόξενος προδιδοὺς τὴν Ποτίδαιαν· τοξεύων γὰρ ὁ Ἀρτάβαζος εἰς τὸ προσυγκείμενον, ἁμαρτὼν τοῦ χωρίου διὰ πνεῦμα καὶ φαύλην πτέρωσιν, βάλλει ἀνδρὸς Ποτιδαιάτου τὸν ὦμον, τὸν δὲ βληθέντα περιέδραμεν ὄχλος, οἷα φιλεῖ γίγνεσθαι ἐν τῷ πολέμῳ· αὐτίκα δὲ τὸ τόξευμα λαβόντες ἔφερον ἐπὶ τοὺς στρατηγούς, καὶ οὕτως καταφανὴς ἐγένετο ἡ πρᾶξις (Aeneas Tacticus, *How to Survive Under Siege*, 31.25-27; see also Herodotus, *Histories*, 8.128.2-129.1)

Among the ancients the following scheme was once contrived. When Timoxenus wished to hand over Potidaea to Artabazus, they prearranged, the one a certain spot in the city, the other one in the camp, to which they used to shoot whatever they wished to communicate with each other. They adopted the device of winding a sheet of writing around the notched end of the arrow, and, after feathering it, they shot it into the places previously determined. But Timoxenus was discovered in the attempt to betray Potidaea. For Artabazus, shooting toward the designated area, missed the spot because of the wind and because the arrow was badly feathered, and hit a man of Potidaea on the shoulder, and a crowd gathered around the wounded man, as often happens in war. And immediately picking up the arrow, they brought it to the generals, and thus the plot was revealed.

Ἱστιαῖος δὲ βουλόμενος τῷ Ἀρισταγόρᾳ σημῆναι ἀποστῆναι, ἄλλως μὲν οὐδαμῶς εἶχεν ἀσφαλῶς δηλῶσαι, ἅτε φυλασσομένων τῶν ὁδῶν καὶ οὐκ εὔπορον ὂν γράμματα λαθεῖν φέροντα, τῶν δὲ[5] δούλων τὸν πιστότατον ἀποξυρήσας ἔστιξεν καὶ ἐπέσχεν ἕως ἀνέφυσαν αἱ τρίχες. ὡς δὲ ἀνέφυσαν τάχιστα, ἔπεμπεν εἰς Μίλητον, ἐπιστείλας τῷ ἐπεστιγμένῳ ἄλλο μὲν οὐδέν, ἐπειδὰν δ᾽ ἀφίκηται εἰς Μίλητον πρὸς Ἀρισταγόραν, κελεύειν ξυρήσαντα κατιδεῖν εἰς τὴν κεφαλήν. τὰ δὲ στίγματα ἐσήμαινεν ἃ ἔδει ποιεῖν (Aeneas Tacticus, *How to Survive Under Siege*, 31.28-29; see also Aulus Gellius, *Attic Nights*, 17.9.18-27; Herodotus, *Histories*, 5.35; Polyaenus, *Stratagems of War*, 1.24)

Again, Histiaeus, wishing to tell Aristagoras to revolt, had no other safe means of communicating, since the roads were guarded and it was not easy for a letter-carrier to escape notice, but shaving the head of his most faithful slave, he tattooed it and detained him until the hair had grown again. And as soon as it had grown, he dispatched him to Miletus and gave the tattooed man no other orders except that when he had come to Miletus, into the presence of Aristagoras, he should request him to shave his head and examine it, whereupon the marks indicated what was to be done.

Γράφειν […] ὧδε. προσυνθέμενον τὰ φωνήεντα γράμματα ἐν κεντήμασι τίθεσθαι, ὁπόστον δ᾽ ἂν τύχῃ ἕκαστον ὄν, ἐν τοῖς γραφομένοις τοσαύτας στιγμὰς εἶναι. οἷον τόδε·

Διονύσιος κόλος - Δ : : : · : Ν : : : C : : : · : C K : · : Λ · · : C

Ἡρακλείδας ἡκέτω - : · Ρ · ΚΛ · · : : Δ · C : · K · · Τ : : : ·

καὶ τόδε ἄλλο· ἀντὶ τῶν φωνηέντων γραμμάτων τίθεσθαι ὅ τι δή (Aeneas Tacticus, *How to Survive Under Siege*, 31.30-31)

6

It is [...] possible to write as follows. It should be arranged in advance to express the vowels by dots, and whatever the number of each vowel happens to be, so many dots are to be placed in the writing. As for example the following:

"Dionysius docked" - d:.:: n::: s: .: ': s d:: ck: d

"let Heracleidas come" - l: t h: r. c l:: . d: s c:: m:

And here is another way: Instead of the vowels, put in anything whatever.

πολλοὶ δὲ κατ᾽ Ἤπειρον κυσὶν ἐχρήσαντο ὧδε. ἀπαγαγόντες δέσμιον περιέθηκαν περὶ τὸν αὐχένα ἱμάντα, ἐν ᾧ ἐπιστολὴ ἐνέρραπτο. εἶτα ἀφῆκαν νυκτὸς ἢ μέθ᾽ ἡμέραν πρὸς ὃν ἐξ ἀνάγκης ἔμελλεν ἥξειν ὅθεν ἀπήχθη. ἔστι δὲ τοῦτο καὶ Θεσσαλόν (Aeneas Tacticus, *How to Survive Under Siege*, 31.32; see also Julius Africanus, *Kestoi*, 53)

Many in Epirus used to employ dogs in the following manner. After leading the dog away in leash they placed around his neck a strap, inside of which was sewed a letter. Then at night or during the daytime, they dispatched the dog to the person to whom he was sure to go, that is, to the one from whom he had been taken away. And this is also a Thessalian custom.

2: Aeschylus (*Agamemnon*, 458 BCE)

Ἥφαιστος Ἴδης λαμπρὸν ἐκπέμπων σέλας.

φρυκτὸς δὲ φρυκτὸν δεῦρ᾽ ἀπ᾽ ἀγγάρου πυρὸς

ἔπεμπεν· Ἴδη μὲν πρὸς Ἑρμαῖον λέπας

Λήμνου· μέγαν δὲ πανὸν ἐκ νήσου τρίτον

Ἀθῷον αἶπος Ζηνὸς ἐξεδέξατο,

ὑπερτελής τε, πόντον ὥστε νωτίσαι,

ἰσχὺς πορευτοῦ λαμπάδος πρὸς ἡδονὴν

†πεύκη τὸ χρυσοφεγγές, ὥς τις ἥλιος,

σέλας παραγγείλασα Μακίστου σκοπαῖς·

ὁ δ᾽ οὔτι μέλλων οὐδ᾽ ἀφρασμόνως ὕπνῳ

νικώμενος παρῆκεν ἀγγέλου μέρος·

ἑκὰς δὲ φρυκτοῦ φῶς ἐπ᾽ Εὐρίπου ῥοὰς

Μεσσαπίου φύλαξι σημαίνει μολόν.

οἱ δ᾽ ἀντέλαμψαν καὶ παρήγγειλαν πρόσω

γραίας ἐρείκης θωμὸν ἄψαντες πυρί.

7

σθένουσα λαμπὰς δ᾽ οὐδέπω μαυρουμένη,

ὑπερθοροῦσα πεδίον Ἀσωποῦ, δίκην

φαιδρᾶς σελήνης, πρὸς Κιθαιρῶνος λέπας

ἤγειρεν ἄλλην ἐκδοχὴν πομποῦ πυρός.

φάος δὲ τηλέπομπον οὐκ ἠναίνετο

φρουρὰ πλέον καίουσα τῶν εἰρημένων:

λίμνην δ᾽ ὑπὲρ Γοργῶπιν ἔσκηψεν φάος:

ὄρος τ᾽ ἐπ᾽ Αἰγίπλαγκτον ἐξικνούμενον

ὤτρυνε θεσμὸν μὴ χρονίζεσθαι πυρός.

πέμπουσι δ᾽ ἀνδαίοντες ἀφθόνῳ μένει

φλογὸς μέγαν πώγωνα, καὶ Σαρωνικοῦ

πορθμοῦ κάτοπτον πρῶν᾽ ὑπερβάλλειν πρόσω

φλέγουσαν: ἔστ᾽ ἔσκηψεν εὖτ᾽ ἀφίκετο

Ἀραχναῖον αἶπος, ἀστυγείτονας σκοπάς:

κἄπειτ᾽ Ἀτρειδῶν ἐς τόδε σκήπτει στέγος

φάος τόδ᾽ οὐκ ἄπαππον Ἰδαίου πυρός.

τοιοίδε τοί μοι λαμπαδηφόρων νόμοι,

ἄλλος παρ᾽ ἄλλου διαδοχαῖς πληρούμενοι:

νικᾷ δ᾽ ὁ πρῶτος καὶ τελευταῖος δραμών.

τέκμαρ τοιοῦτον σύμβολόν τέ σοι λέγω

ἀνδρὸς παραγγείλαντος ἐκ Τροίας ἐμοί (Aeschylus, *Agamemnon*, 281-316).

[Clytaemnestra speaking:] Hephaestus, sending a bright blaze on its way from Mount Ida; and then from that courier-fire beacon sent on beacon all the way here. Ida sent it to Hermes' crag on Lemnos, and from the island the great flambeau was received, thirdly, by the steep height of Zeus at Athos. Then the mighty travelling torch <shot up> aloft to arch over the sea, to the delight <of the god>, bringing its message-flame close to the sky, <and landed on Peparethos, where again much> pinewood <was burned,> which, like another sun, conveyed the message in light of golden brilliance to the watch-heights of Macistus. Nor did Macistus neglect its part in transmitting the message, either by dilatoriness or through being heedlessly vanquished by sleep: far over the waters of the Euripus the beacon-light announced its coming to the watchmen of Messapium. They lit up in response and passed the message further on, kindling with

fire a heap of old heather; and the torch, powerful and still not weakened, leaped over the plain of the Asopus like the shining moon, came to the crags of Cithaeron, and there set in motion its successor stage of the messenger-fire. The watch did not refuse the bidding of the light sent from afar, but kindled more than they had been ordered; and the light swooped over Gorgopis bay and came to the mountain where goats roam, where it stimulated the men not to <be slow in fulfilling> the ordinance about the fire. They kindled and sent on, in abundant strength, a great beard of flame, so that it would go on its blazing way right beyond the headland that looks over the Saronic narrows; then it swooped down and arrived at the steep heights of Arachnaeum, the watch-point nearest our city. And then it fell upon this house of the Atreidae, this light directly descended from the fire kindled on Ida. Such, I tell you, were my dispositions for this torch-relay, one after another of them fulfilled in succession: the first and the last runner were alike victorious! Such, I tell you, is the evidence and the token that my husband has transmitted to me from Troy.

3: Ammianus Marcellinus (*Roman History*, 4th century CE)

Proinde curarum crescente sollicitudine inde passibus citis Amidam pro temporis copia venimus civitatem postea secutis cladibus inclytam. Quo reversis exploratoribus nostris in vaginae internis notarum figuris membranam repperimus scriptam a Procopio ad nos perferri mandatam, quem legatum ad Persas antea missum cum comite Lucilliano praedixi, haec consulto obscurius indicantem, ne captis baiulis sensuque intellecto scriptorum excitaretur materia funestissima : "Amendatis procul Graiorum legatis, forsitan et necandis rex longaevus non contentus Hellesponto, iunctis Granici et Rhyndaci pontibus Asiam cum numerosis populis pervasurus adveniet, suopte ingenio inritabilis et asperrimus, auctore et incensore Hadriani quondam Romani Principis successore; actum et conclamatum est ni caverit Graecia." Qui textus significabat Persarum regem transitis fluminibus Anzaba et Tigride, Antonino hortante dominium orientis adfectare totius. His ob perplexitatem nimiam aegerrime lectis consilium suscipitur prudens (Ammianus Marcellinus, *Roman History*, 18.6.17-19; see also Frontinus, *Stratagems*, 3.13.5)

Then with our [Ammianus and his troops] anxious cares increasing we went from there as quickly as circumstances allowed to Amida, a city afterwards notorious for the calamities which it suffered. And when our scouts had returned there, we found in the scabbard of a sword a parchment written in cipher, which had been brought to us by order of Procopius, who, as I said before, had previously been sent as an envoy to the Persians with Count Lucillianus. In this, with intentional obscurity, for fear that, if the bearers were taken and the meaning of the message known, most disastrous consequences would follow, he gave the following message: "Now that the envoys of the Greeks have been sent far away and perhaps are to be killed, that aged king, not content with Hellespontus, will bridge the Granicus and the Rhyndacus and come to invade Asia with many nations. He is naturally passionate and very cruel, and he has as an instigator and abetter the successor of the former Roman emperor Hadrian; unless Greece takes heed, it is all over with her and her dirge chanted." This writing meant that the king of the Persians had crossed the rivers Anzaba and Tigris, and, urged on by Antoninus, aspired to the rule of the entire

Orient. When it had been read, with the greatest difficulty because of its excessive ambiguity, a sagacious plan was formed.

4: Aristophanes (late 5th/early 4th century BCE)

4.1: *Birds* (ca. 414 BCE)

πρὶν μὲν γὰρ οἰκίσαι σε τήνδε τὴν πόλιν,

ἐλακωνομάνουν ἅπαντες ἄνθρωποι τότε,

ἐκόμων ἐπείνων ἐρρύπων ἐσωκράτουν

σκυτάλι᾽ ἐφόρουν, νυνὶ δ᾽ ὑποστρέψαντες αὖ

ὀρνιθομανοῦσι, πάντα δ᾽ ὑπὸ τῆς ἡδονῆς

ποιοῦσιν ἅπερ ὄρνιθες ἐκμιμούμενοι (Aristophanes, *Birds*, 1280-1285)

Before you built this city all men were crazy about the Spartans:

they wore their hair long, went hungry,

never bathed, acted like Socrates,

brandished batons [*scytalae*].

But now they've about-faced and gone bird-crazy,

and they're having a wonderful time imitating birds in everything they do.

4.2: *Lysistrata* (ca. 411 BCE)

ΚΙΝΗΣΙΑΣ

κἄπειτα δόρυ δῆθ᾽ ὑπὸ μάλης ἥκεις ἔχων;

ΚΗΡΥΞ

οὐ τὸν Δί᾽ οὐκ ἐγώνγα.

ΚΙΝΗΣΙΑΣ

ποῖ μεταστρέφει;

τί δὴ προβάλλει τὴν χλαμύδ᾽; ἦ βουβωνιᾷς

ὑπὸ τῆς ὁδοῦ;

ΚΗΡΥΞ

ἀλεός γα ναὶ τὸν Κάστορα

ὤνθρωπος.

ΚΙΝΗΣΙΑΣ

ἀλλ᾽ ἔστυκας, ὦ μιαρώτατε.

ΚΗΡΥΞ

οὐ τὸν Δί᾿ οὐκ ἐγώνγα· μηδ᾿ αὖ πλαδδίη,

ΚΙΝΗΣΙΑΣ

τί δ᾿ ἐστί σοι τοδί;

ΚΗΡΥΞ

σκυτάλα Λακωνικά. (Aristophanes, *Lysistrata*, 985-991).

Cinesias

And that's why you've come hiding a spear in your clothes?

Herald

I'm not, I swear!

Cinesias

Why are you twisting away from me? And why hold your coat out in front of you? Got a swollen groin from the long ride, maybe?

Herald

By Castor, the man's crazy!

Cinesias

Why, you've got a hard-on, you dirty rascal!

Herald

I certainly do not! Don't be talking twaddle.

Cinesias

Then what do you call that?

Herald

A Spartan walking stick.

5: Athenaeus of Naucratis (*The Learned Banqueters*, early 3rd century CE)

Ἀχαιὸς δ᾿ ὁ Ἐρετριεὺς γλαφυρὸς ὢν ποιητὴς περὶ τὴν σύνθεσιν ἔσθ᾿ ὅτε καὶ μελαίνει τὴν φράσιν καὶ πολλὰ αἰνιγματωδῶς ἐκφέρει, ὥσπερ ἐν Ἴριδι σατυρικῇ. λέγει γάρ·

λιθάργυρος

δόλπη παρηωρεῖτο χρίματος πλέα

τὸν Σπαρτιάτην γραπτὸν ἐν διπλῷ ξύλῳ

κύρβιν.

τὸν γὰρ λευκὸν ἱμάντα βουληθεὶς εἰπεῖν, ἐξ οὗ ἡ ἀργυρᾶ λήκυθος ἐξήρτητο, Σπαρτιάτην γραπτὸν ἔφη ἀντὶ τοῦ Σπαρτιᾶτιν σκυτάλην. ὅτι δὲ λευκῷ ἱμάντι περιειλοῦντες τὴν σκυτάλην οἱ Λάκωνες ἔγραφον ἃ

11

ἠβούλοντο, εἴρηκεν ἱκανῶς Ἀπολλώνιος ὁ Ῥόδιος ἐν τῷ Περὶ Ἀρχιλόχου (Athenaeus of Naucratis, *The Learned Banqueters*, 451c-d)

Although Achaeus of Eretria is a poet who composes elegantly, he occasionally uses obscure language and expresses himself in a confusing fashion, as for example in the satyr play Iris, where he says: A flask made of litharge[1] and full of oil was suspended alongside the inscribed Spartiate tablet on a double peg. Because when he [Achaeus] wanted to refer to the white thong from which [a] silver oil-flask was hanging, he referred to it as an "inscribed Spartiate" rather than as a "Spartan message-staff". As for the fact that the Spartans wrapped their message-staffs in white thongs and wrote what they wanted on them, Apollonius of Rhodes discusses this at length in his *On Archilochus*.

6: Aulus Gellius (*Attic Nights*, ca. 177 CE)[2]

In his epistulis quibusdam in locis inveniuntur litterae singulariae sine coagmentis syllabarum, quas tu putes positas incondite; nam verba ex his litteris confici nulla possunt. Erat autem conventum inter eos clandestinum de commutando situ litterarum, ut in scripto quidem alia aliae locum et nomen teneret, sed in legendo locus cuique suus et potestas restitueretur; quaenam vero littera pro qua scriberetur, ante is, sicuti dixi, conplacebat qui hanc scribendi latebram parabant (Aulus Gellius, *Attic Nights*, 17.9.2-4).

In certain parts of […] letters [sent from Caesar to Oppius and Balbus] there are found individual characters which are not connected to form syllables, but apparently are written at random; for no word can be formed from those letters. […] a secret agreement had been made between the correspondents about a change in the position of the letters, so that, in writing, one name and position was given to one letter and another to another, but in reading its own place and force was restored to each of them. But which letter was written for which was, as I have already said, agreed upon by those who devised this secret code.

Lacedaemonii autem veteres, cum dissimulare et occultare litteras publice ad imperatores suos missas volebant, ne, si ab hostibus eae captae forent, consilia sua noscerentur, epistulas id genus factas mittebant. Surculi duo erant teretes, oblonguli, pari crassamento eiusdemque longitudinis, derasi atque tornati consimiliter; unus imperatori in bellum proficiscenti dabatur, alterum domi magistratus cum iure atque

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[1] Eastaugh, Walsh et. al. 2004, 241. Litharge is one of the natural mineral forms of lead (II) oxide with a yellowish colour. Since Antiquity litharge has been used for dying purposes.

[2] The latest textual edition from Holford-Strevens (2019) largely preserves the standard text for this section. Any changes are highlighted in bold. The minor changes to the text introduced in his edition (based on the *Gryphius* 1537 and Salmasius manuscripts), prefer 'tornati' to 'ornati' at 17.9.7. However, this slight modification does not suggest any change to the standard translation here. In the translation offered below, Aulus Gellius describes the *scytale* as 'smoothed and prepared' (*derasi atque ornati*); the recommendation from Holford-Strevens would give us 'smoothed and turned [as upon a lathe]' (*derasi atque **t**ornati*).

cum signo habebant. Quando usus venerat litterarum secretiorum, circum eum surculum lorum modicae tenuitatis, longum autem quantum rei satis erat, conplicabant, volumine rotundo et simplici, ita uti orae adiunctae undique et cohaerentes lori, quod plicabatur, coirent. Litteras deinde in eo loro per transversas iuncturarum oras versibus a summo (surculo) ad imum proficiscentibus inscribebant. Id lorum litteris ita perscriptis revolutum ex surculo imperatori commenti istius conscio mittebant; resolutio autem lori litteras truncas atque mutilas reddebat membraque earum et apices in partis diversissimas spargebat. Propterea, si id lorum in manus hostium inciderat, nihil quicquam coniectari ex eo scripto quibat; sed ubi ille ad quem erat missum acceperat, surculo conpari quem habebat (a) capite ad finem, proinde ut debere fieri sciebat, circumplicabat, atque ita litterae per eundem ambitum surculi coalescentes rursum coibant integramque et incorruptam epistulam et facilem legi praestabant. Hoc genus epistulae Lacedaemonii σκυτάλην appellant (Aulus Gellius, *Attic Nights*, 17.9.6-16)

The ancient Lacedaemonians, when they wanted to conceal and disguise the public dispatches sent to their generals, in order that, in case they were intercepted by the enemy, their plans might not be known, used to send letters written in the following manner. There were two thin, cylindrical wands of the same thickness and length, smoothed and prepared so as to be exactly alike. One of these was given to the general when he went to war, the other the magistrates kept at home under their control and seal. When the need of more secret communication arose, they bound about the staff a thong of moderate thickness, but long enough for the purpose, in a simple spiral, in such a way that the edges of the thong which was twined around the stick met and were joined throughout. Then they wrote the dispatch on that thong across the connected edges of the joints, with the lines running from the top to the bottom. When the letter had been written in this way, the thong was unrolled from the wand and sent to the general, who was familiar with the device. But the unrolling of the thong made the letters imperfect and broken, and their parts and strokes were divided and separated. Therefore, if the thong fell into the hands of the enemy, nothing at all could be made out from the writing; but when the one to whom the letter was sent had received it, he wound it around the corresponding staff, which he had, from the top to the bottom, just as he knew that it ought to be done, and thus the letters, united by encircling a similar staff, came together again, rendering the dispatch entire and undamaged, and easy to read. This kind of letter the Lacedaemonians called *σκυτάλη*.

Legebamus id quoque in vetere historia rerum Poenicarum, virum indidem quempiam inlustrem—sive ille Hasdrubal sive quis alius est non retineo—epistulam scriptam super rebus arcanis hoc modo abscondisse: pugillaria nova, nondum etiam cera inlita, accepisse, litteras in lignum incidisse, postea tabulas, uti solitum est, cera conlevisse easque tabulas, tamquam non scriptas, cui facturum id praedixerat misisse; eum deinde ceram derasisse litterasque incolumes ligno incisas legisse (Aulus Gellius, *Attic Nights*, 17.9.16-17; see also Justin, *Epitome of the Philippic History of Pompeius Trogus*, 21.6)

[Aulus Gellius speaking:] I [...] read this in an ancient history of Carthage, that a certain famous man of that country —whether it was Hasdrubal or another I do not recall—disguised a letter written about secret matters in the following way: he took new tablets, not yet provided with wax, and cut the letters into the wood. Afterwards he covered the tablet with wax in the usual way and sent it, apparently without writing,

to one to whom he had previously told his plan. The recipient then scraped off the wax, found the letters safe and sound inscribed upon the wood, and read them.

Est [...] in monumentis rerum Graecarum profunda quaedam et inopinabilis latebra, barbarico astu excogitata. Histiaeus nomine fuit, loco natus in terra Asia non ignobili. Asiam tunc tenebat imperio rex Darius. Is Histiaeus, cum in Persis apud Darium esset, Aristagorae cuipiam res quasdam occultas nuntiare furtivo scripto volebat. Comminiscitur opertum hoc litterarum admirandum. Servo suo diu oculos aegros habenti capillum ex capite omni tamquam medendi gratia deradit caputque eius leve in litterarum formas conpungit. His litteris quae voluerat perscripsit, hominem postea quoad capillus adolesceret domo continuit. Ubi id factum est, ire ad Aristagoran iubet et "Cum ad eum," inquit, "veneris, mandasse me dicito ut caput tuum, sicut nuper egomet feci, deradat." Servus, ut imperatum erat, ad Aristagoran venit mandatumque domini adfert. Atque ille id non esse frustra ratus, quod erat mandatum fecit. Ita litterae perlatae sunt (Aulus Gellius, *Attic Nights*, 17.9.18-27; see also Aeneas Tacticus, *How to Survive Under Siege*, 31.28-39; Herodotus, *Histories*, 5.35; Polyaenus, *Stratagems of War*, 1.24)

There is [...] in the records of Grecian history another profound and difficult method of concealment, devised by a barbarian's cunning. He was called Histiaeus and was born in the land of Asia in no mean station. At that time king Darius held sway in Asia. This Histiaeus, being in Persia with Darius, wished to send a confidential message to a certain Aristagoras in a secret manner. He devised this remarkable method of concealing a letter. He shaved all the hair from the head of a slave of his who had long suffered from weak eyes, as if for the purpose of treatment. Then he tattooed the forms of the letters on his smooth head. When in this way he had written what he wished, he kept the man at home for a time, until his hair grew out. When this happened, he ordered him to go to Aristagoras, adding: "When you come to him, say that I told him to shave your head, as I did a little while ago." The slave, as he was bidden, came to Aristagoras and delivered his master's order. Aristagoras, thinking that the command must have some reason, did as he was directed. And thus the letter reached its destination.

7: Ausonius (*Epistles*, 4th century CE)

Vel si tibi proditor instat

aut quaesitoris gravior censura timetur,

occurre ingenio, quo saepe occulta teguntur.

Thraeicii quondam quam saeva licentia regis

fecerat elinguem, per licia texta querellas

edidit et tacitis mandavit crimina telis.

et pudibunda suos malo commisit amores

virgo nec erubuit tacituro conscia pomo.

depressis scrobibus vitium regale minister

credidit idque diu texit fidissima tellus:

inspirata dehinc vento cantavit harundo.

lacte incide notas: arescens charta tenebit

semper inaspicuas; prodentur scripta favillis.

vel Lacedaemoniam *scytalen* imitare, libelli

segmina Pergamei tereti circumdata ligno

perpetuo inscribens versu, qui deinde solutus,

non respondentes sparso dabit ordine formas,

donec consimilis ligni replicetur in orbem.

Innumeras possum celandi ostendere formas

et clandestinas veterum reserare loquellas:

si prodi, Pauline, times nostraeque vereris

crimen amicitiae […] (Ausonius, *Epistles*, 28.10-31)

If an informer is beside thee,

and if 'tis an inquisitor's too stern rebuke is feared,

baffle it with a device whereby secrets are oft concealed.

She whom the brutal outrage of the Thracian king

had robbed of her tongue, revealed her sorrows

by means of woven threads

and committed the story of her wrongs to the silent loom.

Also a shamefast maid entrusted the tale of her love to an apple,

and blushed not to share her secret with fruit which could never speak.

To deep-dug pits a servant revealed his royal lord's deformity,

and long the earth hid the secret most faithfully:

hereafter the reed, breathed on by the wind, sang the story.

Trace letters with milk:

the paper as it dries will keep them ever invisible;

yet with ashes the writing is brought to light.

Or imitate the Spartan *scytale*,

writing on strips of parchment

wound about a rounded stick in continuous lines,

which, afterwards unrolled,

will show characters incoherent because sequence is lost,

until they are rolled again about just such another stick.

I can show thee countless codes of the ancients

for concealing and unlocking secret messages;

if thou, Paulinus, fearest to be betrayed

and dread'st the charge of my friendship.

8: Cassius Dio (*Roman History*, 3rd century CE)

εἰώθει δὲ καὶ ἄλλως, ὁπότε τι δι᾽ ἀπορρήτων τινὶ ἐπέστελλε, τὸ τέταρτον ἀεὶ στοιχεῖον ἀντὶ τοῦ καθήκοντος ἀντεγγράφειν, ὅπως ἂν (Cassius Dio, *Roman History*, 40.9.3)

It was his [Caesar's] usual practice, whenever he was sending a secret message to any one, to substitute in every case for the proper letter of the alphabet the fourth letter beyond, so that the writing might be unintelligible to most persons.

ὅπως γε μηδ᾽ αὐτός τι μήτ᾽ οὖν ἐθελοντὴς μήτ᾽ ἄκων ἐξείπῃ, οὔτε τι αὐτῷ ἐξελάλησε, καὶ τῷ Κικέρωνι πάνθ᾽ ὅσα ἠβουλήθη ἑλληνιστὶ ἐπέστειλεν, ἵνα ἂν καὶ τὰ γράμματα ἁλῷ, ἀλλ᾽ ἀσύνετά γε καὶ τότε τοῖς βαρβάροις ὄντα μηδέν σφας ἐκδιδάξῃ (Cassius Dio, *Roman History,* 40.9.3; see also Caesar, *The Gallic War*, 5.48)

In order that even he [the messenger] might not reveal anything, voluntarily or involuntarily, he gave him no verbal message and wrote to [Quintus] Cicero in Greek all that he wished to say, in order that even if the letter were captured, it should even so be meaningless to the barbarians and afford them no information.

9: Caesar (*The Gallic War,* 100-44 BCE)

Venit magnis itineribus in Nerviorum fines. Ibi ex captivis cognoscit, quae apud Ciceronem gerantur, quantoque in periculo res sit. Tum cuidam ex equitibus Gallis magnis praemiis persuadet uti ad Ciceronem epistolam deferat. Hanc Graecis conscriptam litteris mittit, ne intercepta epistola nostra ab hostibus consilia cognoscantur. Si adire non possit, monet ut tragulam cum epistola ad amentum deligata intra munitionem castrorum abiciat. In litteris scribit se cum legionibus profectum celeriter adfore; hortatur ut pristinam virtutem retineat. Gallus periculum veritus, ut erat praeceptum, tragulam mittit. Haec casu ad turrim adhaesit neque ab nostris biduo animadversa tertio die a quodam milite conspicitur, dempta ad Ciceronem defertur. Ille perlectam in conventu militum recitat maximaque omnes laetitia adficit. Tum fumi incendiorum procul videbantur; quae res omnem dubitationem adventus legionum expulit (Caesar, *The Gallic War*, 5.48).

[Caesar] goes into the territories of the Nervii by long marches. There he learns from some prisoners what things are going on in the camp of Cicero, and in how great jeopardy the affair is. Then with great rewards he induces a certain man of the Gallic horse to convey a letter to Cicero. This he sends written in Greek characters, lest the letter being intercepted, our measures should be discovered by the enemy. He directs him, if he should be unable to enter, to throw his spear with the letter fastened to the thong, inside the fortifications of the camp. He writes in the letter, that he having set out with his legions, will quickly be there: he entreats him to maintain his ancient valour. The Gaul apprehending danger, throws his spear as he has been directed. Is by chance stuck in a tower, and, not being observed by our men for two days, was seen by a certain soldier on the third day: when taken down, it was carried to Cicero. He, after perusing it, reads it out in an assembly of the soldiers, and fills all with the greatest joy. Then the smoke of the fires was seen in the distance, a circumstance which banished all doubt of the arrival of the legions.

16

10: Cicero (*Letters to Atticus*, 68-44 BCE)

Habes σκυτάλην Λακωνικήν. omnino excipiam hominem. erat autem v Non. venturus vesperi, id est hodie; cras igitur ad me fortasse veniet. temptabo, audiam: nihil properare, missurum ad Caesarem. clam agam, cum paucissimis alicubi occultabor; certe hinc istis invitissimis evolabo, atque utinam ad Curionem! σύνες ὅ τοι λέγω. magnus dolor accessit. efficietur aliquid dignum nobis (Cicero, *Letters to Atticus*, 10.10 (Letter 201)).

There's a Laconian dispatch [*σκυτάλην Λακωνικήν*] for you! To be sure I shall lie in wait for him—he is coming on the evening of the 3rd, i.e. today, so perhaps he will call on me tomorrow. I shall sound him, listen to him. I shall say that I am in no hurry, that I shall send to Caesar. I shall act by stealth and conceal myself somewhere with a very few companions. At all events I shall escape from here, however much they want to stop me, and I only hope it will be to Curio. Mark my words. Intense vexation has been added to my other motives. I shall bring off something worthy of myself.[3]

11: Cornelius Nepos (*The Book on the Great Generals of Foreign Nations. Pausanias*, 1st century BCE)

Spartam redire nolebat; Colonas, qui locus in agro Troade est, se contulerat; ibi consilia cum patriae tum sibi inimica capiebat. Id postquam Lacedaemonii rescierunt, legatos cum clava ad eum miserunt, in qua more illorum erat scriptum: nisi domum reverteretur, se capitis eum damnaturos. Hoc nuntio commotus, sperans se etiam tum pecunia et potentia instans periculum posse depellere, domum rediit. Huc ut venit, ab ephoris in vincla publica est coniectus; licet enim legibus eorum cuivis ephoro hoc facere regi. Hinc tamen se expedivit, neque eo magis carebat suspicione; nam opinio manebat eum cum rege habere societatem (Cornelius Nepos, *The Book on the Great Generals of Foreign Nations,* 4.3.4; see also Thucydides, *History of the Peloponnesian War*, 1.131.1)

To Sparta he [Pausanias] would not return, but withdrew to Colonae, a place in the country of Troas, where he formed designs pernicious both to his country and himself. When the Lacedaemonians knew of his proceedings, they sent deputies to him with a *scytale* [*clava*], on which it was written, after their fashion, that "if he did not return home, they would condemn him to death." Being alarmed at this communication, but hoping that he should be able, by his money and his influence, to ward off the danger that threatened him, he returned home. As soon as he arrived there, he was thrown into the public prison by the *Ephori*, for it is allowable, by their laws, for any one of the *Ephori* to do this to a king. He however got himself freed from confinement, but was not cleared from suspicion, for the belief still prevailed, that he had made a compact with the king of Persia.

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[3] Significantly, the words 'Laconian dispatch' (*σκυτάλην Λακωνικήν*) are written in Greek instead of Latin, something that Cicero often did in his letters. In this letter (*Letters to Atticus,* 10.10) one can find five more instances in which Cicero changed Latin words for Greek ones.

12: Diodorus Siculus (*Library of History*, 1st century BCE)

Ἐπὶ δὲ τοὺς εἰς Σηστὸν καταφυγόντας Ἀθηναίους στρατεύσας τὴν μὲν πόλιν εἷλε, τοὺς δ' Ἀθηναίους ὑποσπόνδους ἀφῆκεν. Εὐθὺς δὲ τῇ δυνάμει πλεύσας ἐπὶ Σάμον αὐτὸς μὲν ταύτην ἐπολιόρκει, Γύλιππον δὲ τὸν εἰς Σικελίαν τοῖς Συρακοσίοις τῷ ναυτικῷ συμπολεμήσαντα ἀπέστειλεν εἰς Σπάρτην τά τε λάφυρα κομίζοντα καὶ μετὰ τούτων ἀργυρίου τάλαντα χίλια καὶ πεντακόσια. Ὄντος δὲ τοῦ χρήματος ἐν σακίοις, καὶ ταῦτ' ἔχοντος ἑκάστου σκυτάλην ἔχουσαν τὴν ἐπιγραφὴν τὸ πλῆθος τοῦ χρήματος δηλοῦσαν, ταύτην ἀγνοήσας ὁ Γύλιππος τὰ μὲν σακία παρέλυσεν, ἐξελόμενος δὲ τάλαντα τριακόσια, καὶ διὰ τῆς ἐπιγραφῆς γνωσθεὶς ὑπὸ τῶν ἐφόρων, ἔφυγε καὶ κατεδικάσθη θανάτῳ (Diodorus Siculus, *Library of History*, 13.106.8-9)

After this, advancing against the Athenians who had found refuge in Sestus, he [Lysander] took the city but let the Athenians depart under a truce. Then he sailed at once to Samos with his troops and himself began the siege of the city, but Gylippus, who with a flotilla had fought in aid of the Syracusans in Sicily, he dispatched to Sparta to take there both the booty and with it fifteen hundred talents of silver. The money was in small bags, each of which contained a *scytale* which carried the notation of the amount of the money. Gylippus, not knowing of the *scytale*, secretly undid the bags and took out three hundred talents, and when, by means of the notation, Gylippus was detected by the *ephors*, he fled the country and was condemned to death.

13: Frontinus (*Stratagems*, late 1st century CE)

Romani, obsessi in Capitolio, ad Camillum auxilio implorandum miserunt Pontium Cominium, qui, ut stationes Gallorum falleret, per saxa Tarpeia demissus tranato Tiberi Veios pervenit et perpetrata legatione similiter ad suos rediit. Campani, diligenter Romanis a quibus obsessi erant custodias agentibus, quendam pro transfuga subornatum miserunt, qui occultatam balteo epistulam inventa effugiendi occasione ad Poenos pertulit.

Venationi quoque et pecoribus quidam insuerunt litteras membranis mandatas.

Aliqui et iumento in aversam partem infulserunt, dum stationes transeunt.

Nonnulli interiora vaginarum inscripserunt.

L. Lucullus, Cyzicenos obsessos a Mithridate ut certiores adventus sui faceret, cum praesidiis hostium teneretur introitus urbis, qui unus et angustus ponte modico insulam continenti iungit, militem e suis nandi et nauticae artis peritum iussit insidentem duobus inflatis utribus litteras insutas habentibus, quos ab inferiore parte duabus regulis inter se distantibus commiserat, ire septem milia passuum traiectum. Quod ita perite gregalis fecit, ut cruribus velut gubernaculis dimissis cursum dirigeret et procul visentis, qui in statione erant, marinae specie beluae deciperet.

Hirtius consul ad Decimum Brutum, qui Mutinae ab Antonio obsidebatur, litteras subinde misit plumbo scriptas, quibus ad brachium religatis milites Scultennam amnem tranabant.

Idem columbis, quas inclusas ante tenebris et fame adfecerat, epistulas saeta ad collum religabat easque a propinquo, in quantum poterat, moenibus loco emittebat. Illae lucis cibique avidae altissima aedificiorum petentes excipiebantur a Bruto, qui eo modo de omnibus rebus certior fiebat,

utique postquam disposito quibusdam locis cibo columbas illuc devolare instituerat (Frontinus, *Stratagems*, 3.13; see also Ammianus Marcellinus, *Roman History*, 18.6.17-19)

When the Romans were besieged in the Capitol, they sent Pontius Cominius to implore Camillus to come to their aid. Pontius, to elude the pickets of the Gauls, let himself down over the Tarpeian Rock, swam the Tiber, and reached Veii. Having accomplished his errand, he returned by the same route to his friends.

When the Romans were maintaining careful guard against the inhabitants of Capua, whom they were besieging, the latter sent a certain fellow in the guise of a deserter, and he, finding an opportunity to escape, conveyed to the Carthaginians a letter which he had secreted in his belt.

Some have written messages on skins and then sewed these to the carcasses of game or sheep.

Some have stuffed the message under the tail of a mule while passing the picket-posts.

Some have written on the linings of scabbards.

When the Cyzicenes were besieged by Mithridates, Lucius Lucullus wished to inform them of his approach. There was a single narrow entrance to the city, connecting the island with the mainland by a small bridge. Since this was held by forces of the enemy, he sewed some letters up inside two inflated skins and then ordered one of his soldiers, an adept in swimming and boating, to mount the skins, which he had fastened together at the bottom by two strips some distance apart, and to make the trip of seven miles across. So skilfully did the soldier do this that, by spreading his legs, he steered his course as though by rudder, and deceived those watching from a distance by appearing to be some marine creature.

The consul Hirtius often sent letters inscribed on lead plates to Decimus Brutus, who was besieged by Antonius at Mutina. The letters were fastened to the arms of soldiers, who then swam across the Scultenna River.

Hirtius also shut up pigeons in the dark, starved them, fastened letters to their necks by a hair, and then released them as near to the city walls as he could. The birds, eager for light and food, sought the highest buildings and were received by Brutus, who in that way was informed of everything, especially after he set food in certain spots and taught the pigeons to alight there.

14: Herodian (*History of the Empire from the Death of Marcus*, late 2nd/early 3rd century CE)

παραδοὺς αὐτῷ ἑκατοντάρχας καὶ στρατιώτας τινάς, οἷς ἔδωκε κατασεσημασμένα γράμματα ἐν πτυκτοῖς πίναξι, δι᾽ ὧν τὰ ἀπόρρητα καὶ κρυπτὰ ἀγγέλματα τοῖς βασιλεῦσιν ἐπιστέλλεται (Herodian, *History of the Empire from the Death of Marcus*, 7.6.5)

Gordian transferred to his [provincial quaestor's] command some centurions and soldiers, to whom he gave a letter sealed in folding tablets, the normal method used by the emperor to send private, secret messages.

15: Herodotus (*Histories*, ca. 440 BCE)

λαγὸν μηχανησάμενος, καὶ ἀνασχίσας τούτου τὴν γαστέρα καὶ οὐδὲν ἀποτίλας, ὡς δὲ εἶχε οὕτω ἐσέθηκε βυβλίον, γράψας τά οἱ ἐδόκεε: ἀπορράψας δὲ τοῦ λαγοῦ τὴν γαστέρα, καὶ δίκτυα δοὺς ἅτε θηρευτῇ τῶν

οἰκετέων τῷ πιστοτάτῳ, ἀπέστελλε ἐς τοὺς Πέρσας, ἐντειλάμενός οἱ ἀπὸ γλώσσης διδόντα τὸν λαγὸν Κύρῳ ἐπειπεῖν αὐτοχειρίη μιν διελεῖν καὶ μηδένα οἱ ταῦτα ποιεῦντι παρεῖναι. ταῦτά τε δὴ ὦν ἐπιτελέα ἐγίνετο καὶ ὁ Κῦρος παραλαβὼν τὸν λαγὸν ἀνέσχισε: εὑρὼν δὲ ἐν αὐτῷ τὸ βυβλίον ἐνεὸν λαβὼν ἐπελέγετο, τὰ δὲ γράμματα ἔλεγε τάδε. 'ὦ παῖ Καμβύσεω, σὲ γὰρ θεοὶ ἐπορῶσι: οὐ γὰρ ἂν κοτὲ ἐς τοσοῦτο τύχης ἀπίκευ: σύ νυν Ἀστυάγεα τὸν σεωυτοῦ φονέα τῖσαι. κατὰ μὲν γὰρ τὴν τούτου προθυμίην τέθνηκας, τὸ δὲ κατὰ θεούς τε καὶ ἐμὲ περίεις: τά σε καὶ πάλαι δοκέω πάντα ἐκμεμαθηκέναι, σέο τε αὐτοῦ περὶ ὡς ἐπρήχθη, καὶ οἷα ἐγὼ ὑπὸ Ἀστυάγεος πέπονθα, ὅτι σε οὐκ ἀπέκτεινα ἀλλὰ ἔδωκα τῷ βουκόλῳ. σύ νυν, ἢν βούλῃ ἐμοὶ πείθεσθαι, τῆς περ Ἀστυάγης ἄρχει χώρης, ταύτης ἁπάσης ἄρξεις. Πέρσας γὰρ ἀναπείσας ἀπίστασθαι στρατηλάτεε ἐπὶ Μήδους:καὶ ἤν τε ἐγὼ ὑπὸ Ἀστυάγεος ἀποδεχθέω στρατηγὸς ἀντία σεῦ, ἔστι τοι τὰ σὺ βούλεαι, ἤν τε τῶν τις δοκίμων ἄλλος Μήδων: πρῶτοι γὰρ οὗτοι ἀποστάντες ἀπ᾽ ἐκείνου καὶ γενόμενοι πρὸς σέο Ἀστυάγεα καταιρέειν πειρήσονται. ὡς ὦν ἑτοίμου τοῦ γε ἐνθάδε ἐόντος, ποίεε ταῦτα καὶ ποίεε κατὰ τάχος (Herodotus, *Histories*, 1.123.4-1.124).

He [Harpagus] artfully slit the belly of a hare, and then leaving it as it was without further harm he put into it a paper on which he wrote what he thought fit. Then he sewed up the hare's belly, and sent it to Persia by the trustiest of his servants, giving him nets to carry as if he were a huntsman. The messenger was charged to give Cyrus the hare and bid him by word of mouth to cut it open with his own hands, none other being present. All this was done. Cyrus took the hare and slit it and read the paper which was in it; the writing was as follows: "Son of Cambyses, seeing that the gods watch over you (for else you had not so prospered) do you now avenge yourself on Astyages, your murderer; for according to his intent you are dead; it is by the gods' doing, and mine, that you live. Methinks you have long ago heard the story of what was done concerning yourself and how Astyages entreated me because I slew you not but gave you to the cowherd. If then you will be counselled by me, you shall rule all the country which is now ruled by Astyages. Persuade the Persians to rebel, and lead their army against the Medes; then you have your desire, whether I be appointed to command the army against you or some other notable man among the Medians; for they will of themselves revolt from Astyages and join you and endeavour to pull him down. Seeing then that all here is ready, do as I say and do it quickly"

ἀρρωδέων [...] τούτων ἕκαστα ἐβουλεύετο ἀπόστασιν: συνέπιπτε γὰρ καὶ τὸν ἐστιγμένον τὴν κεφαλὴν ἀπῖχθαι ἐκ Σούσων παρὰ Ἱστιαίου, σημαίνοντα ἀπίστασθαι Ἀρισταγόρην ἀπὸ βασιλέος. ὁ γὰρ Ἱστιαῖος βουλόμενος τῷ Ἀρισταγόρῃ σημῆναι ἀποστῆναι ἄλλως μὲν οὐδαμῶς εἶχε ἀσφαλέως σημῆναι ὥστε φυλασσομενέων τῶν ὁδῶν, ὁ δὲ τῶν δούλων τὸν πιστότατον ἀποξυρήσας τὴν κεφαλὴν ἔστιξε καὶ ἀνέμεινε ἀναφῦναι τὰς τρίχας, ὡς δὲ ἀνέφυσαν τάχιστα, ἀπέπεμπε ἐς Μίλητον ἐντειλάμενος αὐτῷ ἄλλο μὲν οὐδέν, ἐπεὰν δὲ ἀπίκηται ἐς Μίλητον, κελεύειν Ἀρισταγόρην ξυρήσαντά μιν τὰς τρίχας κατιδέσθαι ἐς τὴν κεφαλήν. τὰ δὲ στίγματα ἐσήμαινε, ὡς καὶ πρότερόν μοι εἴρηται, ἀπόστασιν. ταῦτα δὲ ὁ Ἱστιαῖος ἐποίεε συμφορὴν ποιεύμενος μεγάλην τὴν ἑωυτοῦ κατοχὴν τὴν ἐν Σούσοισι: ἀποστάσιος ὦν γινομένης πολλὰς εἶχε ἐλπίδας μετήσεσθαι ἐπὶ θάλασσαν, μὴ δὲ νεώτερόν τι ποιεύσης τῆς Μιλήτου οὐδαμὰ ἐς αὐτὴν ἥξειν ἔτι ἐλογίζετο (Herodotus, *Histories*, 5.35.2-4).

With [...] fears in his mind, he [Histiaeus] began to plan revolt, for it chanced that at that very time there came from Susa Histiaeus' messenger, the man with the marked head, signifying that Aristagoras should

revolt from the king. Since Histiaeus desired to give word to Aristagoras that he should revolt and had no other safe way of doing so because the roads were guarded, he shaved and branded the head of his most trustworthy slave. He waited till the hair had grown again, and as soon as it was grown, he sent the man to Miletus with no other message except that when he came to Miletus he must bid Aristagoras shave his hair and examine his head. The writing branded on it signified revolt, as I have already said. This Histiaeus did because he greatly disliked his detention at Susa and fully expected to be sent away to the coast in the case that there should be a revolt. If, however, Miletus remained at peace, he calculated that he would never return there.

ἄνειμι δὲ ἐκεῖσε τοῦ λόγου τῇ μοι τὸ πρότερον ἐξέλιπε. ἐπύθοντο Λακεδαιμόνιοι ὅτι βασιλεὺς στέλλοιτο ἐπὶ τὴν Ἑλλάδα πρῶτοι, καὶ οὕτω δὴ ἐς τὸ χρηστήριον τὸ ἐς Δελφοὺς ἀπέπεμψαν, ἔνθα δή σφι ἐχρήσθη τὰ ὀλίγῳ πρότερον εἶπον: ἐπύθοντο δὲ τρόπῳ θωμασίῳ. Δημάρητος γὰρ ὁ Ἀρίστωνος φυγὼν ἐς Μήδους, ὡς μὲν ἐγὼ δοκέω καὶ τὸ οἰκὸς ἐμοὶ συμμάχεται, οὐκ ἦν εὔνοος Λακεδαιμονίοισι, πάρεστι δὲ εἰκάζειν εἴτε εὐνοίῃ ταῦτα ἐποίησε εἴτε καὶ καταχαίρων. ἐπείτε γὰρ Ξέρξῃ ἔδοξε στρατηλατέειν ἐπὶ τὴν Ἑλλάδα, ἐὼν ἐν Σούσοισι ὁ Δημάρητος καὶ πυθόμενος ταῦτα ἠθέλησε Λακεδαιμονίοισι ἐξαγγεῖλαι. ἄλλως μὲν δὴ οὐκ εἶχε σημῆναι: ἐπικίνδυνον γὰρ ἦν μὴ λαμφθείη: ὁ δὲ μηχανᾶται τοιάδε: δελτίον δίπτυχον λαβὼν τὸν κηρὸν αὐτοῦ ἐξέκνησε, καὶ ἔπειτα ἐν τῷ ξύλῳ τοῦ δελτίου ἔγραψε τὴν βασιλέος γνώμην, ποιήσας δὲ ταῦτα ὀπίσω ἐπέτηξε τὸν κηρὸν ἐπὶ τὰ γράμματα, ἵνα φερόμενον κεινὸν τὸ δελτίον μηδὲν πρῆγμα παρέχοι πρὸς τῶν ὁδοφυλάκων. ἐπεὶ δὲ καὶ ἀπίκετο ἐς τὴν Λακεδαίμονα, οὐκ εἶχον συμβαλέσθαι οἱ Λακεδαιμόνιοι, πρίν γε δή σφι, ὡς ἐγὼ πυνθάνομαι, Κλεομένεος μὲν θυγάτηρ Λεωνίδεω δὲ γυνὴ Γοργὼ ὑπέθετο ἐπιφρασθεῖσα αὐτή, τὸν κηρὸν κνᾶν κελεύουσα, καὶ εὑρήσειν σφέας γράμματα ἐν τῷ ξύλῳ. πειθόμενοι δὲ εὗρον καὶ ἐπελέξαντο, ἔπειτα δὲ τοῖσι ἄλλοισι Ἕλλησι ἐπέστειλαν (Herodotus, *Histories*, 7.239)

The Lacedaemonians were the first to be informed that the king [Xerxes] was equipping himself to attack Hellas; with this knowledge it was that they sent to the oracle at Delphi, where they received the answer about which I [Herodotus] spoke a little while ago. Now the way in which they were informed of this was strange. Demaratus son of Ariston, an exile among the Medes, was, as I suppose (reason being also my ally), no friend to the Lacedaemonians, and I leave it to be imagined whether what he did was done out of goodwill or spiteful triumph. When Xerxes was resolved to march against Hellas, Demaratus, who was then at Susa and had knowledge of this, desired to send word of it to the Lacedaemonians. He, however, feared detection and had no other way of informing them than this trick:—taking a double tablet, he scraped away the wax from it, and then wrote the king's plan on the wood. Next he melted the wax back again over the writing, so that the bearer of this seemingly blank tablet might not be troubled by the way-wardens. When the tablet came to Lacedaemon, the Lacedaemonians could not guess its meaning, until at last (as I have been told) Gorgo, Cleomenes' daughter and Leonidas' wife, discovered the trick herself and advised them to scrape the wax away so that they would find writing on the wood. When they did so, they found and read the message, and presently sent it to the rest of the Greeks.

ὅκως βυβλίον γράψειε ἢ Τιμόξεινος ἐθέλων παρὰ Ἀρτάβαζον πέμψαι ἢ Ἀρτάβαζος παρὰ Τιμόξεινον, τοξεύματος παρὰ τὰς γλυφίδας περιειλίξαντες καὶ πτερώσαντες τὸ βυβλίον ἐτόξευον ἐς συγκείμενον

χωρίον. ἐπάιστος δὲ ἐγένετο ὁ Τιμόξεινος προδιδοὺς τὴν Ποτίδαιαν· τοξεύων γὰρ ὁ Ἀρτάβαζος ἐς τὸ συγκείμενον, ἁμαρτὼν τοῦ χωρίου τούτου βάλλει ἀνδρὸς Ποτιδαιήτεω τὸν ὦμον, τὸν δὲ βληθέντα περιέδραμε ὅμιλος, οἷα φιλέει γίνεσθαι ἐν πολέμῳ, οἳ αὐτίκα τὸ τόξευμα λαβόντες ὡς ἔμαθον τὸ βυβλίον, ἔφερον ἐπὶ τοὺς στρατηγούς· παρῆν δὲ καὶ τῶν ἄλλων Παλληναίων συμμαχίη. τοῖσι δὲ στρατηγοῖσι ἐπιλεξαμένοισι τὸ βυβλίον καὶ μαθοῦσι τὸν αἴτιον τῆς προδοσίης ἔδοξε μὴ καταπλῆξαι Τιμόξεινον προδοσίη τῆς Σκιωναίων πόλιος εἵνεκα, μὴ νομιζοίατο εἶναι Σκιωναῖοι ἐς τὸν μετέπειτα χρόνον αἰεὶ προδόται. Ὁ μὲν δὴ τοιούτῳ τρόπῳ ἐπάιστος ἐγεγόνεε (Herodotus, *Histories*, 8.128.2-129.1; see also Aeneas Tacticus, *How to Survive Under Siege*, 31.25-27)

Whenever Timoxenus wrote a letter for sending to Artabazus, or Artabazus to Timoxenus, they would wrap it round the shaft of an arrow at the notches and put feathers to the letter, and shoot it to a place whereon they had agreed. But Timoxenus' plot to betray Potidaea was discovered; for Artabazus in shooting an arrow to the place agreed upon, missed it and hit the shoulder of a man of Potidaea; and a throng gathering quickly round the man when he was struck (which is a thing that ever happens in war), they straightway took the arrow and found the letter and carried it to their generals, the rest of their allies of Pallene being also there present. The generals read the letter and perceived who was the traitor, but they resolved for Scione's sake that they would not smite Timoxenus to the earth with a charge of treason, lest so the people of Scione should ever after being called traitors. Thus was Timoxenus' treachery brought to light.

16: Homer (*Iliad*, 8th/7th century BCE)

ὣς φάτο, τὸν δὲ ἄνακτα χόλος λάβεν οἷον ἄκουσε:

κτεῖναι μέν ῥ᾽ ἀλέεινε, σεβάσσατο γὰρ τό γε θυμῷ,

πέμπε δέ μιν Λυκίην δέ, πόρεν δ᾽ ὅ γε σήματα λυγρὰ

γράψας ἐν πίνακι πτυκτῷ θυμοφθόρα πολλά,

δεῖξαι δ᾽ ἠνώγειν ᾧ πενθερῷ ὄφρ᾽ ἀπόλοιτο

δὴ σῆμα κακὸν παρεδέξατο γαμβροῦ (Homer, *Iliad*, 6.166-170).

[Proetus] shunned killing him [Bellerophon], for his heart shrank from that; but he sent him to Lycia, and gave him fatal tokens, scratching in a folded tablet signs many and deadly, and ordered him to show these to his father-in-law [Iobates], so that he might perish.

δὴ σῆμα κακὸν παρεδέξατο γαμβροῦ (Homer, *Iliad*, 6.178).

he [Iobates] had received from him [Bellerophon] the evil token from his son-in-law [Proetus].

ἣ […] ἄρ᾽ ὣς εἰποῦσ᾽ ἀπέβη πόδας ὠκέα Ἶρις,

αὐτὰρ Ἀχιλλεὺς ὦρτο Διῒ φίλος: ἀμφὶ δ᾽ Ἀθήνη

ὤμοις ἰφθίμοισι βάλ᾽ αἰγίδα θυσσανόεσσαν,

ἀμφὶ δέ οἱ κεφαλῇ νέφος ἔστεφε δῖα θεάων

χρύσεον, ἐκ δ᾽ αὐτοῦ δαῖε φλόγα παμφανόωσαν.

ὡς δ᾽ ὅτε καπνὸς ἰὼν ἐξ ἄστεος αἰθέρ᾽ ἵκηται

τηλόθεν ἐκ νήσου, τὴν δήϊοι ἀμφιμάχωνται,

οἵ τε πανημέριοι στυγερῷ κρίνονται Ἄρηϊ

ἄστεος ἐκ σφετέρου: ἅμα δ᾽ ἠελίῳ καταδύντι

πυρσοί τε φλεγέθουσιν ἐπήτριμοι, ὑψόσε δ᾽ αὐγὴ

γίγνεται ἀΐσσουσα περικτιόνεσσιν ἰδέσθαι,

αἴ κέν πως σὺν νηυσὶν ἄρεω ἀλκτῆρες ἵκωνται:

ὣς ἀπ᾽ Ἀχιλλῆος κεφαλῆς σέλας αἰθέρ᾽ ἵκανε (Homer, *Iliad*, 18.203-214)

So spoke swift-footed Iris and went away; but Achilles, dear to Zeus, rose up, and around his mighty shoulders Athene flung her tasselled aegis, and around his head the fair goddess set thick a golden cloud, and from the man made blaze a gleaming flame. And as smoke goes up from a city and reaches to heaven from afar, from an island that foes beleaguer, and its men contend all day long in hateful war from their city's walls, and then at sunset flame out the beacon fires one after another, and high aloft darts their glare for dwellers round about to look on, in the hope that they may come in their ships to be warders off of ruin, so from the head of Achilles went up the gleam toward heaven.

17: Julius Africanus (*Kestoi*, late 2nd/early 3rd century CE)

Τοῖς κεχρημένοις προδόταις ἀναγκαῖον εἰδέναι πῶς ἐπιστολὰς δεῖ αὐτοὺς εἰσπέμπειν. ἀπόστελλε γοῦν οὕτως. πεμπέσθω ἀνὴρ ἐν τῷ φανερῷ φέρων ἐπιστολήν τινα περὶ ἄλλων πραγμάτων. τοῦ δὲ πορεύεσθαι μέλλοντος κρυφαίως αὐτοῦ εἰς τὸ τῶν ὑποδημάτων πέλμα ἐντεθήτω εἰς τὸ μεταξὺ βιβλίον καὶ καταραπτέσθω· πρὸς δὲ τοὺς πηλοὺς καὶ τὰ ὕδατα εἰς κασσίτερον ἐληλασμένον γραφέσθω πρὸς τὸ μὴ ἀφανίζεσθαι ὑπὸ τῶν ὑδάτων τὰ γράμματα. ἀφικομένου δὲ πρὸς ὃν δεῖ καὶ ἀναπαυομένου νυκτὸς ἀναλυέτω τὰς ῥαφὰς τῶν ὑποδημάτων καὶ ἐξελὼν ἀναγνούς τε καὶ ἄλλα γράψας λάθρα ἀποστελλέτω τὸν ἄνδρα, ἀνταποστείλας καὶ δούς τι φέρειν φανερῶς· οὕτως γὰρ οὔτε ἄλλος οὔτε ὁ φέρων εἰδήσει.

Ἀστράγαλον εὐμεγέθη δεῖ σε τρυπῆσαι τρυπήματα κδ̄, ἓξ εἰς ἑκάστην πλευρὰν τοῦ ἀστραγάλου· ἔστω δὲ τὰ τρυπήματα στοιχεῖα. διαμνημόνευε δὲ ἀφ᾽ ἧς ἂν πλευρᾶς ἄρξηται τὸ ἄλφα καὶ τὰ ἐχόμενα ἅπερ ἐν ἑκάστη πλευρᾷ γέγραπται. μετὰ δὲ ταῦτα ὅταν τινὰ θέλῃς ἐν αὐτῷ τίθεσθαι, λίνῳ δῆσαι. διαιροῦντα δὲ δηλοῦν ἐν τῇ τοῦ λίνου διέρσει, ἀρξάμενος ἐκ τῆς πλευρᾶς τοῦ ἀστραγάλου, ἐν ᾗ τὸ ἄλφα ἐστί, παρελθὼν

τὰ ἐχόμενα τούτου γράμματα, ὅταν ἔλθῃς εἰς πλευρὰν οὗ τὸ ἰῶτα γράμμα ἐστί, δίειρον καὶ πάλιν παρεὶς τὰ ἐχόμενα, ὅπου τὸ νῦ εἶναι συμβαίνει δίειρον, καὶ οὕτως τὰ τοῦ λόγου ἀντιγραφεῖεν ἂν εἰς τὰ τρυπήματα. δεήσεται δὲ τὸν ἀναγινώσκοντα ἀναγράφεσθαι εἰς δέλτον τὰ δηλούμενα γράμματα ἐκ τῶν τρυπημάτων, ἀνάπαλιν γινομένης τῆς ἐξέρσεως τῇ ἐνέρσει. Ἐπέμφθη γράμματά ποτε πολλάκις κατ᾽ Ἤπειρον οὕτως χρησαμένων αὐτῶν. κυνὶ δεσμὸν τεθεικότες περὶ τὸν αὐχένα ἐνέβαλον τοῦ ἱμάντος ἔσωθεν ἐπιστολήν, εἶτα νυκτὸς τοῦτον ἀφῆκαν ἢ μεθ᾽ ἡμέραν πρὸς ὃν ἐξ ἀνάγκης ἤμελλεν ἥξειν, ὅθεν ἀπηνέχθη. ἔστι δὲ τοῦτο Θετταλόν. Ἄλλοι τινὲς εἰς βιβλίον γράψαντες ὡς λεπτότατον μακροὺς στίχους καὶ λεπτὰ γράμματα, ἵνα εὐογκότατα γένηται, εἶτα ἐπὶ τοῦ ὤμου τοῦ χιτωνίσκου ὑποθέντες καὶ ἀποπτύξαντες, ἀνύποπτον ἐποίουν τὴν κομιδὴν τῆς ἐπιστολῆς. Ἄλλοι πάλιν ἐν τῷ τῆς δέλτου ξύλῳ γράψαντες κηρὸν ἐπέτηξαν καὶ ἄλλα εἰς τὸν κηρὸν ἔγραψαν. εἶτα ὅταν ἔλθῃ παρ᾽ ὃν δεῖ τὸν κηρὸν ἐκκνήσας καὶ ἀναγνοὺς ὁμοιοτρόπως ἀνταπέστειλεν. ἐγὼ δὲ τὰς παραγινομένας δέλτους εὐθὺς ἀνοίγειν παραινῶ, διότι τὰ εἰσπεμπόμενα μετὰ ἐπιβουλῆς πάνυ χαλεπὸν φυλάξαι (Julius Africanus, *Kestoi*, 51-53)

Those who employ traitors must know how they should send in messages. Dispatch them, then, like this. Let a man be sent openly bearing some message about other matters. Let the letter be inserted without the knowledge of the bearer in the sole of his sandals and be sewed in, and, to guard against mud and water, have it written on beaten tin so that the writing will not be effaced by the water. And when he reaches the one intended and goes to rest for the night, this person should pull out the stitches of the sandals, take out and read the letter, and, writing another secretly, let him send the man back, having dispatched some reply and having given him something to carry openly. For in this way no one else, not even the messenger, will know the message. In a sufficiently large astragal you must bore twenty-four holes, six on each side. Let the holes stand for letters, and note clearly on which side begins Alpha and which of the following letters have been written on each particular side. Then whenever you wish to make some communication by means of it, tie a thread to it. And you are to make clear your differentiation between the letters by the drawing through of the thread, beginning from the side of the astragal on which Alpha is found, omitting the characters placed next to Alpha when you come to the side where the letter Iota is marked, pass the thread through, and again, disregarding the characters following this, pass the thread through where Nu happens to be, and thus the elements of the word would be indicated in the holes. And it will be necessary for the one who is to read the information to write down upon a tablet the characters revealed by the holes, the unthreading taking place in the reverse order to that of the threading. Letters were often sent in Epirus by the employment of the following method. After getting a collar around a dog's neck, they placed inside the strap a letter; then at night or during the daytime they dispatched the dog to the person to whom he was sure to go, that is, to the one from whom he had been brought. And this is a Thessalian custom. Certain others, by writing long lines with fine characters upon some very thin papyrus, so that they may be as compact as possible, then by placing it on the shoulder under the over-tunic and spreading that out, have caused the letter to be transmitted without suspicion. Others, again, after writing on the wooden part of the tablet, have poured wax over it and written something else on the wax. Then when it came to the appointed person, he, scraping off the wax and reading the writing, sent back a reply in a similar manner. And I advise that letters be opened as soon as received, because it is very difficult to guard against anything sent in by artifice.

18: Justin (*Epitome of the Philippic History of Pompeius Trogus*, 2nd century CE)

Xerxes bellum a patre coeptum aduersus Graeciam per quinquennium instruxit. Quod ubi primum didicit Demaratus, rex Lacedaemoniorum, qui apud Xerxen exulabat, amicior patriae post fugam, quam regi post beneficia, ne inopinato bello opprimerentur omnia in tabellis ligneis magistratibus perscribit easdemque cera superinducta delet, ne aut scriptura sine tegmine iudicium daret aut recens cera dolum proderet, fido deinde seruo perferendas tradit iusso magistratibus Spartanorum tradere. Quibus perlatis, Lacedaemone quaestioni res diu fuit, quod neque scriptum aliquid uiderent nec frustra missas suspicarentur, tantoque rem maiorem, quanto esset occultior putabant. Haerentibus in coniectura uiris, soror regis Leonidae consilium scribentis inuenit. Erasa igitur cera, belli consilia deteguntur (Justin, *Epitome of the Philippic History of Pompeius Trogus*, 2.10.12-17; see also Aeneas Tacticus, *How to Survive Under Siege*, 31.14)

Xerxes […] proceeded, during five years, with his preparations for the war against Greece, which his father had commenced. As soon as Demaratus, king of the Lacedaemonians, who was then an exile at the court of Xerxes, understood his intentions, he, feeling more regard for his country, notwithstanding his banishment, than for the king in return for his favours, sent full intelligence of the matter to the magistrates of the Lacedaemonians, that they might not be surprised by an unexpected attack; writing the account on wooden tablets, and hiding the writing with wax spread over it; taking care, however, not merely that writing without a cover might not give proof against him, but that too fresh wax might not betray the contrivance. These tablets he committed to a trusty slave, who was ordered to deliver them into the hands of the authorities at Sparta. When they were received, the object of them was long a matter of inquiry, because the magistrates could see nothing written on them, and yet could not imagine that they were sent to no purpose; and they thought the matter must be momentous in proportion to its mysteriousness. While the men were still engaged in conjecture, the sister of king Leonidas surmised the writer's intention. The wax being accordingly scraped off, the account of the warlike preparations appeared.

Inter haec Karthaginienses tanto successu rerum Alexandri Magni exterriti, verentes, ne Persico regno et Africum vellet adiungere, mittunt ad speculandos eius animos Hamilcarem cognomento Rodanum, virum sollertia facundiaque ceteros insignem. Augebant enim metum et Tyros, urbs auctorum originis suae, capta et Alexandria aemula Karthaginis in terminis Africae et Aegypti condita et felicitas regis, apud quem nec cupiditas nec fortuna ullo modo terminabantur. Igitur Hamilcar per Parmeniona aditu regis obtento profugisse se ad regem expulsum patria fingit militemque se expeditionis offert. Atque ita consiliis eius exploratis in tabellis ligneis vacua desuper cera inducta civibus suis omnia perscribebat. Sed Karthaginienses post mortem regis reversum in patriam, quasi urbem regi venditasset, non ingrato tantum, verum etiam crudeli animo necaverunt (Justin, *Epitome of the Philippic History of Pompeius Trogus*, 21.6; see also Aulus Gellius, *Attic Nights*, 17.9.16-17)

During these proceedings, the Carthaginians, alarmed at the rapid successes of Alexander the Great, and fearing that he might resolve to annex Africa to his Persian empire, sent Hamilcar, surnamed Rhodanus, a man remarkable for wit and eloquence beyond others, to sound his intentions; for, indeed, the capture

of Tyre, their own parent city, and the founding of Alexandria, as a rival to Carthage, on the confines of Africa and Egypt, as well as the good fortune of the king, whose ambition and success seemed to know no limit, raised their apprehensions to an extreme height. Hamilcar, obtaining access to the king through the favour of Parmenio, represented himself to Alexander as having been banished from his country, and as having fled to him for refuge, offering, at the same time, to serve as a soldier in the expedition against Carthage. Having thus ascertained his views, he sent a full account of them to his countrymen, inscribed on wooden tablets, with blank wax spread over the writing. The Carthaginians, however, when he returned home after the death of Alexander, put him to death, not only ungratefully but cruelly, on pretence that he had offered to sell their city to the king.

19: Ovid (43 BCE-17/18 CE)

18.1: *Amores*

Cum premet ille torum, vultu comes ipsa modesto
        Ibis, ut accumbas – clam mihi tange pedem!
Me specta nutusque meos vultumque loquacem;
        Excipe furtivas et refer ipsa notas.
Verba superciliis sine voce loquentia dicam;
        Verba leges digitis, verba notata mero.[4]
Cum tibi succurret Veneris lascivia nostrae,[5]
        Purpureas tenero pollice tange genas.
Siquid erit, de me tacita quod mente queraris,
        Pendeat extrema mollis ab aure manus.[6]
Cum tibi, quae faciam, mea lux, dicamve, placebunt,[7]
        Versetur digitis anulus usque tuis.
Tange manu mensam, tangunt quo more precantes,
        Optabis merito cum mala multa viro (Ovid, *Amores*, 1.4.15-28)

When he shall press the couch,
        You will come yourself with modest mien to recline beside him –
In secret give my foot a touch.
        Keep your eyes on me, to get my nods and the language of my eyes;
And catch my stealthy signs, and yourself return them.
        With my brows I shall say to you words that speak without sound;
You will read words from my fingers you will read words traced in wine.

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[4] See also Pliny, *Natural History*, 11.45.

[5] Ovid could have been influenced by Sappho here (Fragments, 31.9f). As Ovid will be, Sappho was suffering the pain of seeing a beloved in the company of someone else, and Ovid mentions blushing in the pentameter.

[6] See also Macrobius, *Saturnalia*, 3.11.5.

[7] See also Petronius, *Satyricon*, 64.

When you think of the wanton delights of our love,

Touch you rosy cheeks with tender finger.

If you have in mind some silent grievance against me,

Let your hand gently hold to the lowest part of your ear.

When what I do or what I say shall please you, light of mine,

Keep turning the ring about your finger.

Lay your hand upon the table as those who place their hands in prayer,

When you wish your husband as many ills as he deserves.

Cum surges abitura domum, surgemus et omnes,

In medium turbae fac memor agmen eas.

Agmine me invenies aut invenieris in illo:

Quidquid ibi poteris tangere, tange, mei (Ovid, *Amores*, 1.4.55-58)

When you rise to go home, and all the rest of us rise,

Remember to lose yourself in the midst of the crowd.

You will find me there in that crowd, or will be found by me.

Lay hand on whatever of me you can touch there.

Multa supercilio vidi vibrante loquentes;

Nutibus in vestris pars bona vocis erat.

Non oculi tacuere tui, conscriptaque vino

Mensa, nec in digits littera nulla fuit.

Sermonem agnovi, quod non videatur, agentem

Verbaque pro certis iussa valere notis (Ovid, *Amores*, 2.5.15-20)

I saw you both say many things with quiverings of the brow;

In your nods was much of speech.

Your eyes, too, girl, were not dumb, and the table was written o'er with wine,

Nor did any letter fail your fingers.

Your speech too, I recognised was busied with hidden message

And your words charged to stand for certain meanings.

Candida seu tacito vidit me femina vultu,

In vultu tacitas arguis esse notas (Ovid, *Amores*, 2.7.5-6)

Or if a fair beauty has looked on me with unspeaking face,

You charge that in her face were unspoken signals.

ego, ut arcanas possim signare tabellas,

Neve tenax ceram siccaque gemma trahat,

Umida formosae tangam prius ora puellae –

Tantum ne signem scripta dolenda mihi (Ovid, *Amores*, 2.15.15-18)

To help her seal her secret missives, and to keep the dry,

>   Clinging gem from drawing away the wax,

I should first touch the moist lips of my beautiful love –

>   Only so that I sealed no missive that would bring me pain.

Quid iuvenum tacitos inter convivia nutus

>   Verbaque conpositis dissimulata notis? (Ovid, *Amores*, 3.11a.23-24)

Why tell of the silent nods of young lovers at the banquet board,

>   And of words concealed in the signal agreed upon?

18.2: *Ars Amatoria*

Nos venerem tutam concessaque furta canemus,

>   Inque meo nullum carmine crimen erit (Ovid, *Ars Amatoria*, 1.33-34)

Of safe love-making do I sing, and permitted secrecy,

>   and in my verse shall be no wrong-doing.

Illic invenies quod ames, quod ludere possis, […] (Ovid, *Ars Amatoria*, 1.91)

There will you find an object for passion or for deception, […]

neque te prodet communi noxia culpa,

>   Factaque erunt dominae dictaque nota tibi.

Sed bene celetur: bene si celabitur index,

>   Notitae suberit semper amica tua (Ovid, *Ars Amatoria*, 1.395-398)

sharing a common guilt, she will not betray you,

>   you will know her mistress' words and deeds.

But keep her secret well; if the informer's secret be well kept,

>   she will always gladly foster your intimacy.

eat et blandis peraretur littera verbis,

>   Exploretque animos, primaque temptet iter.

Littera Cydippen pomo perlata fefellit,

>   Insciaque est verbis capta puella suis (Ovid, *Ars Amatoria*, 1.455-458).

Let a letter speed, traced with persuasive words,

>   And explore her feelings, and be the first to try the path.

A letter carried in an apple betrayed Cydippe,

>   And the maid was deceived unawares by her own words.

sive illa toro resupina feretur.

>   Lecticam dominae dissimulanter adi,

Neve aliquis verbis odiosas offerat auris,

    Qua potes ambiguis callidus abde notis (Ovid, *Ars Amatoria*, 1.487-490)

Whether she be borne reclining on her cushions,

    Approach your mistress' litter in dissembling fashion,

And lest someone intrude hateful ears to your words, hide them,

    So far as you may, in cunning ambiguities.

Hic tibi multa licet sermone latentia tecto

    Dicere quae dici sentiat illa sibi:

Blanditiasque leves tenui perscribere vino,

    Ut dominam in mensa se legat illa tuam:

Atque oculos oculis spectare fatentibus ignem:

    Saepe tacens vocem verbaque vultus habet.

Fac primus rapias illius tacta labellis

    Pocula quaque bibet parte puella bibas:

Et quemcumque cibum digitis libaverit illa,

    Tu pete dumque petis sit tibi tacta manus.

Sint etiam tua vota, viro placuisse puellae:

    Utilior vobis factus amicus erit (Ovid, *Ars Amatoria*, 1.569-580)

Here may you say many things lurking in covered speech,

    So that she may feel they are said to her,

And you may trace light flatteries in thin characters of wine,

That on the table she may read herself your mistress;

    You may gaze at her eyes with eyes that confess their flame:

There are often voice and words in a silent look.

    See that you are the first to seize the cup her lips have touched,

And drink at that part where she has drunk;

    And whatever food she has touched with her fingers see that you ask for,

And while you ask contrive to touch her hand.

    Let it also be your aim to please your lady's husband;

He will be more useful to you, if made a friend.

Ebrietas ut vera nocet sic ficta iuvabit:

    Fac titubet blaeso subdola lingua sono,

Ut quicquid facias dicasve porterius aequo,

    Credatur niminum causa fuisse merum (Ovid, *Ars Amatoria*, 1.597-600)

As real drunkenness does harm, so will feigned bring profit:

    make your crafty tongue stumble in stammering talk,

So that, whatever you do or say more freely than you should,

  May be put down to too much wine.

Ille levi virga (virgam nam forte tenebat)

  Quod rogat in spisso litore pingit opus.

"Haec" inquit "Troia est" (muros in litore fecit):

  "Hic tibi sit Simios; haec mea castra puta.

Campus erat" (campumque facit), "quem caede Dolonis

  Sparsimus, Haemonios dum vigil optat equos.

Illic Sithonii fuerant tentoria Rhesi:

  Hac ego sum captis nocte revectus equis"

Pluraque pingebat subitus cum Pergama fluctus

  Abstulit et Rhesi cum duce castra suo (Ovid, *Ars Amatoria*, 2.131-140)

He with a light staff (for by chance he carried a staff)

  Draws in the deep sand the tale of which she asks.

'Here', says he 'is Troy' (he made walls upon the beach),

  'And here, suppose, is Simios; imagine this to be my camp.

There was a plain' (and he draws a plain) 'which we sprinkled with

  Dolon's blood, while he watched and yearned for the Haemonian steeds.

There were the tents of Sithonian Rhesus;

  On that night I rode back on the captured horses.'

More was he portraying, when a sudden wave washed Pergamus away,

  And the camp of Rhesus with its chief.

Si tibi per tutum planumque negabitur ire,

  Atque erit opposita ianua fulta sera,

At tu per praeceps tecto delabere aperto:

  Det quoque furtivas alta fenestra vias (Ovid, *Ars Amatoria*, 2.243-246)

If it is denied you to go by a safe and easy road,

  And if the door be held by a fastened bolt,

Yet slip down headlong through an opening in the roof;

  Or let a high window afford a secret path.

Si latet ars prodest adfert depresna pudorem,

  Atque adimit merito tempus in omne fidem (Ovid, *Ars Amatoria*, 2.313-314)

Art, if hidden, avails; if detected, it brings shame,

  And deservedly discredits you for ever.

quotiens scribes totas prius ipse tabellas

  Inspice: plus multae quam sibi missa legunt (Ovid, *Ars Amatoria*, 2.394-396)

whenever you write, examine the whole letter first yourself;

Many read more than the message sent to them.

Quae bene celaris, siqua tamen acta patebunt,

Illa, licet pateant, tu tamen usque nega (Ovid, *Ars Amatoria*, 2.409-410)

Should what you have well concealed be yet somehow made manifest,

Manifest though it be yet deny it ever.

Qui modo celabas monitu tua criminal nostro,

Flecte iter, et monitu detege furta meo (Ovid, *Ars Amatoria*, 2.427-428)

You who were but now concealing your fault by my advice,

turn your path, and by my advice uncover your deceit.

Hoc vetiti; vos este vetat deprensa Dione

Insidias illas, quas tulit ipsa, dare.

Nec vos rivali laqueos disponite, nec vos

Excipite arcana verba notate manu (Ovid, *Ars Amatoria*, 2.593-596)

Be warned of this; Dione's detection warns you not

To set those snares that she endured.

Devise no toils for your rival,

Nor lie in wait for letters written in a secret hand.

Nos etiam verso parce profitemur amores,

Tectaque sunt solida mystica furta fide (Ovid, *Ars Amatoria*, 2.639-640)

As for me I recount even true amours but sparely

And a solid secrecy hides my dark intrigues.

quamvis vittae careatis honore,

Est vobis vestros fallere cura viros,

Ancillae puerique manu perarate tabellas,

Pignora nec iuveni credite vestra novo.

Perfidius ille quidem, qui talia pignora servat,

Sed tamen Aetnaei fulminis instar habent.

Vidi ego pallentes isto terrore puellas

Servitium miseras tempus in omne pati.

Iudice me fraus est concessa repellere fraudem,

Armaque in armatos sumere iura sinunt.

Ducere consuescat multas manus una figuras,

(A! pereant per quos ista monenda mihi)

Nec nisi deletis tutum rescribere ceris,

     Ne teneat geminas una tabella manus (Ovid, *Ars Amatoria*, 3.483-498)

Though you lack the honour of the fillet,

     You too have your lords you are eager to deceive,

Write your messages by the hand of slave or handmaid,

     And entrust not your pledges to a youth you now not.

Perfidious indeed is he who keeps such pledges,

     But they hold what is like a thunderbolt of Aetna.

I have seen women pale with terror on that account,

     Suffering in their misery unending servitude.

In my judgment fraud may be repelled by fraud

     And the laws allow arms to be taken against an armed foe.

Let one hand be accustomed to tracing many figures,

     (Ah perish they who make this counsel needful)

Nor is it safe to write an answer unless the wax is quite smoothed over,

     Lest one tablet hold two hands.

Scilicet obstabit custos, ne scribere possis,

     Sumendae detur cum tibi tempus aquae?

Conscia cum possit scriptas portare tabellas,

     Qquas tegat in tepido fascia lata sinu?

Cum possit sura chartas celare ligatas,

     Et vincto blandas sub pede ferre notas?

Caverit haec custos, pro charta conscia tergum

     Praebeat, inque suo corpore verba ferat.

Tuta quoque est fallitque oculos e lacte recenti

     Littera: carbonis pulvere tange, leges

Fallet et umiduli quae fiet acumine lini,

     Un ferat occultas pura tabella notas (Ovid, *Ars Amatoria*, 3.619-630)

Will a guardian forsooth prevent your writing,

     When time is allowed you for taking a bath?

When a confidant can carry a written tablet,

     Concealed by a broad band on her warm bosom?

When she can hide a paper packet in her stocking

     And bear your coaxing message 'twixt foot and sandal?

Should the guardian beware of this,

     Let the confidant offer her back for our note,

And bear your words upon her body.

     A letter too is safe and escapes the eye, when written in new milk:

Touch it with coal-dust and you will read.

That too will deceive which is written with a stalk of moistened flax,

So that a pure sheet may bear hidden marks.

18.3: *Heroides*

Atque aliquis posita monstrat fera proelia mensa,

Pingit et exiguo Pergama tota mero:

'Hac ibat Simois; haec est Sigeia tellus;

Hic steterat Priami regia celsa senis.

illic Aeacides, illic tendebat Ulixes

hic lacer admissos terruit Hector equos (Ovid, *Heroides*, 1.31-36)

And someone about the board shows thereon the fierce combat,

And with scant tracing of wine pictures forth all Pergamum:

'Here flowed the Simois; this is the Sigeian land;

here stood the lofty palace of Priam the ancient.

Yonder tented the son of Aeacus yonder, Ulysses

Here, in wild course went the frightened steeds with Hector's mutilated corpse'

quid epistula lecta nocebit?

Te quoque in hac aliquid quod iuvet esse potest;

His arcana notis terra pelagoque feruntur (Ovid, *Heroides*, 4.3-5)

What shall reading of a letter harm?

In this one, too, there may be something to pleasure you;

In these characters of mine, secrets are borne over land and sea.

20: Philo of Byzantium (*Compendium of Mechanics (Μεγανίκε συνταχις)*), 3rd century BCE)

chalcantho[…], spongia in illo madefacta, postquam ea detersae fuerint litterae apparebunt. (Philo of Byzantium, *Compendium of Mechanics*, D.80 (102.40–44))

[Use gallnuts] dissolved in water to write […], and then use a sponge soaked in vitriol rubbed gently over the writing to reveal the letters.

21: Pliny the Elder (*Natural History*, 77-79 CE)

Tithymallum nostri herbam lactariam vocant, alii lactucam caprinam, narrantque lacte eius inscripto corpore, cum inaruerit, si cinis inspargatur, apparere litteras, et ita quidam adulteras adloqui maluere quam codicillis (Pliny the Elder, *Natural History*, 26.39 (62)).

Tithymalus is called "milky plant" by us Romans, sometimes "goat lettuce." It is said that, if letters are traced on the body with its milk and then allowed to dry, on being sprinkled with ash the letters become visible. And it is by this means, rather than by a letter, that some lovers have preferred to address unfaithful wives.

22: Plutarch (late 1ˢᵗ/early 2ⁿᵈ century CE)

21.1: *Life of Agesilaus*

καθ᾽ ὁδὸν ὢν σκυτάλην δέχεται παρὰ τῶν οἴκοι τελῶν κελεύουσαν αὐτὸν ἄρχειν ἅμα καὶ τοῦ ναυτικοῦ. τοῦτο μόνῳ πάντων ὑπῆρξεν Ἀγησιλάῳ (Plutarch, *Life of Agesilaus*, 10.5)

On the road he [Agesilaus] received a dispatch-roll [*scytale*] from the magistrates at home, which bade him assume control of the navy as well as of the army. This was an honour which no one ever received but Agesilaus.

Ἀλέξανδρος δὲ καὶ προσεπέσκωψε πυθόμενος τὴν πρὸς Ἆγιν Ἀντιπάτρου μάχην, εἰπών· "Ἔοικεν, ὦ ἄνδρες, ὅτε Δαρεῖον ἡμεῖς ἐνικῶμεν ἐνταῦθα, ἐκεῖ τις ἐν Ἀρκαδίᾳ γεγ Ἀλέξανδρος δὲ καὶ ὀνέναι μυομαχία·" πῶς οὐκ ἦν ἄξιον τὴν Σπάρτην μακαρίσαι τῆς Ἀγησιλάου τιμῆς πρὸς ταύτην καὶ πρὸς τοὺς νόμους τῆς εὐλαβείας; ὃς ἅμα τῷ τὴν σκυτάλην ἐλθεῖν εὐτυχίαν τοσαύτην καὶ δύναμιν παροῦσαν καὶ τηλικαύτας ἐλπίδας ὑφηγουμένας ἀφεὶς καὶ προέμενος εὐθὺς ἀπέπλευσεν "ἀτελευτήτῳ ἐπὶ ἔργῳ," πολὺν ἑαυτοῦ πόθον τοῖς συμμάχοις ἀπολιπών, καὶ μάλιστα δὴ τὸν Ἐρασιστράτου τοῦ Φαίακος ἐλέγξας λόγον, εἰπόντος ὡς εἰσὶ δημοσίᾳ μὲν Λακεδαιμόνιοι βελτίονες, ἰδίᾳ δὲ Ἀθηναῖοι (Plutarch, *Life of Agesilaus*, 15.4-6)

Alexander [the Great] actually went so far as to jest when he heard of Antipater's battle with Agis, saying: "It would seem, my men, that while we were conquering Darius here, there has been a battle of mice there in Arcadia." Why, then, should we not call Sparta happy in the honour paid to her by Agesilaus, and in his deference to her laws? No sooner had the dispatch-roll [*scytale*] come to him than he renounced and abandoned the great good fortune and power already in his grasp, and the great hopes which beckoned him on, and at once sailed off, "with task all unfulfilled," leaving behind a great yearning for him among his allies, and giving the strongest confutation to the saying of Erasistratus the son of Phaeax, who declared that the Lacedaemonians were better men in public life, but the Athenians in private.

21.2: *Life of Alcibiades*

τέλος δὲ Κριτίας ἐδίδασκε Λύσανδρον ὡς Ἀθηναίων οὐκ ἔστι δημοκρατουμένων ἀσφαλῶς ἄρχειν Λακεδαιμονίοις τῆς Ἑλλάδος· Ἀθηναίους δέ, κἂν πρᾴως πάνυ καὶ καλῶς πρὸς ὀλιγαρχίαν ἔχωσιν, οὐκ ἐάσει ζῶν Ἀλκιβιάδης ἀτρεμεῖν ἐπὶ τῶν καθεστώτων. οὐ μὴν ἐπείσθη γε πρότερον τούτοις ὁ Λύσανδρος ἢ παρὰ τῶν οἴκοι τελῶν σκυτάλην ἐλθεῖν κελεύουσαν ἐκ ποδῶν ποιήσασθαι τὸν Ἀλκιβιάδην, εἴτε κἀκείνων φοβηθέντων τὴν ὀξύτητα καὶ μεγαλοπραγμοσύνην τοῦ ἀνδρός, εἴτε τῷ Ἄγιδι χαριζομένων (Plutarch, *Life of Alcibiades*, 38)

Critias tried to make it clear to Lysander that as long as Athens was a democracy the Lacedaemonians could not have safe rule over Hellas; and that Athens, even though she were very peacefully and well disposed towards oligarchy, would not be suffered, while Alcibiades was alive, to remain undisturbed in her present condition. However, Lysander was not persuaded by these arguments until a dispatch-roll [*scytale*] came from the authorities at home bidding him put Alcibiades out of the way; either because

they too were alarmed at the vigour and enterprise of the man, or because they were trying to gratify Agis.

21.3: *Life of Artaxerxes*

ὐχ ἧττον οὖν τοῖς ἄνω πιστεύων ὁ Κῦρος ἢ τοῖς. περὶ αὐτόν, ἐπεχείρει τῷ πολέμῳ· καὶ Λακεδαιμονίοις ἔγραφε, παρακαλῶν βοηθεῖν καὶ συνεκπέμπειν ἄνδρας, οἷς ἔφη δώσειν, ἂν μὲν πεζοὶ παρῶσιν, ἵππους, ἂν δ' ἱππεῖς, συνωρίδας· ἐὰν δ' ἀγροὺς ἔχωσι, κώμας· ἐὰν δὲ κώμας, πόλεις· μισθοῦ δὲ τοῖς στρατευομένοις οὐκ ἀριθμόν, ἀλλὰ μέτρον ἔσεσθαι. μεγαληγορῶν δὲ περὶ αὐτοῦ πολλά, καὶ καρδίαν ἔφη τοῦ ἀδελφοῦ φορεῖν βαρυτέραν, καὶ φιλοσοφεῖν μᾶλλον, καὶ μαγεύειν βέλτιον, οἶνον δὲ πλείονα πίνειν καὶ φέρειν· ἐκεῖνον δ' ὑπὸ δειλίας καὶ μαλακίας ἐν μὲν τοῖς κυνηγεσίοις μηδ' ἐφ' ἵππου, ἐν δὲ τοῖς κινδύνοις μηδ' ἐπὶ τοῦ θρόνου καθῆσθαι. Λακεδαιμόνιοι μὲν οὖν σκυτάλην πρὸς Κλέαρχον ἀπέστειλαν, ὑπηρετεῖν Κύρῳ πάντα κελεύοντες. ὁ δὲ Κῦρος ἀνέβαινεν ἐπὶ βασιλέα, βαρβαρικήν τε πολλὴν ἔχων δύναμιν καὶ μισθοφόρους Ἕλληνας ὀλίγῳ τρισχιλίων καὶ μυρίων ἀποδέοντας, ἄλλας ἐπ' ἄλλαις ποιούμενος. προφάσεις τῆς στρατείας. οὐ μὴν ἔλαθέ γ' εἰς πολὺν χρόνον, ἀλλ' ἧκε βασιλεῖ Τισσαφέρνης αὐτάγγελος, καὶ πολὺς θόρυβος εἶχε τὰ βασίλεια, τῆς τε Παρυσάτιδος τὴν πλείστην αἰτίαν τοῦ πολέμου φερομένης, καὶ τῶν φίλων. αὐτῆς ἐν ὑποψίαις ὄντων καὶ διαβολαῖς (Plutarch, *Life of Artaxerxes*, 6.2-5)

Cyrus relied quite as much upon the people of the interior as upon those of his own province and command, when he began the war. He also wrote to the Lacedaemonians, inviting them to aid him and send him men, and promising that he would give to those who came, if they were footmen, horses; if they were horsemen, chariots and pairs; if they had farms, he would give them villages; if they had villages, cities; and the pay of the soldiers should not be counted, but measured out. Moreover, along with much high-sounding talk about himself, he said he carried a sturdier heart than his brother, was more of a philosopher, better versed in the wisdom of the Magi, and could drink and carry more wine than he. His brother [Artaxerxes], he said, was too effeminate and cowardly either to sit his horse in a hunt, or his throne in a time of peril. The Lacedaemonians, accordingly, sent a dispatch-roll [*scytale*] to [their general] Clearchus ordering him to give Cyrus every assistance. So Cyrus marched up against the king with a large force of Barbarians and nearly thirteen thousand Greek mercenaries, alleging one pretext after another for his expedition. But the real object of it was not long concealed, for Tissaphernes [a Persian general and statesmen] went in person to the king and informed him of it. Then there was a great commotion at the court, Parysatis [Cyrus's mother] being most blamed for the war, and her friends undergoing suspicion and accusation.

21.4: *Life of Lysander*

ὁ δὲ Λύσανδρος […], αὐτὸς μὲν ἐπὶ Θρᾴκης ἐξέπλευσε, τῶν δὲ χρημάτων τὰ περιόντα καὶ ὅσας δωρεὰς αὐτὸς ἢ στεφάνους ἐδέξατο, πολλῶν, ὡς εἰκός, διδόντων ἀνδρὶ δυνατωτάτῳ καὶ τρόπον τινὰ κυρίῳ τῆς Ἑλλάδος, ἀπέστειλεν εἰς Λακεδαίμονα διὰ Γυλίππου τοῦ στρατηγήσαντος περὶ Σικελίαν. ὁ δέ, ὡς λέγεται, τὰς ῥαφὰς τῶν ἀγγείων κάτωθεν ἀναλύσας καὶ ἀφελὼν συχνὸν ἀργύριον ἐξ ἑκάστου πάλιν συνέρραψεν, ἀγνοήσας ὅτι γραμμάτιον ἐνῆν ἑκάστῳ τὸν ἀριθμὸν σημαῖνον. ἐλθὼν δὲ εἰς Σπάρτην ἃ μὲν ὑφῄρητο κατέκρυψεν ὑπὸ τὸν κέραμον τῆς οἰκίας, τὰ δὲ ἀγγεῖα παρέδωκε τοῖς ἐφόροις καὶ τὰς σφραγῖδας ἐπέδειξεν. ἐπεὶ δὲ ἀνοιξάντων καὶ ἀριθμούντων διεφώνει πρὸς τὰ γράμματα τὸ πλῆθος τοῦ

ἀργυρίου καὶ παρεῖχε τοῖς ἐφόροις ἀπορίαν τὸ πρᾶγμα, φράζει θεράπων τοῦ Γυλίππου πρὸς αὐτοὺς αἰνιξάμενος ὑπὸ τῷ κεραμικῷ κοιτάζεσθαι πολλὰς γλαῦκας. ἦν γάρ, ὡς ἔοικε, τὸ χάραγμα τοῦ πλείστου τότε νομίσματος διὰ τοὺς Ἀθηναίους γλαῦκες. ὁ μὲν οὖν Γύλιππος αἰσχρὸν οὕτω καὶ ἀγεννὲς ἔργον ἐπὶ λαμπροῖς τοῖς ἔμπροσθεν καὶ μεγάλοις ἐργασάμενος μετέστησεν ἑαυτὸν ἐκ Λακεδαίμονος (Plutarch, *Life of Lysander*, 16-17.1)

Lysander, […], sailed for Thrace himself, but what remained of the public moneys, together with all the gifts and crowns which he had himself received, — many people, as was natural, offering presents to a man who had the greatest power, and who was, in a manner, master of Hellas, — he sent off to Lacedaemon by Gylippus, who had held command in Sicily. But Gylippus, as it is said, ripped open the sacks at the bottom, and after taking a large amount of silver from each, sewed them up again, not knowing that there was a writing in each indicating the sum it held. And when he came to Sparta, he hid what he had stolen under the tiles of his house, but delivered the sacks to the *ephors*, and showed the seals upon them. When, however, the *ephors* opened the sacks and counted the money, its amount did not agree with the written lists, and the thing perplexed them, until a servant of Gylippus made the truth known to them by his riddle of many owls sleeping under the tiling. For most of the coinage of the time, as it seems, bore the forgery of an owl, owing to the supremacy of Athens. Gylippus, then, after adding a deed so disgraceful and ignoble as this to his previous great and brilliant achievements, removed himself from Lacedaemon.

ἐπεὶ δὲ Φαρνάβαζος ἀδικούμενος ὑπ' αὐτοῦ τὴν χώραν ἄγοντος καὶ φέροντος ἀπέστειλεν εἰς τὴν Σπάρτην κατηγόρους, ἀγανακτήσαντες οἱ ἔφοροι τῶν μὲν φίλων αὐτοῦ καὶ συστρατήγων ἕνα Θώρακα λαβόντες ἀργύριον ἰδίᾳ κεκτημένον ἀπέκτειναν, ἐκείνῳ δὲ σκυτάλην ἔπεμψαν ἥκειν κελεύοντες (Plutarch, *Life of Lysander*, 19.4)

When Pharnabazus, who was outraged by Lysander's pillaging and wasting his territory, sent men to Sparta to denounce him, the *ephors* were incensed, and when they found Thorax, one of Lysander's friends and fellow-generals, with money in his private possession, they put him to death, and sent a dispatch-scroll [*scytale*] to Lysander, ordering him home.

ἔστι δὲ ἡ σκυτάλη τοιοῦτον. ἐπὰν ἐκπέμπωσι ναύαρχον ἢ στρατηγὸν οἱ ἔφοροι, ξύλα δύο στρογγύλα μῆκος καὶ πάχος ἀκριβῶς ἀπισώσαντες, ὥστε ταῖς τομαῖς ἐφαρμόζειν πρὸς ἄλληλα, τὸ μὲν αὐτοὶ φυλάττουσι, θάτερον δὲ τῷ πεμπομένῳ διδόασι. ταῦτα δὲ τὰ ξύλα σκυτάλας καλοῦσιν. ὅταν οὖν ἀπόρρητόν τι καὶ μέγα φράσαι βουληθῶσι, βιβλίον ὥσπερ ἱμάντα μακρὸν καὶ στενὸν ποιοῦντες περιελίττουσι τὴν παρ' αὐτοῖς σκυτάλην, οὐδὲν διάλειμμα ποιοῦντες, ἀλλὰ πανταχόθεν κύκλῳ τὴν ἐπιφάνειαν αὐτῆς τῷ βιβλίῳ καταλαμβάνοντες. τοῦτο δὲ ποιήσαντες ἃ βούλονται καταγράφουσιν εἰς τὸ βιβλίον, ὥσπερ ἐστὶ τῇ σκυτάλῃ περικείμενον· ὅταν δὲ γράψωσιν, ἀφελόντες τὸ βιβλίον ἄνευ τοῦ ξύλου πρὸς τὸν στρατηγὸν ἀποστέλλουσι. δεξάμενος δὲ ἐκεῖνος ἄλλως μὲν οὐδὲν ἀναλέξασθαι δύναται τῶν γραμμάτων συναφὴν οὐκ ἐχόντων, ἀλλὰ διεσπασμένων, τὴν δὲ παρ' αὐτῷ σκυτάλην λαβὼν τὸ τμῆμα τοῦ βιβλίου περὶ αὐτὴν περιέτεινεν, ὥστε, τῆς ἕλικος εἰς τάξιν ὁμοίως ἀποκαθισταμένης, ἐπιβάλλοντα τοῖς πρώτοις τὰ δεύτερα, κύκλῳ τὴν ὄψιν ἐπάγειν τὸ συνεχὲς ἀνευρίσκουσαν. καλεῖται δὲ ὁμωνύμως τῷ ξύλῳ σκυτάλη τὸ βιβλίον, ὡς τῷ μετροῦντι τὸ μετρούμενον (Plutarch, *Life of Lysander*, 19.5-7)

The dispatch-scroll [the *scytale*] is of the following character. When the *ephors* send out an admiral or a general, they make two round pieces of wood exactly alike in length and thickness, so that each corresponds to the other in its dimensions, and keep one themselves, while they give the other to their envoy. These pieces of wood they call "*scytalae*". Whenever, then, they [the *ephors* of Sparta] wish to send some secret and important message, they make a scroll […], long and narrow, like a leathern strap, and wind it round their "*scytale*," leaving no vacant space thereon, but covering its surface all round with the parchment. After doing this, they write what they wish on the parchment, just as it lies wrapped about the "*scytale*"; and when they have written their message, they take the parchment off, and send it, without the piece of wood, to the commander. He, when he has received it, cannot otherwise get any meaning of it, — since the letters have no connection, but are disarranged, — unless he takes his own "*scytale*" and winds the strip of parchment about it, so that, when its spiral course is restored perfectly, and that which follows is joined to that which precedes, he reads around the staff, and so discovers the continuity of the message. And the parchment, like the staff, is called "*scytale*," as the thing measured bears the name of the measure.

ὁ […] Λύσανδρος, ἐλθούσης τῆς σκυτάλης πρὸς αὐτὸν εἰς τὸν Ἑλλήσποντον, διεταράχθη, καὶ μάλιστα τὰς τοῦ Φαρναβάζου δεδιὼς κατηγορίας, ἐσπούδασεν εἰς λόγους αὐτῷ συνελθεῖν, ὡς λύσων τὴν διαφοράν. καὶ συνελθὼν ἐδεῖτο γράψαι περὶ αὐτοῦ πρὸς τοὺς ἄρχοντας ἑτέραν ἐπιστολὴν ὡς οὐδὲν ἠδικημένον οὐδ' ἐγκαλοῦντα. πρὸς Κρῆτα δὲ ἄρα, τὸ τοῦ λόγου, κρητίζων ἠγνόει τὸν Φαρνάβαζον. ὑποσχόμενος γὰρ ἅπαντα ποιήσειν, φανερῶς μὲν ἔγραψεν οἵαν ὁ Λύσανδρος ἠξίωσεν ἐπιστολήν, κρύφα δὲ εἶχεν ἑτέραν αὐτόθι γεγραμμένην. ἐν δὲ τῷ τὰς σφραγῖδας ἐπιβάλλειν ἐναλλάξας τὰ βιβλία μηδὲν διαφέροντα τῇ ὄψει, δίδωσιν ἐκείνην αὐτῷ τὴν κρύφα γεγραμμένην. ἀφικόμενος οὖν ὁ Λύσανδρος εἰς Λακεδαίμονα καὶ πορευθείς, ὥσπερ ἔθος ἐστίν, εἰς τὸ ἀρχεῖον, ἀπέδωκε τοῖς ἐφόροις τὰ γράμματα τοῦ Φαρναβάζου, πεπεισμένος ἀνηρῆσθαι τὸ μέγιστον αὐτοῦ τῶν ἐγκλημάτων: ἠγαπᾶτο γὰρ ὁ Φαρνάβαζος ὑπὸ τῶν Λακεδαιμονίων, προθυμότατος ἐν τῷ πολέμῳ τῶν βασιλέως στρατηγῶν γεγενημένος. ἐπεὶ δὲ ἀναγνόντες οἱ ἔφοροι τὴν ἐπιστολὴν ἔδειξαν αὐτῷ, καὶ συνῆκεν ὡς - οὐκ ἄρ' Ὀδυσσεύς ἐστιν αἱμύλος μόνος (Plutarch, *Life of Lysander*, 20)

Lysander, when the dispatch-scroll [*scytale*] reached him at the Hellespont, was much disturbed, and since he feared the denunciations of Pharnabazus above all others, he hastened to hold a conference with him, hoping to compose their quarrel. At this conference he begged Pharnabazus to write another letter about him to the magistrates, stating that he had not been wronged at all, and had no complaints to make. But in thus "playing the Cretan against a Cretan," as the saying is, he misjudged his opponent. For Pharnabazus, after promising to do all that he desired, openly wrote such a letter as Lysander demanded, but secretly kept another by him ready written. And when it came to putting on the seals, he exchanged the documents, which looked exactly alike, and gave him the letter which had been secretly written. Accordingly, when Lysander arrived at Sparta and went, as the custom is, into the senate-house, he gave the *ephors* the letter of Pharnabazus, convinced that the greatest of the complaints against him was thus removed; for Pharnabazus was in high favour with the Lacedaemonians, because he had been, of all the

King's generals, most ready to help them in the war. But when the *ephors*, after reading the letter, showed it to him, and he understood that: "Odysseus, then, is not the only man of guile"[8]

23: Polyaenus (*Stratagems of War*, second half 2nd century CE)

Ἱστιαῖος Μιλήσιος ἐν Πέρσαις διάγων παρὰ Δαρείῳ βασιλεῖ βουλόμενος Ἰωνίαν ἀποστῆσαι γράμματα πέμπειν οὐ θαρρῶν διὰ τοὺς φύλακας τῶν ὁδῶν οἰκέτην πιστὸν ἀποξύρας τὰς τρίχας στίγματα ἐνέγραψατο τῇ κεφαλῇ ''Ἱστιαῖος' Ἀρισταγόρα Ἰωνίαν ἀπόστησον' καὶ τοῖς στίγμασιν ἐπέθρεψε τὰς τρίχας. τοῦτον τὸν τρόπον λαθὼν τοὺς φύλακας ὁ στιγματοφόρος καταβὰς ἐπὶ θάλατταν ἀποξθράμενος ἔδειξεν Ἀρισταγόρα τὰ στίγματα. ὁ δὲ ἀναγνοὺς ἀπέστησεν τὴν Ἰωνίαν (Polyaenus, *Stratagems of War*, 1.24; see also Herodotus, *Histories*, 5.35; Aeneas Tacticus, *How to Survive Under Siege*, 31.8-29; Aulus Gellius, *Attic Nights*, 17.9.18-27)

Whilst Histiaeus, the Miletian, resided at the court of King Darius, in Persia, he formed the design of engaging the Ionians to revolt; but was at a loss how safely to transmit a letter, the way being every where possessed by the king's guard. Shaving the head of a confidential servant, in incisions of it he thus briefly wrote: 'Histiaeus to Aristagoras, solicit the revolt of Ionia.' And as soon as his [the slave's] hair had grown again, he dispatched him to Aristagoras. By this means he passed the guards unsuspected; and, after bathing in the sea, ordered himself to be shaved, and then shewed Aristagoras the marks: which, when he had read, he prosecuted the design, and affected the revolt of Ionia.

Δημάρατος ἐπιστέλλων Σπαρτιάταις περὶ τῆς Χέρξου στρατείας ἐς πτύχα ἀκέρωτον τὴν ἐπιστολὴν γράψας ἐπεκήρωσεν, ἵνα ὡς ἄγραφος διὰ τῶν φυλάκων κομισθῇ (Polyaenus, *Stratagems of War*, 2.20; see also Aeneas Tacticus, *How to Survive Under Siege*, 31.14).

The intelligence, which Demaratus communicated to the Lacedaemonians, concerning Xerxes' army, he engraved on a tablet; which he afterwards covered with wax; that if intercepted, no characters might appear.

Καρχεδόνιοι Σικελίαν πορτοῦντες ὅπως αὐτοῖς ἀπὸ λιβύης διὰ τάχους τὰ ἀναγκαῖα κομίζοιτο, κλεψύδρας δύο ποιήσαντες ἴσας τοῖς μεγέθεσι, κύκλους ἐν ἑκατέρα διέγραψαν ἴσους ἔχοντας τὴν αὐτὴν ἐπιγραφήν. Ἐπεγέγραπτο δὲ οὗ μὲν χρεία νεῶν οὗ δὲ στρογγύλον πλοίων, ἀλλαχοῦ δὲ χρυσίου, καὶ πάλιν σίτου καὶ πάλιν ἀλλαχοῦ μεχανεμάτων καὶ πάλιν σίτου καὶ πάλιν θηρίων καὶ πάλιν ὅπλον καὶ πεζῶν καὶ ἱππέων. Οὕτω δὴ πάντας τοὺς κύκλους ἐπιγράψαντες, τὴν ἑτέραν τῶν κλεψυδρῶν ἐν Σικελίᾳ κατασχόντες [τὴν ἑτέραν] ἐξέπεμψαν εἰς Καρχηδόνα συντάξαντες, ἣν ἴδοσιν ἀρθέντα πυγρὸν γὰρ αὐτῶν ἀποσκοπεῖν ὅταν ὅ δεύτερος ἀναδειχθῇ πυρσός, ποίου κύκλου τοῦτο συμβήσεται οὗ τὴν ἐπιγραφὴν ἀναγνόντας ὅτι τάχος τὸ σημαινόμενον διὰ τῶν γραμμάτων ἐκπέμπειν. Τοῦτον τὸν τρόπον ὀξυτάτην εἶχον Καρχηδόνιοι τὴν κομιδὴν τῶν εἰς τὸν πόλεμον ἀναγκαίων (Polyaenus, *Stratagems of War*, 6.16.2; see also Polybius, *The Histories*, 10.43-46)

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[8] The text 'Odysseus, then, is not the only man of guile' is an iambic trimeter of some unknown poet (Perrin 1916, 288-289).

When the Carthaginians had invaded Sicily, in order to be supplied from Libya with provisions and naval stores in the most expeditious manner, they made two hour glasses exactly of the same description, and drew around each of them an equal number of circles. One of those circles they engraved "A want of ships of war", on another "A want of store-ships", on another "A want of gold", on another "Of machines", on another again "Of corn", on another "Of cattle"; "Of arms"; "Of infantry"; and "Of cavalry". The circles in this manner all filled up, one of these hour glasses the forces kept with them in Sicily; and sent the other to Carthage: directing the Carthaginians, when they saw the second torch raised, to send the particulars described in the second circle; when the third, those in the third circle; and so on. By this means they received a steady supply of whatever they wanted.

Φαρνάβαζος κατὰ Λυσάνδρου Λακεδαιμονίοις ἔγραψεν. Οἱ δὲ ἀπό τῆς Ασίας αὐτόν ἀνεκαλέσαντο σκυτάλην πέμψαντες. Λύσανδρος ἱκετεύει Φαρνάβαζον ἄλλην ἐπιστολὴν ὑπὲρ αὐτοῦ γράψαι φυλάνθροπου. Φαρνάβαζος ὑποχόμενος φανερῶς μὲν ἔγραψεν οἵαν ὁ Λυσάνδρος ἠξίωσε, κρύφα δὲ εἶχεν ἑτέραν γεγραμμένην, ἐν δὲ τῷ τὴν σφραγίδα ἐπιβάλλειν ὑπαλλάξας τὰ βιβλία μηδὲν διαφέροντα τῇ ὄψει δίδωσιν αὐτῷ τὴν κρύφα γεγραμμένην. Λυσάνδρος ἐπανελθὼν ἐς Λακεδαίμονα τοῖς ἐφόροις κατὰ τὸ ἔθος ἀπέδωκε τὰ γράμματα, οἱ δὲ ἀναγνόντες ἔδειξαν αὐτῷ τὴν ἐπιστολὴν προειπόντες μηδὲν ἀπολογίας δεῖσθαι αὐτὸν καθ᾽ αὐτοῦ ἐπιστολὴν κομίσαντα (Polyaenus, *Stratagems of War*, 7.19)

Pharnabazus, having preferred charges of misdemeanor against Lysander, the Lacedaemonians sent him letters [*scytalae*] to recall from Asia. When Lysander importuned him to be less severe on his representation of his conduct; Pharnabazus promised he would; and addressed a letter to the Lacedaemonians of the purport Lysander desired. But at the same time, he privately wrote another letter, giving a very different account. In sealing the letter, he contrived to slip that which he had privately written, and which was in shape exactly the same with that Lysander had derived his letter to the *Ephori*; which as soon as they had read, they shewed him; observing at the same time that there was no room for any defense, the very letter, which he himself produced, concerning him.

24: Polybius (*Histories*, 2nd century BCE)

Τοῦ δὲ κατὰ τὰς πυρσείας γένους, μεγίστας δὴ παρεχομένου χρείας ἐν τοῖς πολεμικοῖς, ἀνεργάστου πρότερον ὑπάρχοντος, χρήσιμον εἶναί μοι δοκεῖ τὸ μὴ παραδραμεῖν, ἀλλὰ ποιήσασθαι περὶ αὐτοῦ τὴν ἁρμόζουσαν μνήμην. ὅτι μὲν οὖν ὁ καιρὸς ἐν πᾶσι μεγάλην ἔχει μερίδα πρὸς τὰς ἐπιβολάς, μεγίστην δ᾽ ἐν τοῖς πολεμικοῖς, παντὶ δῆλον· τῶν δὲ πρὸς τοῦτο συναγωνισμάτων πλείστην ἔχουσι δύναμιν οἱ πυρσοί. <δηλοῦσι γὰρ> τίνα μὲν ἄρτι γέγονε, τινὰ δ᾽ ἀκμὴν ἐνεργεῖται, καὶ δυνατόν ἐστι γινώσκειν, ᾧ μέλει, ποτὲ μὲν ἡμερῶν τριῶν ἢ τεττάρων ὁδὸν ἀπέχοντι, ποτὲ δὲ καὶ πλειόνων. ὥστ᾽ ἀεὶ τοῖς δεομένοις πράγμασιν ἐπικουρίας παράδοξον γίνεσθαι τὴν βοήθειαν διὰ τῆς τῶν πυρσῶν ἀπαγγελίας. τὸν μὲν <οὖν> πρὸ τούτου χρόνον ἁπλῆς γινομένης τῆς πυρσείας κατὰ τὸ πλεῖστον αὐτὴν ἀνωφελῆ συνέβαινε γίνεσθαι τοῖς χρωμένοις. διὰ γὰρ συνθημάτων ὡρισμένων ἔδει τὴν χρείαν συντελεῖν· τῶν δὲ πραγμάτων ἀορίστων ὑπαρχόντων τὰ πλεῖστα διέφυγε τὴν τῶν πυρσῶν χρείαν, οἷον ἐπ᾽ αὐτῶν τῶν νῦν εἰρημένων. ὅτι μὲν οὖν εἰς Ὠρεὸν καὶ Πεπάρηθον ἢ Χαλκίδα πάρεστι στόλος, δυνατὸν ἦν διασαφεῖν τοῖς περὶ τούτου συνθεμένοις· ὅτι δὲ μεταβάλλονταί τινες τῶν πολιτῶν ἢ προδιδόασιν, ἢ φόνος ἐν τῇ πόλει γέγονεν, ἤ τι τῶν τοιούτων, ἃ δὴ συμβαίνει μὲν πολλάκις, πρόληψιν δ᾽ ἔχειν πάντων ἀδύνατον—μάλιστα δὲ τὰ

παραδόξως γινόμενα τῆς ἐκ τοῦ καιροῦ συμβουλίας καὶ ἐπικουρίας προσδεῖται—τὰ τοιαῦτα πάντα διέφυγε τὴν τῶν πυρσῶν χρείαν. περὶ ὧν γὰρ οὐκ ἐνεδέχετο προνοηθῆναι, περὶ τούτων οὐδὲ σύνθημα ποιήσασθαι δυνατόν (Polybius, *Histories*, 10.43)

I think that as regards the system of signalling by fire, which is now of the greatest possible service in war but was formerly undeveloped, it will be of use not to pass it over but to give it a proper discussion. It is evident to all that in every matter, and especially in warfare, the power of acting at the right time contributes very much to the success of enterprises, and fire signals are the most efficient of all the devices which aid us to do this. For they show what has recently occurred and what is still in the course of being done, and by means of them anyone who cares to do so even if he is at a distance of three, four, or even more days' journey can be informed. So that it is always surprising how help can be brought by means of fire messages when the situation requires it. Now in former times, as fire signals were simple beacons, they were for the most part of little use to those who used them. For the service had to be performed by signals previously determined upon, and as facts are indefinite, most of them defied communication by fire signals. To take the case I just mentioned, it was possible for those who had agreed on this to convey information that a fleet had arrived at Oreus, Peparethus, or Chalcis, but when it came to some of the citizens having changed sides or having been guilty of treachery or a massacre having taken place in the town, or anything of the kind, things that often happen, but cannot all be foreseen—and it is chiefly unexpected occurrences which require instant consideration and help—all such matters defied communication by fire signal. For it was quite impossible to have a preconcerted code for things which there was no means of foretelling.

Αἰνείας […] βουληθεὶς διορθώσασθαι τὴν τοιαύτην ἀπορίαν, ὁ τὰ περὶ τῶν Στρατηγικῶν ὑπομνήματα συντεταγμένος, βραχὺ μέν τι προεβίβασε, τοῦ γε μὴν δέοντος ἀκμὴν πάμπολυ τὸ κατὰ τὴν ἐπίνοιαν ἀπελείφθη. γνοίη δ᾽ ἄν τις ἐκ τούτων. φησὶ γὰρ δεῖν τοὺς μέλλοντας ἀλλήλοις διὰ τῶν πυρσῶν δηλοῦν τὸ κατεπεῖγον ἀγγεῖα κατασκευάσαι κεραμεᾶ, κατά τε τὸ πλάτος καὶ κατὰ τὸ βάθος ἰσομεγέθη πρὸς ἀκρίβειαν: εἶναι δὲ μάλιστα τὸ μὲν βάθος τριῶν πηχῶν, τὸ δὲ πλάτος πήχεος. εἶτα παρασκευάσαι φελλοὺς βραχὺ κατὰ πλάτος ἐνδεεῖς τῶν στομάτων, ἐν δὲ τούτοις μέσοις ἐμπεπηγέναι βακτηρίας διῃρημένας εἰς ἴσα μέρη τριδάκτυλα, καθ᾽ ἕκαστον δὲ μέρος εἶναι περιγραφὴν εὔσημον. ἐν ἑκάστῳ δὲ μέρει γεγράφθαι τὰ προφανέστατα καὶ καθολικώτατα τῶν ἐν τοῖς πολεμικοῖς συμβαινόντων, οἷον εὐθέως ἐν τῷ πρώτῳ, διότι " πάρεισιν ἱππεῖς εἰς τὴν χώραν," ἐν δὲ τῷ δευτέρῳ διότι "πεζοὶ βαρεῖς," ἐν δὲ τῷ τρίτῳ "ψιλοί," τούτων δ᾽ ἑξῆς " πεζοὶ μεθ᾽ ἱππέων," εἶτα "πλοῖα," μετὰ δὲ ταῦτα "σῖτος," καὶ κατὰ τὸ συνεχὲς οὕτω, μέχρις ἂν ἐν πάσαις γραφῇ ταῖς χώραις τὰ μάλιστ᾽ ἂν ἐκ τῶν εὐλόγων προνοίας τυγχάνοντα καὶ συμβαίνοντα κατὰ τοὺς ἐνεστῶτας καιροὺς ἐκ τῶν πολεμικῶν. τούτων δὲ γενομένων ἀμφότερα κελεύει τρῆσαι τὰ ἀγγεῖα πρὸς ἀκρίβειαν, ὥστε τοὺς αὐλίσκους εἶναι καὶ κατ᾽ ἴσον ἀπορρεῖν: εἶτα πληρώσαντας ὕδατος ἐπιθεῖναι τοὺς φελλοὺς ἔχοντας τὰς βακτηρίας, κἄπειτα τοὺς αὐλίσκους ἀφεῖναι ῥεῖν ἅμα. τούτου δὲ συμβαίνοντος δῆλον ὡς ἀνάγκη πάντων ἴσων καὶ ὁμοίων ὄντων, καθ᾽ ὅσον ἂν ἀπορρέῃ τὸ ὑγρόν, κατὰ τοσοῦτον τοὺς φελλοὺς καταβαίνειν καὶ τὰς βακτηρίας κρύπτεσθαι κατὰ τῶν ἀγγείων. ὅταν δὲ τὰ προειρημένα γένηται κατὰ τὸν χειρισμὸν ἰσοταχῇ καὶ σύμφωνα, τότε κομίσαντας ἐπὶ τοὺς τόπους, ἐν οἷς ἑκάτεροι μέλλουσι συντηρεῖν τὰς πυρσείας, ἑκάτερον θεῖναι τῶν ἀγγείων. εἶτ᾽ ἐπὰν ἐμπέσῃ τι τῶν ἐν τῇ βακτηρίᾳ γεγραμμένων, πυρσὸν ἆραι κελεύει, καὶ μένειν, ἕως ἂν ἀνταίρωσιν οἱ συντεταγμένοι:

γενομένων δὲ φανερῶν ἀμφοτέρων ἅμα τῶν πυρσῶν καθελεῖν. εἶτ᾽ εὐθέως ἀφεῖναι τοὺς αὐλίσκους ῥεῖν. ὅταν δὲ καταβαίνοντος τοῦ φελλοῦ καὶ τῆς βακτηρίας ἔλθῃ τῶν γεγραμμένων ὃ βούλει δηλοῦν κατὰ τὸ χεῖλος τοῦ τεύχους, ἆραι κελεύει τὸν πυρσόν· τοὺς δ᾽ ἑτέρους ἐπιλαβεῖν εὐθέως τὸν αὐλίσκον, καὶ σκοπεῖν τί κατὰ τὸ χεῖλός ἐστι τῶν ἐν τῇ βακτηρίᾳ γεγραμμένων· ἔσται δὲ τοῦτο τὸ δηλούμενον πάντων ἰσοταχῶς παρ᾽ (Polybius, *Histories*, 10.44)

Aeneas, […] the writer of the treatise on tactics, wished to correct this defect, and did in fact make some improvement; but his invention still fell very far short of what was wanted, as the following passage from his treatise will show. "Let those who wish," he says, "to communicate any matter of pressing importance to each other by fire-signals prepare two earthenware vessels of exactly equal size both as to diameter and depth. Let the depth be three cubits, the diameter one. Then prepare corks of a little shorter diameter than that of the vessels: and in the middle of these corks fix rods divided into equal portions of three fingers' breadth, and let each of these portions be marked with a clearly distinguishable line: and in each let there be written one of the most obvious and universal of those events which occur in war; for instance in the first 'cavalry have entered the country,' in the second 'hoplites,' in the third 'light-armed,' in the next 'infantry and cavalry,' in another 'ships,' in another 'corn,' and so on, until all the portions have written on them the events which may reasonably be expected to occur in the particular war. Then carefully pierce both the vessels in such a way that the taps shall be exactly equal and carry off the same amount of water. Fill the vessels with water and lay the corks with their rods upon its surface, and set both taps running together. This being done, it is evident that if there is perfect equality in every respect between them, both corks will sink exactly in proportion as the water runs away, and both rods will disappear to the same extent into the vessels. When they have been tested, and the rate of the discharge of water has been found to be exactly equal in both, then the vessels should be taken respectively to the two places from which the two parties intend to watch for fire signals. As soon as any one of those eventualities which are inscribed upon the rods takes place, raise a lighted torch, and wait until the signal is answered by a torch from the others: this being raised, both parties are to set the taps running together. When the cork and rod on the signalling side has sunk low enough to bring the ring containing the words which give the desired information on a level with the rim of the vessel, a torch is to be raised again. Those on the receiving side are then at once to stop the tap, and to look at the words in the ring of the rod which is on a level with the rim of their vessel. This will be the same as that on the signalling side, assuming everything to be done at the same speed on both sides"

ταῦτα δὲ βραχὺ μέν τι τῆς διὰ τῶν συνθημάτων πυρσείας ἐξήλλαχεν, ἀκμὴν δ᾽ ἐστὶν ἀόριστα. δῆλον γὰρ [ἔσται] ὡς οὔτε προϊδέσθαι τὰ μέλλοντα πάντα δυνατὸν οὔτε προϊδόμενον εἰς τὴν βακτηρίαν γράψαι· λοιπὸν ὁπόταν ἐκ τῶν καιρῶν ἀνυπονόητά τινα συμβαίνῃ, φανερὸν ὡς οὐ δύναται δηλοῦσθαι κατὰ ταύτην τὴν ἐπίνοιαν. καὶ μὴν οὐδ᾽ αὐτῶν τῶν ἐν τῇ βακτηρίᾳ γεγραμμένων οὐδέν ἐστιν ὡρισμένον. πόσοι γὰρ ἥκουσιν ἱππεῖς ἢ πόσοι πεζοὶ καὶ ποῦ τῆς χώρας καὶ πόσαι νῆες καὶ πόσος σῖτος, οὐχ οἷόν τε διασαφῆσαι· περὶ γὰρ ὧν ἀδύνατον γνῶναι πρὶν ἢ γενέσθαι, περὶ τούτων οὐδὲ συνθέσθαι πρὸ τοῦ δυνατόν. τὸ δὲ συνέχον ἐστὶ τοῦτο· πῶς γὰρ ἄν τις βουλεύσαιτο περὶ τοῦ βοηθεῖν μὴ γινώσκων πόσοι πάρεισι τῶν πολεμίων ἢ ποῦ; πῶς δὲ θαρρῆσαι πάλιν ἢ τοὐναντίον ἢ καθόλου διανοηθείη τι μὴ συνεὶς πόσαι νῆες ἢ πόσος σῖτος ἥκει παρὰ τῶν συμμάχων· (Polybius, *Histories*, 10.45.1-5)

[Aeneas' method] is a slight advance on beacons with a preconcerted code, but it is still quite indefinite. For it is evident that it is neither possible to foresee all contingencies, or even if one did to write them all on the rod. So that when circumstances produce some unexpected event, it is evident that it cannot be conveyed by this plan. Again none of the things written on the rod are defined statements, for it is impossible to indicate how many infantry are coming and to what part of the country, or how many ships or how much corn. For it is impossible to agree beforehand about things of which one cannot be aware before they happen. And this is the vital matter; for how can anyone consider how to render assistance if he does not know how many of the enemy have arrived, or where? And how can anyone be of good cheer or the reverse, or in fact think of anything at all, if he does not understand how many ships or how much corn has arrived from the allies?

τὸ τῶν στοιχείων πλῆθος ἑξῆς δεῖ λαμβάνοντας διελεῖν εἰς πέντε μέρη κατὰ πέντε γράμματα. λείψει δὲ τὸ τελευταῖον ἑνὶ στοιχείῳ· τοῦτο δ᾽ οὐ βλάπτει πρὸς τὴν χρείαν. μετὰ δὲ ταῦτα πλατεῖα παρεσκευάσθαι πέντε τοὺς μέλλοντας ἀποδιδόναι τὴν πυρσείαν ἀλλήλοις ἑκατέρους καὶ γράψαι τῶν μερῶν ἑξῆς εἰς ἕκαστον πλατεῖον, κἄπειτα συνθέσθαι πρὸς αὑτοὺς διότι τοὺς μὲν πρώτους ἀρεῖ πυρσοὺς ὁ μέλλων σημαίνειν ἅμα καὶ δύο καὶ μενεῖ μέχρις ἂν ὁ ἕτερος ἀνταίρῃ. τοῦτο δ᾽ ἔσται χάριν τοῦ διὰ ταύτης τῆς πυρσείας ἑαυτοῖς ἀνθομολογήσασθαι διότι πρωσοέχουσι. καθαιρεθέντων δὲ τούτων λοιπὸν ὁ σημαίνων ἀρεῖ μὲν τοὺς πρώτους ἐκ τῶν εὐωνύμων, διασαφῶν τὸ πλατεῖον ποῖον δεήσει σκοπεῖν, οἷον ἐὰν μὲν τὸ πρῶτον, ἕν᾽, ἂν δὲ τὸ δεύτερον, δύο, καὶ κατὰ λόγον οὕτω· τοὺς δὲ δευτέρους ἐκ τῶν δεξιῶν κατὰ τὸν αὐτὸν λόγον, ποῖον δεήσει γράμμα τῶν ἐκ τοῦ πλατείου γράφειν αὖ τὸν ἀποδεχόμενον τὴν πυρσείαν. (Polybius, *Histories*, 10.45.6-12).

We take the alphabet and divide it into five parts, each consisting of five letters. There is one letter less in the last division, but this makes no practical difference. Each of the two parties who are about to signal to each other must now get ready five tablets and write one division of the alphabet on each tablet, and then come to an agreement that the man who is going to signal is in the first place to raise two torches and wait until the other replies by doing the same. This is for the purpose of conveying to each other that they are both at attention. These torches having been lowered the dispatcher of the message will now raise the first set of torches on the left side indicating which tablet is to be consulted, *i.e.* one torch if it is the first, two if it is the second, and so on. Next he will raise the second set on the right on the same principle to indicate what letter of the tablet the receiver should write down.

25: Porphyry of Tyre (*Life of Pythagoras*, 3rd century CE)

ἐν Αἰγύπτῳ μὲν τοῖς ἱερεῦσι συνῆν καὶ τὴν σοφίαν ἐξέμαθε καὶ τὴν Αἰγυπτίων φωνήν. γραμμάτων δε τρισσὰς διαφορὰς ἐπιστολογραφικῶν τε καὶ ἱερογλυφικῶν καὶ συμβολικῶν τβῶν μὲν κοινολογουμένων κατὰ μίμησιν τῶν δ᾽ ἀλληγορονμένων κατά τινας αἰνιγμους καὶ περὶ θεῶν πλέον τι ἐμαΐθεν (Porphyry of Tyre, *Life of Pythagoras,* 11-12)

In Egypt he [Pythagoras] lived with the priests, and learned the language and wisdom of the Egyptians, and their three kinds of letters, the epistolographic, the hieroglyphic, and symbolic, whereof one [the

epistolographic way] imitates the common way of speaking, while the others [the hieroglyphic and symbolic ways] express the sense of allegory and parable.

26: Suetonius (*Life of the Caesars: Lives of the Caesars* 1 and 2. *The Deified Julius* (1) and *The Deified Augustus* (2), 121 CE)

Exstant et ad Ciceronem, item ad familiares domesticis de rebus, in quibus, si qua occultius perferenda erant, per notas scripsit, id est sic structo litterarum ordine, ut nullum verbum effici posset; quae si qui investigare et persequi velit, quartam elementorum litteram, id est D pro A et perinde reliquas commutet (Suetonius, *Life of the Caesars* 1. *The Deified Julius*, 56.6)

There are […] letters of his [Caesar] to Cicero, as well as to his intimates on private affairs, and in the latter, if he had anything confidential to say, he wrote it in cipher, that is, by so changing the order of the letters of the alphabet that not a word could be made out. If anyone wishes to decipher these, and get at their meaning, he must substitute the fourth letter of the alphabet, namely D, for A, and so with the others.

Orthographiam, id est formulam rationemque scribendi a grammaticis institutam, non adeo custodit ac videtur eorum potius sequi opinionem, qui perinde scribendum ac loquamur existiment. Nam quod saepe non litteras modo sed syllabas aut permutat aut praeterit, communis hominum error est. Nec ego id notarem, nisi mihi mirum videretur tradidisse aliquos, legato eum consulari successorem dedisse ut rudi et indocto, cuius manu "ixi" pro "ipsi" scriptum animadverterit. Quotiens autem per notas scribit, B pro A, C pro B ac deinceps eadem ratione sequentis litteras ponit; pro X autem duplex A. (Suetonius, *Lives of the Caesars* 2. *The Deified Augustus*, 88)

[Augustus] does not strictly comply with orthography, that is to say the theoretical rules of spelling laid down by the grammarians, seeming to be rather of the mind of those who believe that we should spell exactly as we pronounce. Of course his frequent transposition or omission of syllables as well as of letters are slips common to all mankind. I should not have noted this, did it not seem to me surprising that some have written that he cashiered a consular governor, as an uncultivated and ignorant fellow, because he observed that he had written ixi for ipsi.

27: Xenophon (*Hellenica*, late 5th/early 4th century BCE)

ἀκούσαντες ταῦτα οἱ ἔφοροι ἐσκεμμένα τε λέγειν ἡγήσαντο αὐτὸν καὶ ἐξεπλάγησαν, καὶ οὐδὲ τὴν μικρὰν καλουμένην ἐκκλησίαν συλλέξαντες, ἀλλὰ συλλεγόμενοι τῶν γερόντων ἄλλος ἄλλοθι ἐβουλεύσαντο πέμψαι τὸν Κινάδωνα εἰς Αὐλῶνα σὺν ἄλλοις τῶν νεωτέρων καὶ κελεῦσαι ἥκειν ἄγοντα τῶν Αὐλωνιτῶν τέ τινας καὶ τῶν εἱλώτων τοὺς ἐν τῇ σκυτάλῃ γεγραμμένους. ἀγαγεῖν δὲ ἐκέλευον καὶ τὴν γυναῖκα, ἣ καλλίστη μὲν αὐτόθι ἐλέγετο εἶναι, λυμαίνεσθαι δ᾿ ἐῴκει τοὺς ἀφικνουμένους Λακεδαιμονίων καὶ πρεσβυτέρους καὶ νεωτέρους (Xenophon, *Hellenica*, 3.3.8)

Upon hearing […] statements the *ephors* came to the conclusion that he [an informant] was describing a well-considered plan, and were greatly alarmed; and without even convening the Little Assembly, as it

was called, but merely gathering about them—one *ephor* here and another there—some of the senators, they decided to send Cinadon to Aulon along with others of the younger men, and to order him to bring back with him certain of the Aulonians and Helots whose names were written in the official dispatch [*scytale*]. And they ordered him to bring also the woman who was said to be the most beautiful woman in Aulon and was thought to be corrupting the Lacedaemonians who came there, older and younger alike.

ἀλλὰ μὴν καὶ πρὸς Ὀλυνθίους εἰδότες ὑμᾶς πόλεμον ἐκφέροντας συμμαχίαν ἐποιοῦντο, καὶ ὑμεῖς γε τότε μὲν ἀεὶ προσείχετε τὸν νοῦν πότε ἀκούσεσθε βιαζομένους αὐτοὺς τὴν Βοιωτίαν ὑφ᾽ αὑτοῖς εἶναι: νῦν δ᾽ ἐπεὶ τάδε πέπρακται, οὐδὲν ὑμᾶς δεῖ Θηβαίους φοβεῖσθαι: ἀλλ᾽ ἀρκέσει ὑμῖν μικρὰ σκυτάλη ὥστ᾽ ἐκεῖθεν πάντα ὑπηρετεῖσθαι ὅσων ἂν δέησθε, ἐὰν ὥσπερ ἡμεῖς ὑμῶν, οὕτω καὶ ὑμεῖς ἡμῶν ἐπιμελῆσθε (Xenophon, *Hellenica*, 5.2.34-35)

[Leontiades addresses the Lacedaemonians:] Again, knowing that you [the Lacedaemonians] were making war upon the Olynthians, they [the Thebans] undertook to conclude an alliance with them, and you in those past days were always uneasily watching for the time when you should hear that they were forcing Boeotia to be under their sway; but now that this stroke has been accomplished, there is no need of your fearing the Thebans; on the contrary, a brief message [*scytale*] from you will suffice to secure from that quarter all the support that you may desire, provided only you show as much concern for us as we have shown for you.

οἱ Λακεδαιμόνιοι πολὺ προθυμότερον τὴν εἰς τὴν Ὄλυνθον στρατιὰν συναπέστελλον. καὶ ἐκπέμπουσι Τελευτίαν μὲν ἁρμοστήν, τὴν δ᾽ εἰς τοὺς μυρίους σύνταξιν αὐτοί τε ἅπαντας συνεξέπεμπον, καὶ εἰς τὰς συμμαχίδας πόλεις σκυτάλας διέπεμπον, κελεύοντες ἀκολουθεῖν Τελευτίᾳ κατὰ τὸ δόγμα τῶν συμμάχων. καὶ οἵ τε ἄλλοι προθύμως τῷ Τελευτίᾳ ὑπηρέτουν, καὶ γὰρ οὐκ ἀχάριστος ἐδόκει εἶναι τοῖς ὑπουργοῦσί τι, καὶ ἡ τῶν Θηβαίων δὲ πόλις, ἅτε καὶ Ἀγησιλάου ὄντος αὐτῷ ἀδελφοῦ, προθύμως συνέπεμψε καὶ ὁπλίτας καὶ ἱππέας (Xenophon, *Hellenica*, 5.2.37)

The Lacedaemonians with much more spirit set about dispatching the joint army to Olynthus [after the speech of Leontiades]. They sent out Teleutias as governor, and not only sent with him their own full contingent of the total ten thousand men, but also transmitted official dispatches [scytalae] to the various allied states, directing them to follow Teleutias in accordance with the resolution of the allies. And all the states gave their hearty support to Teleutias, — for he was regarded as a man not ungrateful to those who performed any service, — while the Theban state in particular, inasmuch as he was a brother of Agesilaus, eagerly sent with him both hoplites and horsemen.

Appendix 4: Medieval, Renaissance, and Early Modern sources on cryptography and steganography referring to Greco-Roman sources

1: Leon Battista Alberti (*De Componendis Cifris*, 1466-1467)

Prius de indice mobili. Sit verbi gratia inter nos constitutus index ex mobili tabella k. Statuam tabellam formulae uti quidem scribenti mihi libuerit, puta ut k ipsa statuta sub maiuscula B et sequens sub sequenti. Ad te igitur scribens primam omnium scribam B maiusculam sub qua indicem k in formula scripturus posuerim; id indicabit ut id quoque tu in provincia volens nostra legere, formulam quae apud te gemella est versionibus aptes usque sub B itidem sit index ipse k. Hinc demum caeterae omnes litterae minores in epistola inventae superiorum stabilium vim et sonos significabunt. Cum autem tres quottuorve dictiones exscripsero mutabo nostra in formula situm indicis versione circuli, ut sit index ipse k fortassis sub R. Ergo in epistola inscribam maiusculam R inde igitur k significabit non amplius B sed R et quae sequentur singulae superiorum stabilium novissima suscipient significata. Tu idem in provincia interlegendum admonitus inventa maiuscula eam scies nihil aliud importare ex se nisi ut moneat mobilis circuli situm atque indicis collocationem isthic esse immutatam. Ergo tu quoque sub ea indicem collocabis, eo pacto facillime cuncta perleges et perdisces. Caeterum altera illa indicis constitutio, quae fiat ex maiusculis, est ut constet inter nos ex maiuscularum ipsarum numero quaenam earum index sit; atque esto sit mihi tecum index constitutus B. Prima omnium in epistola quam ad te scribam erit littera ex minoribus quae libuerit, puta q; eam igitur conversion tabellarum in formula locabis sub ipsa indice B. Hinc fiet ut ipsa q significet sonetque B. Demum in caeteris sequemur scriptione, uti de superiori mobili diximus indice. Cum autem erit immutanda cifrae tabella et formulae habitus, tum inscribam loco in epistola unicam non plures ex litteris numeralibus, hoc est ex his quae sub numeris aderunt constitutae minoris quae significet puta 3 aut 4 et eiusmodi. Hancque ipsam inversione tabellarum substituam indici B constituto atque deinceps prout scribendi ratio postulabit, prosequar minusculis litteris maiorum significata perscribens. Hic etiam quo magis atque magis scrutatores fallas, poteris cum amico constituere ad quem scripturus sis ut maiusculae interpositae (quae alioquin nullae interponentur) nihil important et similia pleraque poteris quae longum et supervacuum est prosequi. Itaque cuiusque maiusculae sonos et vox quattuor (ut vides) et viginti formis litterarum poterit indicari et contra minuscularum quaeque litterarum viginti poterit maiorum significata et amplius quattuor numerales dicere indicis et circuli inversione et positione variata. Venio ad numeralium usum, quo nihil admirabilius. Venio ad numeralium usum, quo nihil admirabilius. Numerales litterae sunt, uti dixi, minusculae, quae supra se scriptos in tabella stabili numeros significant. Numerales quidem de se praestant ut duabus tribusve quattuorve in unum ordinem adiunctis trecentae atque sex et triginta significari possint integrae orationes ad arbitrium.

Nam ex his numeralibus litteris iunctis binatim ut puta ps quae 12 fortasse significent et pf quae fortassis 13 significabunt et eiusmodi iunctionibus (quaequidem ex his quattuor numeralibus fieri binatim possunt) orationes indicabuntur usque sexdecim. Sin autem numerales eaedem litterae ternatim iungentur puta psf quae fortassis 123 significent et sfp quae 231 significent, tunc quidem dabitur ut orationes possis explicare usque sexaginta et quattuor. Si demum quaternatim uti sfkp, quae significent 2341 aut fpsk quae significant 3124 et eiusmodi iungentur litterae, dabuntur tunc ex earum adiunctionibus uti orationes explicentur integrae adusque 256. Itaque harum omnium summa habebitur orationum integrarum 336. Atqui istarum quidem usus veniet hunc in modum. Nam seorsum componemus tabulam linearum 336, in qua ordinibus explicabimus singulas quae fieri possunt numeralium istiusmodi adiunctiones, easque apponemus capitibus litterarum, sic, nam ad primam quidem lineam erit 11, ad secundam 12, ad tertiam 13, ad quartam 14, ad quintam 21, ad sextam 22, ad septimam 23, et deinceps reliqua ut in ea tabula infra subnotavimus. Hinc tabulae ex constituto singulis lineis ad suos numeros adscribemus singulas quas libuerit integras orationes, puta post numerum 12: "Naves quas polliciti sumus milite frumentoque refertas paravimus". Similes igitur quibusque istorum numerorum in tabula adscribemus ad arbitrium animi orationes integras. Istius meae tabulae sit exemplar apud te necesse est, tu igitur in provincia cum ad te meae pervenerint litterae et in epistola offenderis litteras numerales, notabis quos indicent numeros, spectabis ex tabula isthac integrarum orationum atque inde perdisces quid sit quod scripserim; quo scribendi commento nihil brevius, nihil tutius, nihil ad cyfrarum usum excogitari aptius accommodatiusve potest, duabus tribusve aut usque quattuor litteris, at his quidem non semper eisdem sed variis trecentas et sex atque triginta explicari orationes integras et diversas posse, quis non admiretur? Et fortassis conferet duas habere tabulas numerales apud me et duas aeque tales apud te, in quarum alteris ordine positi, uti exposuimus, numeri ex principiis versuum sese legenti promptissimum exhibeant; in alteris vero tabulis ad ordinem alphabeti positae sint orations sub litterarum titulis quo illic quidem non diffusius quaerendae ex tabula orations sint et promptius scribenti suppeditentur. Tituli orationum erunt habendi sic: nam quae orationes ad annonam facient, ponentur sub titulo A, quae ad bellum administrandum sub <titulo> B, quae ad naves sub <titulo> N et istiusmodi reliqua. Atqui different quidem inter se tabulae isthaec numerales, quod in illis cuiusque versus principium significabitur numeris, post sequentur orationes; in his vero alteris numeri non in principio versuum sed littera titulo consona adscribetur, post sequetur oratio, in fine autem aderunt numeri prout eisdem ipsis orationibus in altera parili tabula istiusmodi orationum fuerant perscripti. Scripturus ergo ad te quam instituerim orationem eam ex tabula disquiro qua inventa sub litterarum titulo cui supposita est, specto ex fine numeros annotatos. Hos ea re ipse ex formula cyfrae nostris litteris illic eos numeros significantibus pono in epistola. Tu uti dixi ex numeris illico explicatas habebis orationes. Hoc opusculum velim apud amicos nostros observari ne in vulgus imperitorum prodeat et profanetur digna res principe et maximis rebus agendis dedito (Alberti, *De Componendis Cifris*, 14-16).

First the mobile index. Say for example we have mutually established k as the index of the mobile circle. Writing, the formulae are positioned at will, say such k lies under the upper-case B and the next letter corresponds to the letter that comes next. In writing to you, I will first of all put the upper-case B under which lies the index k in the formula; this is a signal to you far away, wanting to read what I have written, that you should set up the twin formula in your keeping, positioning the mobile circle so that the B sits

over the index k. Then all of the rest of the lower-case letters present in the coded text will take their meaning and sound from those of the fixed circle above them. After I have written three or four words I will mutate the position of the index in our formula, rotating the disk let's say, so that the index k falls below the upper-case R. Then in the missive I write an upper-case R to indicate that k no longer refers to B, but to R, and the letters that follow will assume new meanings. You likewise, far away and receiving the message, have to look carefully in reading to find the upper-case letter, which you will know serves solely to indicate the positioning of the mobile circle and that the index has changed. Thus, you too will position the index under that upper-case letter, and be able to read and understand the entire text with ease. The four mobile letters that under the four houses on the fixed circle above that are marked with numbers, regardless of the values they themselves have, do not (if you will) receive any meaning, and can be inserted into the text as null letters. However, when combined or repeated, they are marvellously commodious, which I will describe below. Alternately, an index could be selected from among the upper-case letters and we could mutually agree on which would be the index; say we have determined the letter B as the index. The first letter that will appear in the missive that I write to you will be whatever lower-case letter you want, say q; the formula will be positioned so that this lies under the index B. It follows that q will take on the phonetic and semantic value of the B. Finally, we shall follow all the rest of the writing, as we said, with regard to the index of the highest mobile <circle>. When it is then necessary to modify the encoded alphabet and the positioning of the formula, then I will insert into the missive, in the proper place, one and only one of the numeral letters, that is, one of the letters of the small circle lying under the numbers that signify, say, the number 3 or 4, and so on. Rotating the mobile disk, I will make this letter correspond precisely to the agreed upon index B and, successively, as the logic of writing requires, I will go forward, assigning to the lower-case letters the value of the upper-case letters. In order to further disorient the investigators, I could also agree with my friend to whom I am writing that the interposing upper-case letters (of which without this convention there would be none) have no value, and similar other devices that it is not worthwhile listing. Thus, by positioning the index in a different way by rotating the mobile disk, it is possible to express the phonetic and semantic value of each of the upper-case letters, using (as you can see) twenty-four different alphabetic characters, while each of the lower-case letters can correspond to any upper-case letter whatsoever and also to the four numbers of the disk above. I now come to the use of the numeral letters, of which is nothing <more> admirable. The numeral letters are, as I said, the lower-case letters that correspond to the four numbers of the fixed circle above. The numbers, combined in groups of two, three or four, three hundred thirty-six whole phrases determined at will. These numeral letters, when paired, say that ps corresponds to 12 and pf to 13, and with other similar pairings that can for constructed with these four numerals, indicate sixteen phrases. If instead these same numbers are combined into groups of three, say psf signifies 123 and sfp 231, sixty-four phrases can be expressed. With combinations of four numerals, where sfkp is equivalent to 2341 or fpsk corresponds to 3124, and similar combinations, 256 whole phrases can be expressed. The total sum of whole phrases is 336. Now we shall show how these numeral letters are used. On one side we compose a table of 336 lines, in which we clearly arrange the numeral combinations at the beginning of the line, that is, in the first line there will be 11, in the second 12, in the third, 13, in the four 14, in the fifth 21, in the sixth 22, in the seventh 23, The Mathematical Works of Leon Battista Alberti 183 and so forth for all

the rest, as in the table we show below. We ascribe to each individual line of the table, next to the corresponding number, say next to the number 12 'the promised ships have been equipped and provided with provisions'. In a similar way whole phrases with whatever contents we want are ascribed to each number combination in the table. It is necessary for you to have a copy of this table with you so that when you who are far away receive my letter and you come across the numeral letters, noting that they signify numbers, you will consult the table that contains the predetermined phrases written there; for writing I will say that there is no invention that is quicker, more secure and nothing devised for cyphers could be more aptly suited, that two, three or four letters combined in different ways can express three hundred thirty-six phrases, isn't this wonderful? It is recommended that I have with me two numeral tables and for you to have two as well, arranged in different orders, one where we set out the numbers at the beginning of the line so that they are easy to read; in the other conversely in alphabetical order will be arranged the phrases according to the letter that forms the title so that the writer can find them quickly. The phrases will be arranged in the following way: those that regard administration of provisions (*annonam*) will appear under the initial A; those that refer to the carrying out of military operations (*bellum administrandum*) under B; those that regard ships (*naves*) under N, and so forth for the rest. The difference between the two numeral tables is that, in the first, at the beginning of the line, there appear the numbers followed by the phrases, conversely what appears at the beginning of the line is not the numbers but the initials followed by the phrases, and at the end will be the numbers that have been attributed to the phrases in the correlated table. Thus, in writing to you, I first look up the phrase that I want to use in the table, and having found it under the corresponding initial, I look at the numbers noted and using our encrypted formula, I insert the letters that signify those numbers into the missive. You, as I have said, will deduce the phrase from those numbers. I would have this little work of mine kept among our friends, not in the public domain, so as to not profane a subject worthy of sovereigns and rather for statesmen devoted to the most important of affairs.

2: Gerolamo Cardano (*De Subtilitate*, 1550)

Triplex haec est trasmutandi, quae in usa ut de Caesare olim Suetonius, velut si pro a, d, pro b, n, scribatur. Est autem infinitorem generum (Cardano, *De Subtilitate*, 17.1036)

The basis of substitution, which was in use, as Suetonius long ago wrote about Caesar, as if D is written instead of A, and N instead of B. It is of innumerable kinds.

translationis modus est, ut delitescant, in quibus da suspiciones, nota quada, ut in Laconica *scytala* […] (Cardano, *De Subtilitate*, 17.1036)

[A] method of 'translation' exists, so that in some cases of suspicion, the marks may pass unnoticed; this is so with the Lacedaemonian cylinders [*scytalae*]

3: Isidore of Seville, *The Etymologies* (5th/6th century CE)

Caesar […] Augustus ad filium, "quoniam" inquit, "innumerabilia accidunt assidue quae scribi alterutro oporteat et esse secreta, habeamus inter nos notas si vis tales ut, cum aliquid notis scribendum erit, pro unaquaque littera scribamus sequentem hoc modo, pro a b pro b c et deinceps eadem ratione ceteras; pro z autem littera redeundum erit ad duplex a" (Isidore of Seville, *The Etymologies*, 1.25.2)

Caesar Augustus […] said to his son: Since innumerable things are constantly occurring about which we must write to each other, and which must be secret, let us have between us code-signs, if you will, such that, when something is to be written in code, we will replace each letter with the following letter in this way: B for A, C for B, and then the rest in the same way. For the letter Z, we will return to a double AA.

4: Photius (*Lexicon*, 9th century CE)

Σκυτάλη: ἐπιστολὴ Λακωνική. ἦν δὲ ἡ σκυτάλη ξύλον ἐξεσμένον ἐπίμηκες. Δύο δὲ παρὰ Λακεδαιμονίοις ὑπεχον σκυτάλαι. Καὶ τὴν μὲν μίαν κατεῖχον οἱ Ἔφοροι τῶν Λακεδαιμονίων. Τὴν δὲ ἑτέραν τῶι ἐκπεμπομένωι παρ' αὐτῶν στρατηγῶι παρεῖχον. Καὶ ὁπότε ἐβούλοντο τι ἐπιστεῖλαι αὐτῶι, φέροντες ἱμάντα λευκὸν περιεῖλλον τὴν σκυτάλην. Καὶ ἐπί τοῦ ἱμάντος ἔγραφον. Καὶ ἀνελίττοντες παρεῖχον τὸν ἱμάντα τῶι ἀποφέροντι. Τοῦτο δὲ ἐποιουν, ἵνα μὴ μανθάιωσιν οἱ ἀποφέροντες τὸ δηλούμενον ἐν αὐτῶ. Ὁ δὲ στρατεγὸς δεχόμενος τὸν ἱμάντα τῆι ἑαυτοῦ σκυτάλη περιείλιττεν. Καὶ ἀναγίνωσκεν οὗτος τὰ γεγραμμένα. Λέγεται οὖν καὶ ἡ ἐπιστολή. Διοσκουρίδης δὲ ἐν τοῖς περὶ νομίμων τοὺς δανείζοντας ἐν Σπάρτηι διαιρεῖν σκυτάλην δύο παρόντων μαρτυρων καὶ γράφειν τὸ συμβόλαιον ἐν ἑκατέρωι τμήματι. Καὶ τὸ μὲν ἑνὶ τῶν μαρτύρων διδόναι. Τὸ δὲ δὶ ἑαυτοῦ ἔχειν. Ἔχρῶντο δ'αὐτῶ καὶ ἄλλοι. Ὡς Ἀριστοτέλης ἐν τῆι Ἰθακησίων πολιτείαι μῆβ (Photius, *Lexicon*, entry: σκυτάλη (II)).

Skytale: A Spartan letter. The *'skytale'* was a long shaved piece of wood. There used to be two *'skytalai'* among the Spartans. The Spartan's *'ephors'* would keep the one and would furnish the other to the general who was dispatched by them. And whenever they wished to send something to him, taking a white strap they would wrap it around the *'skytale'* and write on the strap. And unwrapping it they would furnish the strap to the man who carried [the message]. They used to do this so that those who carried [the message] might not know what was indicated in it. The general, on receiving the strap, used to wrap it around his own *'skytale'* and thus read what was written. Thus, both the letter is called a *'skytale'*, and the wood itself, after which also the letter [is called] *'skytale'*. Dioscorides in On Customs [says] that lenders in Sparta divide a *'skytale'*, with two witnesses being present, and write the contract

on each piece. And that [a lender] gave the one to one of the witnesses but kept the other by himself. Others too used to use it, as Aristotle [says] in the *Constitution of the Ithacans*, 42.

5: Procopius of Caesarea (*Secret History*, 6th century CE)

τῶν κατασκόπων τοιαῦτά ἐστιν. ἄνδρες πολλοὶ ἐν δημοσίῳ τὸ ἀνέκαθεν ἐσιτίζοντο, οἳ δὴ ἐς τοὺς πολεμίους ἰόντες ἔν τε τοῖς Περσῶν βασιλείοις γινόμενοι ἢ ἐμπορίας ὀνόματι ἢ τρόπῳ ἑτέρῳ, ἔς τε τὸ ἀκριβὲς διερευνώμενοι ἕκαστα, ἐπανήκοντες ἐς Ῥωμαίων τὴν γῆν πάντα τοῖς ἄρχουσιν ἐπαγγέλλειν ἠδύναντο τὰ τῶν πολεμίων ἀπόρρητα. οἱ δὲ προὔμαθον ἐφύλασσόν τε καὶ ἀπρόοπτον οὐδὲν ξυνέπιπτε σφίσι. τοῦτο δὲ τὸ χρῆμα κἂν τοῖς Μήδοις ἐκ παλαιοῦ ἦν. Χοσρόης μὲν οὖν μείζους, ὥσπερ φασί, πεποιημένος τὰς τῶν κατασκόπων ξυντάξεις προμηθείας τῆς ἐνθένδε ἀπήλαυσεν. οὐδὲν γὰρ αὐτὸν [ἐλάνθανε τῶν ἐν Ῥωμαίοις γινομένων. ὁ δὲ Ἰουστινιανὸς οὐδ᾽ ὁτιοῦν ἀναλώσας καὶ αὐτὸ τὸ] τῶν κατασκόπων ὄνομα ἐξέτριψεν ἐκ Ῥωμαίων τῆς γῆς, ἐξ οὗ δὴ ἄλλα τε πολλὰ ἡμαρτήθη καὶ Λαζικὴ πρὸς τῶν πολεμίων ἑάλω, Ῥωμαίων οὐδαμῆ πεπυσμένων ὅποι ποτὲ γῆς ὁ Περσῶν βασιλεὺς ξὺν τῷ στρατῷ εἴη (Procopius of Caesarea, *Secret History*, 30.12-14)

The matter of the spies is as follows. Many men from ancient times were maintained by the State, men who would go into the enemy's country and get into the Palace of the Persians, either on the pretext of selling something or by some other device, and after making a thorough investigation of everything, they would return to the land of the Romans, where they were able to report all the secrets of the enemy to the magistrates. And they, furnished with this advance information, would be on their guard and nothing unforeseen would befall them. And this practice had existed among the Medes also from ancient times. Indeed Chosroes, as they say, increased the salaries of his spies and profited by this forethought. For nothing [that was happening among the Romans escaped] him. [Justinian, on the other hand, by refusing to spend anything at all on them] blotted out from the land of the Romans [even the very] name of spies, and in consequence of this action many mistakes were made and Lazica was captured by the enemy, the Romans having utterly failed to discover where in the world the Persian king and his army were.

6: Edgar Allan Poe (*A Few Words on Secret Writing*, 1841)

Were two individuals, totally unpractised in cryptography, desirous of holding by letter a correspondence which should be unintelligible to all but themselves, it is most probable that they would at once think of a peculiar alphabet, to which each should have a key. At first it would, perhaps, be arranged that a should stand for z, b for y, c for x, d for w, &c. &c.; that is to say, the order of the letters would be reversed. Upon second thoughts, this arrangement appearing too obvious, a more complex mode would be adopted. The first thirteen letters might be written beneath the last thirteen, thus:

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n o p q r s t u v w x y z
a b c d e f g h i j k l m
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and, so placed, a might stand for n and n for o, o for b and b for a, et cetera, et cetera. This, again, having an air of regularity which might be fathomed, the key alphabet might be constructed absolutely at random (Poe, *A Few Words on Secret Writing*, 1841, 33)

The *scytalae* were two wooden cylinders, precisely similar in all respects. The general of an army, in going upon any expedition, received from the *ephori* one of these cylinders, while the other remained in their possession. If either party had occasion to communicate with the other, a narrow strip of parchment was so wrapped around the *scytala* that the edges of the skin fitted accurately each to each. The writing was then inscribed longitudinally, and the epistle unrolled and dispatched. If, by mischance, the messenger was intercepted, the letter proved unintelligible to his captors. If he reached his destination safely, however, the party addressed had only to involve the second cylinder in the strip to decipher the inscription. The transmission to our own times of this obvious mode of cryptography is due, probably, to the historical uses of the *scytala*, rather than to anything else. Similar means of secret intercommunication must have existed almost contemporaneously with the invention of letters. It may be as well to remark, in passing, that in none of the treatises on the subject of this paper which have fallen under our cognizance, have we observed any suggestion of a method — other than those which apply alike to all ciphers — for the solution of the cipher by *scytala*. We read of instances, indeed, in which the intercepted parchments were deciphered; but we are not informed that this was ever done except accidentally. Yet a solution might be obtained with absolute certainty in this manner. The strip of skin being intercepted, let there be prepared a cone of great length comparatively — say six feet long — and whose circumference at base shall at least equal the length of the strip. Let this latter be rolled upon the cone near the base, edge to edge, as above described; then, still keeping edge to edge, and maintaining the parchment close upon the cone, let it be gradually slipped towards the apex. In this process, some of those words, syllables, or letters, whose connection is intended, will be sure to come together at that point of the cone where its diameter equals that of the *scytala* upon which the cipher was written. And as, in passing up the cone to its apex, all possible diameters are passed over, there is no chance of a failure. The circumference of the *scytala* being thus ascertained, a similar one can be made, and the cipher applied to it (Poe, *A Few Words on Secret Writing*, 1841, 33)

As we can scarcely imagine a time when there did not exist a necessity, or at least a desire, of transmitting information from one individual to another, in such manner as to elude general comprehension; so we may well suppose the practice of writing in cipher to be of great antiquity (Poe, *A Few Words on Secret Writing*, 1841, 33)

7: *Sylloge Tacticorum* (10th-century Byzantine military manual)

Caesar wrote a message about something he wanted on paper and rolled it up with wax like a torch. After he gave it to one of his spies, he sent it to his colleague who had previously revolted, offering to him, by means of this message, an amnesty for his transgressions. And so, he immediately won over his colleague (*Sylloge Tacticorum*, 76.1. Translation of original text: Charzelis & Harris 2017, 98)

ΛΕΞΙΣ ΙΣΤΟΡΙΩΔΕΣ ΣΚΥΤΑΛΗ ΠΟΣΑ ΣΗΜΑΙΝΕΙ ΚΑΙ ΠΟΘΕΝ ΕΤΥΜΟΛΟΓΕΙΤΑΙ σνή

Ἒξ τὴν σκυτάλην γινοσγε σημαινουσαν, ἃ μάθε

Σχῦτος τὸ παῖον τάς πηγὰς παιδον τῶν μαντανόντών.

Σκυτάλη καὶ ιχθύς ἐστιν. ἑκήτη δὲ σκυτάλη

Τῷ πληκτικῷ πανεμφσρὴς οὖσα τῶν παίδον σχύτει.

Καὶ τῶν δακτύλον τὰ ἀστᾶ καλοῦνται δὲ σκυτάλαι.

Καὶ ῥάβδος δὲ τειράγωνος τῶν μαρμαρεργατούντων.

Ἒκ τοῦ τετπαγωνίσματος νομίζο δὲ καὶ ταῦτα

Τῆς ἧς σκυτάλης ἔφημεν τῆς τιμοροῦ τῶν παίδων

Καὶ πᾶσα ῥάβδας λέγεται σκύταλος καὶ σκυτάλης,

Εἴτ' ἐχ τῆς τῶν μαρμαρουργῶν ἧς προειρήκειν ῥάβδου,

Εἴτ' ἐχ τοῦ σκύζω, τὸ δηλοῦν ὀργίζομαι, κληθεῖσα,

Ἡ τὰ σκυσμοῦ καὶ τῆς ὀργῆς τλῶσα καὶ ὑπουργοῦσα.

Ἒκτη δὲ ἀξιάκουστος Λακῶνων ἡ σκυτάλη,

Τὴν ἧπερ ἐκφραστέον μοι ὡς οἶόν τε συντόμως

Οἱ Λάκονες πρὶχ μέλλοντες ἤ στρατηγοῖς ἤ ἄλλοις

Βουλὰς μυστηριάτιδας ἐν γράμμασι σημαίνειν,

Ῥάβδον λαβόντες ἤντινοῦν τῷ μήκει βραχυτάτην,

Καὶ ἐπιμήκει δέρματι πάνυ στενῷ ὡς ζώνῇ,

Τὴν ῥάβδου ἐπιφάνειαν πᾶσαν εἰλοῦντες τούτῳ

Ἒγραφον ἅπερ ἤθελον ἑλίξεσι τοῦ δέρους,

Ἃ καὶ ἀνεγινώσκοντο τοῦ δέρους εἰλιγμένου,

Τὸ σύνολον ἀνάγνωσις οὐκ ἦν δὲ τῶν γραμμάτων,

Ἃν ἐκ τῆς ῥάβδου τις αὐτῆς ἀφείλιζε τὸ δέρμα.

Πάλιν δ' ἀνεγινώσκοντο τῇ ῥάβδῳ τῇ ῥηθείσῃ,

Εἴπερ εἰλίχθη τὸ αὐτὸ δέρμα καὶ προσηρμόσθη.

Οὗτος, ὡς ἔφην, γράφοντες ἀφείλισσον τὴν ῥάβδον.

Καὶ μεθ' ἑτέρου ἔστελλον οἷς ἤθελον τὸ δέρμα,

Τὴν ῥάβδον μεθ' ἑτέρου δὲ πλὴν σὺν μεγίστῃ σκέψει.

Ἐκεινοι δὲ δεχόμενοι τὴν ῥάβδον καὶ τὸ δέρος,

Εἰλοῦντες ἀνεγινωσκον, ὡς ἔφημεν καὶ πρώην.

Τοῦτο καλῶς μοι γίνωσκε Λακονικὴν σκυτάλην,

Δέρος εἰς ῥάβδον ἑλικτόν, γράφον βουλὰς κρυφίους,

Σφενδόνης οὖσαν δύναμιν τῆς Γύγου πρὸ τοῦ Γύγου

Ἔστι καὶ εἶδος ὄφεως ἕβδομον ἡ σκυτάλη.

The word *scytale* has six meanings, all of which you should learn:

First, a *skytos* is used to bring out tears in schoolchildren,

While a *scytale* is a kind of fish: it is called that because

It resembles the school children's *skytos* completely.

The third meaning is finger bones, which are also called *skytalai*.

The fourth, the square rod used by marble masons.

I suspect the schoolchildren call their punishment rod a skytale because

Of the rod used by the masons.

The fifth meaning is any kind of rod, which can be called a *skytalos* or a *skytales*,

Whether because of the aforementioned mason's rod

Or because of the verb *skyzo*, which means to be angry.

For a rod is used to end and resolve anger and wrath.

Whenever the Spartans wished to send a general or anyone else

A written, secret message,

They would first take the shortest rod they could find.

Then, they would take a piece of skin thin as a belt,

And, stretching it across the whole surface of the rod,

They would write under it whatever they wished to convey.

The message would then be read by rolling away the skin.

However, it could not be completely read

If someone rolled away the entire skin.

Then the rod would be examined,

To see if the skin had been rolled and fitted to the rod.

Thus, as I said, the Spartans would roll away the rod,

And send the skin to whomever they wished with another,

And also the rod with great care.

Then, the recipient, having received the rod and the skin,

Rolled the skin away and read, as I said earlier.

So now you well know what the Spartan *skytale* was,

A skin rolled onto a rod, bearing secret messages.

Finally, a seventh meaning of *skytale* is the force of Gyges' sling before Gyges,

Which looked like a snake (Johannes Tzetzes, *Chiliades*, 9.122-155).

9 : Charles François Toustain and René Prosper Tassin (*Nouveau traité de diplomatique*, 1750)

Sur un bande ou laniére fort étroite de cuir our de parchemin, placée autour d'un cylindre ou d'un bâton, dont un correspondant avoit le semblable; les Lacédémoniens écrivoient les dépêches, concernant leur afaires d'Etat. Ces laniéres confiées à des couriers ne formoient aucun sens aux yeux des ennemis, qui pouvoient les intercepter: parceque, pour les lire, il faloit avoir un cylindre de la même forme, qui celui dont on s'étoit servi en les écrivant. C'étoit par consequent un secret assez grossier de stéganographie, et non pas une sorte d'écriture d'usage ordinaire (Tassin & Toustain, *Nouveau traité de diplomatique* 1750, 605)

On a very narrow strip or thong of leather or parchment, placed around a cylinder or a stick [*scytale*], of which a correspondent had the like; the Lacedaemonians would write dispatches concerning their affairs of state. These lines they [then] entrusted to couriers. [The text] would make no sense in the eyes of the enemies, [if they] would intercept it; since to read [the text], it was necessary to have a cylinder [*scytale*] of the same shape, which was used when [a message was] written on [the strip]. It was therefore a rather crude [method] of steganography, and not an ordinary kind of writing.