

A Porphyrogenitan Portulan

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IN *De Cerimoniis* 2.45 a *stadiodromikon* is given at the end of the catalogue of ships and equipment gathered for the imperial expedition to Crete in 949.¹ The text lists places on the way from Constantinople to Crete, with the distances between them in miles. Some of the numbers given are obviously too large, but it is not possible to distinguish with certainty errors of the compiler from corruptions of his work, and since there is but one manuscript, there are no textual variants; the document can nonetheless be placed in its tenth-century historical context.

Σταδιοδρομικόν

Ἐκ τῆς θεοφυλάκτου πόλεως εἰς Ἡράκλειαν μίλια ξ'. ἀπὸ Ἡρακλείας ἕως Προικονήσσου μιλ. μ'. ἀπὸ Προικονήσσου ἕως Ἀβύδου μιλ. ρ'. ἀπὸ Ἀβύδου ἕως Ταπευκία μιλ. ιβ'. ἀπὸ Ταπευκία ἕως Τενέδου μιλ. η'. ἀπὸ Τενέδου ἕως Μιτυλήνης μιλ. ρ'. ἀπὸ Μιτυλήνης ἕως Χίου μιλ. ρ'. ἀπὸ Χίου ἕως Σάμου μιλ. ρ'. ἀπὸ τῆς Σάμου ἕως τοὺς Φούρνους μιλ. λ'. ἀπὸ τοὺς Φούρνους ἕως Ναξίας μιλ. ο'. ἀπὸ Ναξίας ἕως τὴν Ἴον μιλ. λ'. ἀπὸ τὴν Ἴον ἕως τὴν Θήραν καὶ Θηρασίαν μιλ. κ'. ἀπὸ τὴν Θήραν καὶ Θηρασίαν ἕως τὰ Χριστιανὰ μιλ. κ'. ἀπὸ τὰ Χριστιανὰ ἕως τῆς Δίας μιλ. π'. ἀπὸ τῆς Δίας ἕως Κρήτης μιλ. ιβ'. ὁμοῦ μιλία ψζβ'.

15. η' post μιλ., recentiori manu in cod. adscriptum, om. ed.

The total number of miles is given as 792, but the intervals listed amount to 782. The arithmetical error comes from the stated interval between *Ταπευκία* (*sic*) and Tenedos: a second hand supplied η' after μιλ. here, but ιη' should have been written, thirty miles (12+⟨1⟩8) being a fair estimate of the sailing distance from Abydos to Tenedos. The position of *Τὰ Πευκία* is not quite certain. Pefkhia according to Edrisi stood on a hill and was the first station after Abdo (Abydos).²

¹ Const.Porph. *De Cer.* 1.678 (Bonn 1829).

² W. Tomaschek, "Zur historischen Topographie von Kleinasien im Mittelalter," *SBWien* 124 (1891) 16–17.

No doubt the pine trees which gave to the place its name were a prominent sailing-mark. Tomaschek³ suggested: “Der ans Ufer tretende Hügelzug zwischen dem Kodža-çai und Deïrmen-deresi trug wahrscheinlich einige Fichten, Merkzeichen für die Segler” (‘Fichten’ here means ‘pines’, not ‘spruces’); but by any fair reckoning of mile-lengths, the Değirmen Deresi⁴ comes down to the coast less than twelve miles from Abydos. A passage along the coast of the Troad of twelve miles from Abydos would bring a ship to the neighbourhood of Ophryneion. The country is still heavily wooded hereabouts, and traces of Byzantine settlement, together with coins, have been found in the vicinity of the anchorage.⁵ From the Ophryneion site a ship could travel along the coast towards Kum Kale (the promontory north of Sigeion) and then head for the northeastern coast of Tenedos, the sailing distance being about eighteen miles in all. We can therefore accept the interval Abydos–τὰ Πευκία, 12 miles, and the corrected interval τὰ Πευκία–Tenedos, <1>8 miles.⁶

The estimate of sixty-miles from Constantinople to Herakleia (Perinthos) is satisfactory, and the sailing-distance from Herakleia to Prokonnesos is close to forty (the spelling Προικόννησος is also found in Byzantine texts)⁷; but Abydos is far less than 100 miles from Prokonnesos. To the nearest ten miles the distance is 70, and it may well be that ρ’ has replaced ο’, an easy corruption. The estimate of 100 miles from Tenedos to any part of Lesbos (= Mytilene) is also excessive: a voyage of about seventy miles would bring a fleet from Tenedos past Sigeion to the fine natural haven of Kallone in the south of Lesbos—so ρ’ may again have displaced ο’. To more northerly parts of Lesbos the interval is of course less; Pliny (NH 5.39.140) gives 56 miles from Tenedos to Lesbos.

Pliny reckons 65 miles from Lesbos to Chios (NH 5.39.139), and a late mediaeval or sixteenth-century portulan gives fifty, due north-to-south: Ἡ Μιτυλήνη μὲ τὸν Χίον βλέπουνται ὄστρια τρεμουντάνα

³ See n.2 *supra*.

⁴ For this river valley see J. M. Cook, *The Troad* (Oxford 1973) 290.

⁵ Cook, *op.cit.* (*supra* n.4) 74–77 and plate 2(b).

⁶ Ramon Muntaner, *Crònica* VI p.209,21 (II p.39, Barcelona 1951), mentions Passàquia in his account of the straits. In the Barcelona edition Passàquia is said to be Lampsakos, but Paffàquia (i.e. τὰ Πευκία) may be meant (see Tomaschek, *op.cit.* [*supra* n.2] 16–17, who also notes other mediaeval spellings of the place name).

⁷ A. M. Mansel, *Kl. Pauly* 4 (1972) 1163.

μίλια ν'.⁸ So the entry in the Porphyrogenitan portulan ἀπὸ Μιτυλήνης ἕως Χίου μιλ. ρ' can hardly be correct, and it may well be that ρ' has yet again displaced ο'. Pliny (NH 5.38.136) gives 94 miles as the distance from Samos to Chios, but even if the interval from Samos town to Chios town is closer to 90 than to 100 miles, ρ' should be kept, since we cannot be sure that ρ' is a corruption of ς' or ϑ' (90).

For the distance from Samos town in the southeast of the island to the Korseai islands⁹ (mediaeval Phournoi) thirty miles (λ') is a just estimate, as is the reckoning seventy miles to Naxos town (Naxia). Thirty miles thence to Ios (Nios) are generous but not excessive; Pliny's estimate (NH 4.12.69), *Ios a Naxo xviii mil. pass.* has been corrupted or is insufficient. The twenty miles from Ios to Thera and Therasia given in the *stadiodromikon* can be compared with Pliny's statement, *distat Ios a Thera xxv mil. pass.* (NH 4.12.70).

From the eastern shore of the great haven of Thera southwestwards to the islets of τὰ Χριστιανὰ the distance is approximately twenty miles. μιλ. η' is therefore to be kept. The islets served as a useful sailing mark not only to those making for Crete, but also on the journey from Thera to the channel between Crete and Kythera: ἀπὸ τὴν Σαντορίνην εἰς τὸν πουνέντε ἔχει β' νησία τζιμαρόλα κοντὰ τὸ ἔνα εἰς τὸ ἄλλον καὶ λέγουν τὰ Χριστιανὰ. καὶ τότε πηγαίνοντα εἰς τὸν πουνέντε μέσα τὴν Κρήτην καὶ τὴν Κυθουρίαν ἔχει νησὶν μεγάλων καὶ λέγουν τὸ Σικελίους¹⁰ (Aigilia).

Almost due south of τὰ Χριστιανὰ lies the isle of Dia. The *stadiodromikon* gives the distance as 80 miles, but the estimate is excessive. Sixty is close to the truth, but we are not entitled to emend, in view of the greater difficulty of estimating distances on the open sea. The incorrect figure may already have stood in the documents from which

⁸ A. Delatte, *Les Portulans grecs* (Paris 1947), Portulan III, p.276,1–2. On the occidental origin of this use of βλέπομαι see M. Cortelazzo, "L'Elemento romanzo nei Portolani greci," *Bol. dell'Atlante linguistico mediterraneo* 1 (1959) 215–21, at p.219.

⁹ First mentioned in Hekataios (FGrHist 1 F 143=Steph.Byz. s.v. Κορσεαί). Various forms of the name are found: Pliny, NH 4.12.69 has *Corassiae*, but in 5.37.135 *Corseae*. The *Stad.Mar. Mag.* has ἐπὶ τὴν Κορσίαν (GGM 1.499 §283) and ἐπὶ τὰς Κορσίαις (GGM 1.500 §284). Agathemerros gives ἐπὶ Κορσίαις (GGM 2.479 and A. Diller, GRBS 16 [1975] 74 § 18). For the harbour town see J. T. Bent, *JHS* 7 (1886) 143–44, and for the island group Philippson, *op.cit.* (*infra* n.10) 268–69. See also D. Dünst, "Die Inschriften von Korsiai," in *Mélanges helléniques offerts à Georges Daux* (Paris 1974) 115–37.

¹⁰ Delatte, *op.cit.* (*supra* n.8), Portulan I, p.87,8–11. Christiáni (Leia) is separated by a ½ km. channel from Askania; thence a third island, Eschate, is 1½ km, distant (A. Philippson *Die gr. Landschaften* IV [Frankfurt am Main 1959] 185).

the *stadiodromikon* was compiled. Dia (ἡ Δία, ἡ Ντρία) had two good havens, each of which was known in the later middle ages as a *καλὸς λιμὸνας*.¹¹ The value of Dia to naval commanders engaged in operations against Crete is evident from the story of Photeinos, who, having been defeated by the Cretan Saracens, was able to escape thither.¹² Dia is less than twelve miles from the nearest point on the Cretan mainland, but the compiler of the *stadiodromikon* may well have envisaged a landfall not at Amnisos or at Chandax (Herakleion) but, for example, at Chersonesos.

Since some of the estimates of distance are greatly in error and others are corrupt, it is not possible to use the total 792 to estimate the length of mile assumed in the sources of the list.¹³ More significant than the distances—exact, corrupted or conjectured—is the route envisaged. Obviously important staging posts or naval *ἄπληκτα* are Abydos, which gave its name to the maritime officials called *Abydikoi*,¹⁴ and Samos, from which the naval administration *θέμα Σάμου* was named—though the *στρατηγός* of the *thema* had his seat of government (*πραιτώριον*) at Smyrna.¹⁵ Of least significance are those places where there were no permanent naval installations: such, we may suppose, were τὰ Χριστιανὰ and Dia. Some places had a great value as natural havens where fleets could be concentrated: Thera is an example of such an *αὐτοφνὲς ὀρμητήριον*.¹⁶ Here crews could be rested or allowed to go ashore to eat, favourable winds could be awaited and weather-signs be studied. Such *τόποι κκαλώματος* are accordingly given close attention in Byzantine naval handbooks.¹⁷ A particular significance attached to Tenedos, where it was necessary to await favourable winds before attempting to enter the Hellespontine

¹¹ Delatte, *op.cit.* (*supra* n.8) Portulan I, p.68.

¹² *Theophanes Continuatus* pp. 76,22–77,1 (Bonn 1838).

¹³ According to H. Antoniadis-Bibicou, *Études d'histoire maritime de Byzance* (Paris 1966) 27 n.4, C. Alexandris, 'Ἡ θαλακκία δύναμις εἰς τὴν ἱστορίαν τῆς βυζαντινῆς αὐτοκρατορίας (Athens 1957) 78 n.1 (non vidi), claimed that the mile was taken in the *stadiodromikon* to be the equivalent of about 1500 metres.

¹⁴ For them see H. Ahrweiler, "L'Escale dans le Monde byzantin" in *Les grandes Escales, Recueils de la Société Jean Bodin* 32 (1974) 175, and H. Antoniadis-Bibicou, *Recherches sur les douanes à Byzance* (Paris 1963) 179–81.

¹⁵ *Const.Porph. De Them.* 1.16 (p.149 Pertusi). See also A. J. Toynbee, *Constantine Porphyrogenitus and his Age* (London 1973) 261.

¹⁶ For this category of place see H. Ahrweiler, *Byzance et la mer* (Paris 1966) 421 (= *Études sur les structures administratives et sociales de Byzance* [London 1971] xvi, 421).

¹⁷ For example, Nikephoros Ouranos, *Taktika* 6.28–30 and 7.123.9 (ed. A. Dain, *Naumachia* [Paris 1943] 77–78 and 104).

straits. Before the loss of Egypt to the Arabs, the island also played a vital part in the economy of Constantinople, since a granary had been constructed there at the command of the Emperor Justinian to enable grain ships to be unloaded without having to wait for favourable winds to take them all the way to the city.¹⁸

The absence of Phygela from the *stadiodromikon* is noteworthy, since this town had been a place of assembly during the preparations for the unsuccessful expedition to Crete in 911,¹⁹ and it was from Phygela that Nikephoros Phokas departed to reconquer Crete.²⁰ Nor does the *stadiodromikon* mention Kepoi, beside the river Maeander; this was the place whence Bardas had hoped in 866 to set sail for Crete before his murder put a stop to the expedition.²¹ Evidently the compiler of the *stadiodromikon* is not concerned with the marshalling of troops and ships in the Thrakesian *thema*; his interest is in the movement of units of the imperial fleet based at Constantinople from their home waters to Crete by easy stages of not more than 100 miles each. The compiler had so imperfect an idea of the intermediate distances that we may think of him not as a practical mariner but as a bureaucratic landlubber. The presence of the document at the end of the musters for the expedition of 949 suggests that he may have worked in the entourage of Gongylios the *patrikios*, whose ineffectiveness as a military commander was a prime cause of the failure of the armada.²² There is also reason to think that Constantine Porphyrogenitus himself took part in preparing documentation for the task force. A meteorological treatise for sailors has been convincingly connected with his naval studies prior to the campaign of 949,²³ and Constantine's concern with such topics is plain from his own reference in an Appendix to *De Cerimoniis*²⁴ to a work by his own hand: βιβλίον τὸ περιέχον περὶ εὐδείας καὶ χειμῶνος καὶ ζάλης, ὑετοῦ τε καὶ ἀστραπῶν καὶ βροντῶν καὶ ἀνέμων ἐπιφορᾶς. πρὸς τοῦτοις βροντολόγιον καὶ σεισμολόγιον, καὶ ἕτερα, ὅσα παρατηροῦνται οἱ πλευστικοί. ἰστέον δὲ, ὅτι

¹⁸ Procop. *Aed.* 5.1.7–16 (4.150–52 ed. Haury).

¹⁹ *De Cer.* 2.44 (1.658 Bonn).

²⁰ *Theoph.Cont.* 6.10 (p.475, 21 Bonn). Ps.-Symeon p.758, 24 Bonn.

²¹ *Geo.Mon.Cont.* p.830, 1 Bonn. See also J. B. Bury, *A History of the Eastern Roman Empire* (London 1912) 171.

²² On Gongylios see Skylitzes pp.245–46 ed. J. Thurn.

²³ Text: *Venet.Marc.* 335, ff. 420^r–423^v, published by S. Lambros in *Nέος Ἑλληνομνήμων* 9 (1912) 162–72, and discussed, with translation, by R. H. <M.> Dolley in *The Mariner's Mirror* 37 (1951) 5–16.

²⁴ 1.467,9–15 Bonn.

τοιούτον βιβλίον ἐφιλοπονήθη καὶ ἐκ πολλῶν βιβλίων ἠρανίσθη παρ' ἐμοῦ Κωνσταντίνου ἐν Χριστῷ βασιλεῖ αἰωνίῳ βασιλέως Ῥωμαίων. How much the Emperor yearned for reconquest is evident from the allusion to Crete he added to the Continuator's account of Ooryphas' campaigns against the islands in *Theophanes Continuatus* Book II:²⁵ ταύτην δὲ ὡς ἔοικεν, παρέπεμψεν εἰς ἡμᾶς. ἀλλὰ τὰ μὲν περὶ αὐτῆς θεῶ πάντως μελήσει, μελήσει δὲ καὶ ἡμῖν τοῖς νύκτωρ καὶ μεθ' ἡμέραν τὴν ψυχὴν δαπανῶσιν ὑπὲρ αὐτῆς.

It is not possible to prove, though it seems very likely, that the *stadiodromikon* is one of the items ὅσα παρατηροῦνται οἱ πλευστικοί gathered by the Porphyrogenitus himself, but if the compiler worked in the imperial bureaucracy at a time when Constantine and Gongylios were planning the expedition of 949, there is no difficulty in the presence of the text in the *De Cerimoniis*. The Emperor simply added it to the ἐξόπλις of the forces without checking its accuracy. Although the text is called a *stadiodromikon*, the distances, as usual in Byzantine times, are in miles; the term *stadiodromikon* comes down from a time when portulans or *stadiasmoi* regularly gave distances in stades.²⁶

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²⁵ p.81,12–15 Bonn.

²⁶ For the equivalent 10 stades=1 nautical mile, see L. Casson, *Ships and Seamanship in the Ancient World* (Princeton 1971) 288 n.81. The term *Diaphragma* also deserves a mention, since the meaning is not given in LSJ or the Supplement. Two *διαφράγματα* appear at the end of the *Periplus* of Ps.-Skylax (GGM 1.95–96); one gives distances in stades all the way from the Euripos at Chalkis to Samos and Mykale (§ 112), and the other lists the stages, with stades, Malea-Kythera-Aigilia-Crete-the length of Crete-Karpathos-Rhodes-Asia. In both *διαφράγματα* reckoning by distances is combined with reckoning by time: for example, § 113,3 εἰς Αἰγίλιαν πλοῦς προαρμετίδιος, the meaning being that Aigilia can be reached from Kythera before the first meal of the day is taken (the statement assumes a favourable wind); compare Xen. *Hell.* 1.1.13—Alkibiades sailed all night up to breakfast from Parion to Prokonnesos (very likely against current and wind: Casson, *op.cit.* 292 n.96).

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