

## PATROCLES AND THE OXO-CASPIAN TRADE ROUTE.

THE statement is usually made, that Greek geographers between Herodotus and Ptolemy believed the Caspian to be an inlet of the Northern ocean; that the Greeks, from the time that they first knew of the Oxus, believed it to flow into the Caspian; and that raw silk and other articles of commerce were carried down the Oxus into the Caspian and thence in due course to the Black Sea.

Even before Alexander, perhaps as early as Herodotus, there was a vague notion that the Caspian was, or ought to be, connected with a circumfluent ocean, as the other large sheets of salt water then known were; but this notion did not take definite shape till after the only recorded navigation of that sea by Greeks; and it perhaps requires explanation, why a genuine voyage should have given definite shape to a false notion.

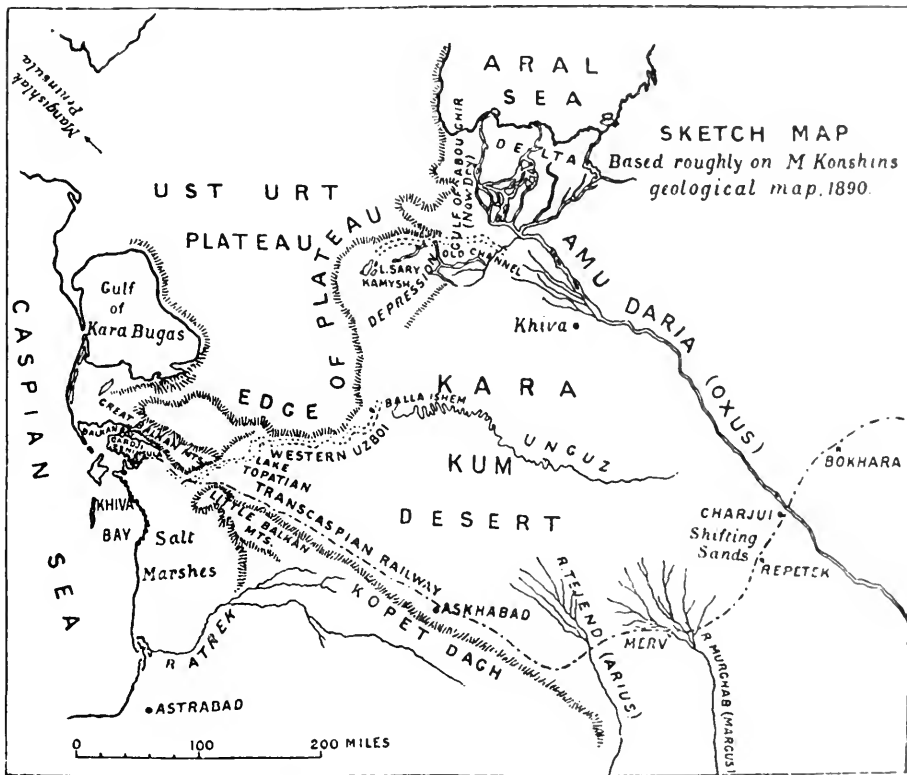
Recent investigations appear to have rendered it fairly certain that the Oxus never flowed into our Caspian within any historical period, though it may have sent, and probably did send, a branch westward into the Sary-Kamysh depression, then either a lake or a part of the Aral. If the Oxus did not enter the Caspian, it is clear that some explanation of the Greek belief that it did, and of the trade route, would also be required. If then, in connection with this trade route, two errors appear in what may be called the ordinary view, one as regards the Oxus and one as regards the Caspian, it is at least possible that these two errors may be due to a common source, the discovery of which might throw light upon the whole matter. It is the object of this paper to indicate the direction in which I believe the explanation to lie.

Before going through the Greek notices, it may be as well to state briefly what I conceive to be the present position of the Oxus question. There are three routes, by one or more of which the Oxus has been supposed to have once entered the Caspian; (1) by the Uzboi channel from lake Sary-Kamysh; (2) by the Ungus channel across the Kara-kum desert, joining the Uzboi; (3) by a southern branch leaving the Oxus near Charjui, passing Merv, and thence following (roughly speaking) the course now taken by the railway, parallel to the line of the Kopet Dag and Little Balkan. All these views still find champions<sup>1</sup>; at the same time some, as M. Lessar, have

<sup>1</sup> A summary of the views of modern Russian geographers will be found in an article (with map) by Prince Kropotkin, 'The old beds of the

Anu-Daria,' *Geogr. Journ.* vol. 12 (1898), p. 306. It has always been, and still is, a Russian dream to turn the Oxus back into the Caspian.

always been found to maintain that neither the Uzboi nor the Ungus were channels of the Oxus. This latter view is now strongly put forward by the Russian engineer M. Konshin,<sup>1</sup> who has come to the conclusion that the Oxus always ran in its present course, though it once threw off a branch into lake Sary-Kamysh; that there are no traces of beds or delta deposits of the Oxus in the Kara-kum; that the Kara-kum and the Western Uzboi were once gulfs of the Caspian, (the Ungus being an old sea-beach), as is proved (among other things) by the Caspian sea shells found there; and that the upper part of the Uzboi was a channel for the discharge of overflow water from Sary-



Kamysh to the Caspian. M. Konshin has explored and sunk shafts in the so-called old Delta of the Oxus, the Dardji peninsula, and found no trace whatever of fresh-water deposits, or of river-shells.<sup>2</sup>

<sup>1</sup> M. Konshin's results in Moser, *A travers l'Asie Centrale* (1886), p. 228 seq.; 'The old channel of the Oxus,' by Mr. E. Delmar Morgan, *Proceedings R. G. S.* vol. 14 (1892), p. 236; and Prince Kropotkin's article above cited. I only know them at second hand.

<sup>2</sup> Beside the sea and river theories of the

Uzboi, the view has been put forward by Bogdanovich that this channel, other than the extreme western portion, which may be due to the action of the sea, has been formed by rain. This view is examined by W. Komischke in *Das Ausland* for 1893, p. 657, 'Die Hydrographie des Oxus-Beckens'; he sums up that, though

The latest theory with which I am acquainted is that put forward by Prof. J. Walther,<sup>1</sup> who has also explored personally the supposed old mouth of the Oxus at Balkan Bay. He also thinks that the Oxus always ran in its present channel (subject to the regular tendency of its bed to shift eastward with the earth's rotation), with the possible exception of a branch flowing into the Sary-Kamysh depression. His chief argument is drawn from the absence elsewhere of deposits of the typical Oxus mud. In particular he shews that no *river* can ever have flowed into the Caspian at the supposed old mouth of the Oxus. He differs from M. Konshin about the Uzboi; his numerous measurements shew that the Sary-Kamysh depression, while 89 m. lower than the present surface of the Aral, is 92 m. lower than Karahuhunek, the point where the Uzboi channel commences, and that in consequence the Uzboi can never have taken the overflow from Sary-Kamysh to the Caspian. At the same time he concludes against the Western Uzboi having ever been an arm of the Caspian on the ground that, if so, this arm can only have shrunk and retired through evaporation, and an overflow channel like the Uzboi cannot have been formed by this means. Without being a geologist, I may be permitted to remark that Prof. Walther does not appear to have met M. Konshin's argument drawn from the presence of numerous sea shells, similar to those now living in the Caspian, on the surface of the Western Uzboi; while the whole region is notoriously subject to alterations of the level of the ground; the Caspian is known to have altered its level several times, beside its regular loss from evaporation. A rise of 20·17 m. would take the sea up between the Balkans as far as the so-called lake Topatian.

Whatever the facts, however, as to the Uzboi, we may take it as fairly certain that the Oxus never reached the Caspian by any of the three routes; since, by any route, there is only one gap in the hills between the Ust Urt plateau and the Kopet Dagħ through which it could have passed, viz., that between the Great and the Little Balkan through which the railway now runs; and the investigations of both M. Konshin and Prof. Walther have rendered it fairly certain that there was never any Oxus delta at or near Balkan Bay. It may also be noticed that the Oxus still periodically overflows into the Sary-Kamysh depression, the last occasion on which it did so being during the coronation of the present Czar, when the Khivans broke down a dyke.

With this much by way of prelude, we may turn to the Greek writers. Our principal concern will be with Patrocles, but I shall briefly go through the chief notices before and after his voyage.

Herodotus<sup>2</sup> mentions the Caspian as a sea by itself, which does not join

one cannot trace all the steps of the gradual separation between Aral and Caspian, 'wahrscheinlich bestand der albugirische sowie der balchanische Abfluss in seiner ursprünglichen Bedeutung als Meeresstrasse bis in die historische Zeit hinein.'

<sup>1</sup> 'Das Oxus-problem in historischer und geologischer Beleuchtung,' in Petermann's *Mitteilungen* (1898), No. 9.

<sup>2</sup> Herod. 1, 202: οὐ συμμίγγουσα τῇ ἐτέρῃ θαλάσσει.

the other sea.<sup>1</sup> About 'the other sea' he gives no information. But he has heard dimly of the Oxus or Jaxartes as a river with 40 mouths, all ending in marshes but one, which flows clear into the Caspian; there are islands in it as big as Lesbos, inhabited by savage fish-eaters and other strange people.<sup>2</sup>

The next notice concerns Alexander. Arrian (*Anab.* 7, 16) says he wished to know whether the Caspian was connected with the Euxine or with the Eastern Indian Ocean. This may have been a mere guess; but it is also possible that Alexander's intelligence department had got a report of a supposed connection with some other sea.<sup>3</sup> Anyhow, there were now three hypotheses. Here belongs a story told by Strabo (11, 509) that men flattered Alexander by identifying the Maeotis, which receives the Tanais, with the Caspian which receives the Jaxartes, a river that the Greeks at first took for the Tanais.<sup>4</sup> Strabo adds that they called the latter sea a lake and said that it and the Maeotis were connected. Alexander sent one Heraclides to Hyrcania to build ships and explore the sea; as far as we know, this expedition had no result. The rest of Arrian's remarks appear to concern what he thought himself.

The next generation saw the one attempt at exploration known to us as made by the Greeks, when Seleucus sent his admiral Patrocles to the Caspian. Eratosthenes cites a periplus of this sea as known to the Greeks, which I assume to be that of Patrocles.<sup>5</sup> This periplus speaks of two voyages, one along the coasts of the Albani and Cadusii, the other along the coasts of the Anariaki, Mardi and Hyrcani towards the mouths of the Oxus and Jaxartes: the point of junction, according to the situation of these tribes, would be somewhere at the extreme S.W. of this sea. As to the first voyage, though the Albani are named first, no one could suppose that Patrocles built his ships up in the north and sailed south; even without Pliny's evidence, we might fairly suppose that he started from the S.W. corner, the point of

<sup>1</sup> Mr. J. L. Myres, in a paper read before the Geographical Society on 'An attempt to reconstruct the maps used by Herodotus' (*Geogr. Journ.* vol. 8 (1896), p. 605), has put forward a theory that Herodotus had two different ideas about the Caspian, based on different maps, and that in 4, 40, he (Herod.) 'assumes that the Caspian, as a part of the undiscovered "North Sea," corresponds with the known Red or "Southern" Sea, a conclusion which reappears in Eratosthenes,' and which is inconsistent with Herod. 1, 202.

<sup>2</sup> 1, 202; he calls it the Araxes. It is generally supposed to represent the Jaxartes, because of the marshes; but, *a priori*, it is much more likely to be the larger and better known Oxus, which must, in a natural state, have had an equally marshy mouth or mouths.

<sup>3</sup> Alexander, in his speech at the Hyphasis (*Arr. Anab.* 5, 26) says: *καὶ ἐγὼ ἐπιδείξω...τὸν*

*μὲν Ἰνδικὸν κόλπον ξύβρον ὄντα τῷ Περσικῷ, τὴν δ' Ἑρκανίαν τῷ Ἰνδικῷ* but this, if he said anything of the sort, is clearly special pleading.

<sup>4</sup> In Plutarch (*Alex.* 44) Alexander is made to take the Caspian for part of the Maeotis.

<sup>5</sup> Strabo 11, 507. This is Susemihl's opinion (*Gesch. d. Griech. Lit. in der Alexandrinerzeit* 1, 657-9); and though Strabo does not actually say so, we know of no other Greek who ever sailed on the Caspian, and Strabo says that it was little exploited, owing to the brief and disturbed nature of the Macedonian rule in those parts (11, 509); besides, Strabo expressly cites the measurement of one part of this periplus, the distance between the mouths of the Oxus and Jaxartes, as Patrocles' (11, 518), and Eratosthenes (l.c.) speaks as if no other periplus were known (*τὸν ὑπὸ τῶν Ἑλλήνων γνωριζόμενον περίπλουον*).

junction of the two voyages.<sup>1</sup> The reason for starting from here, and not from Hyrcania, may merely have been convenience of ship-timber.<sup>2</sup> Be that as it may, the fact agrees curiously with what Strabo says about the 'bight' <sup>3</sup> of the Caspian. The mountains of Media and Armenia project like the horns of a crescent, and form the 'bight' of the Caspian Gulf.<sup>4</sup> This gulf, running in southward from the ocean, is at first narrow enough, but as it goes further in it broadens, its greatest breadth, about 5000 stades, being obtained over against the 'bight'; but the length from the 'sailing-in point' to the bight is perhaps a little more than the breadth, as the 'sailing-in point' is very near the uninhabitable zone.<sup>5</sup> This shews clearly enough that Strabo reckons the length of the sea from *S.W. to N.E.*, roughly speaking, that is, from the point whence Patrocles started to the 'sailing-in point'; and this passage alone should be conclusive against any theory which places the 'sailing-in point' at the extreme north of the Caspian, as we know it.<sup>6</sup> I may add that, so far as I know, no one has taken Patrocles to the extreme north; the more general opinion is that he perhaps only went a little way.<sup>7</sup>

We can now examine Patrocles' voyage in detail.<sup>8</sup> Why he went north

<sup>1</sup> Pliny *N.H.* 6, 13, quoting from the same passage in Eratosthenes, has 'ab exortu et meridie per Cadusiac et Albaniae oram.'

<sup>2</sup> Aristobulus (Strabo 11, 509) notes a deficiency of light wood in Hyrcania, though plenty of oak.

<sup>3</sup> *μυχός*.

<sup>4</sup> Strabo 11, 508: *τοῦτων* (the mountains) *ἐστὶ μνηοειδὲς τὸ σχῆμα κατὰ τὰς ὑπώρειας, αἱ τελευτῶσαι πρὸς θάλατταν ποιοῦσι τὸν μυχὸν τοῦ κόλπου*. So Pliny 6, 13 *lunatis cornibus*; Curtius 6, 12. The map does not permit of identification; but Curtius shews that the crescent meant was only a blunt one, *flexu modico*.

<sup>5</sup> Strabo 11, 507: *ἔστι δ' ὁ κόλπος ἀνέχων ἐκ τοῦ ὠκεανοῦ πρὸς μεσημβρίαν κατ' ἀρχὰς μὲν ἰκανῶς στενός, ἐνδοτέρω δὲ πλατύνεται προϊών, καὶ μάλιστα κατὰ τὸν μυχὸν ἐπὶ σταδίου πού καὶ πεντακισχιλίου· ὁ δ' εἰσπλοῦς μέχρι τοῦ μυχῷ μικρῷ πλείονων ἂν εἴη συνάπτων πως ἤδη τῇ ἀοικήτῃ*. 'Sailing-in point' is of course not meant as a translation of *εἰσπλοῦς*; it is the point whence the length of the *εἰσπλοῦς* is reckoned, sometimes (2, 74, 119; 11, 491) called *στόμα*.

<sup>6</sup> The evidence for this will appear, p. 17 seq. Here I merely wish to note that in one passage (11, 519) Strabo seems to think the *στόμα* is in the North. But I think, as will appear, that there is often a distinction between Strabo's view, and the true view that he has preserved without always understanding it. Even in 11, 519 the *στόμα* is straight opposite to the *μυχός*;

and that the *μυχός* is S.W. is indisputable, and (so far as I know) generally admitted.

<sup>7</sup> Susemihl, *l.c.* The Greeks of about Strabo's time seem to have known nothing definitely of the northern part. Their names for the sea, Caspian, Hyrcanian, Albanian, are southern local names, originally no doubt signifying different stretches of water (Pliny 6, 21 *circumvectis* in Hyrcanium mare et Caspium 6, 13 ante quos mare quod est Albanum nominatur cf. Arist. *Meteor.* II. 1 § 8); but they have no northern local names, unless Seythicus sinus (Pliny 6, 13; Pomponius Mela 3, 5) be one. Arrian (*Anab.* 7, 16) says the *ἀρχαί* of the sea had not been discovered; but Strabo, by giving the length and breadth, seems to have thought it was bounded all round, subject to the question of the *εἰσπλοῦς*. And so, clearly, did the authorities from whom Pliny (6, 13) took the phrase 'circutum a freto.'

<sup>8</sup> Negative criticism, refuting earlier attempts (based on the measurements) to locate the point reached by Patrocles, in Wagner's 'Patrocles am Kara-Bugas?' *Nachr. v.d. Königl. Gesellschaft* (Göttingen) 1885, p. 209. It appears to me that the writer proves his points; but that the problem has rather shifted its ground. Any system of measuring out this voyage must be vitiated (other things apart) by the fact that we do not know where to measure from; for that Patrocles started from the mouth of the Mardus (Kizil Uzen), though likely enough, is merest guesswork.

first is clear : for Pliny says that Seleucus, at the time of his assassination, had it in his mind to make a canal between the Caspian and the Cimmerian Bosphorus.<sup>1</sup> If Seleucus, in sending out Patrocles, had any such idea, the latter would soon have discovered its impossibility. If he really went 5,400 stades in this direction, the distance that Eratosthenes gives,<sup>2</sup> he must have gone pretty far north ; but as no tribes north of the Albani are mentioned, it may be supposed that he himself only went part of the distance, and heard that the sea extended for a considerable way further,<sup>3</sup> and this the more readily as with his eastern voyage such seems actually to have been the case. That Strabo's account of the mouth of the Cyrus<sup>4</sup> comes in the main from Patrocles I would conjecture from this, that he describes the people there as simple and bad at bargains, trading by barter but scarcely using money and having no knowledge of weights and measures ; this might seem to apply best to a time earlier than Strabo's own, when Armenia and the neighbour lands were the great channel of overland trade.

But the chief interest of Patrocles' voyage begins when he turned eastward. At first sight it might appear from Eratosthenes' account of his periplus that he reached the mouths of the Oxus and Jaxartes ; Eratosthenes even gives the measurements,<sup>5</sup> from the 'bight' to the Oxus mouth 4,800 stades, and thence to the Jaxartes mouth 2,400 stades. But though Patrocles is one of the two authorities for Strabo's statement<sup>6</sup> that the Jaxartes flows into the same sea as the Oxus, this same passage shews that he never reached the Jaxartes mouth himself ; for Strabo adds 'the mouths of the two rivers, according to Patrocles, are 80 parasangs apart.' Patrocles, as a Greek sailor, would hardly measure in parasangs ; and this remark of Strabo's suggests that Patrocles' information was hearsay, and derived from people who did reckon in parasangs, *i.e.* Persian-speaking folk of some sort.<sup>7</sup> Now I would point out that if, for the distance between the mouths of the Oxus and Jaxartes, Eratosthenes turned parasangs into stades for the benefit of his Greek readers,<sup>8</sup> he *may* equally well have done so for the distance from the 'bight' to the mouth of the Oxus ; and Patrocles himself may never have reached the Oxus mouth at all. The fact that we have no description of its mouth (by name), while we have an elaborate one of *e.g.* such a river as the Cyrus, raises a presumption that he did *not* reach it. However, it is a necessary condition of this periplus that he should have sailed in a direction in which he could at least have heard that the mouths of

<sup>1</sup> Pliny 6, 11. He gives no express authority for this statement ; but he has used some good sources in book 6, as well as bad.

<sup>2</sup> Strabo 11, 507 l.c.

<sup>3</sup> He thought it as large as the Euxine : (Strabo 11, 508). I shall say something about the measurements presently.

<sup>4</sup> Strabo 11, 501.

<sup>5</sup> Strabo 11, 507.

<sup>6</sup> Strabo 11, 518 ; Aristobulus is the other.

<sup>7</sup> I know of nothing to warrant Sir H. Rawlinson's statement (*Proceedings R.G.S.* 1 (1879) p. 161) that Patrocles 'actually measured' the distance.

<sup>8</sup> A proceeding that Strabo must be criticising when he insists (11, 518), with illustrations, on the extraordinary variation of length of the parasang in different places. Elsewhere (11, 507) he says that these measurements of Eratosthenes' are to be received with caution.

the Oxus and Jaxartes lay at such and such a distance before him. Now it has to be remembered, as a condition of the whole problem, that the evidence for the Jaxartes entering the 'Caspian' is just as good as that for the Oxus, and that the two must stand or fall together. There have been theories put forward for bringing the Jaxartes round the Aral;<sup>1</sup> some, I believe, have boldly abolished the Aral altogether; but the Jaxartes cannot by any means be made to cross the Ust Urt plateau. In fact, we must proceed on the assumption that the Jaxartes ran pretty much as it does now; and while on the one hand these facts would afford some support to a contention that the whole Aralo-Caspian salt-water system was sometimes referred to as 'the Caspian,' on the other hand they are quite fatal to any theory which takes Patrocles to any point<sup>2</sup> on the eastern shore of our Caspian further north than Balkan Bay, which is the most northerly point, south of the Ust Urt, where water from beyond the Balkans can enter the Caspian.

Here then we are pulled up short; for Patrocles *ought* to sail toward the Oxus mouth, *i.e.* out of the Caspian altogether.

His voyage having come to a standstill for the moment, we may stop also and enquire what is his supposed authority for the connection of the Caspian with the northern ocean.<sup>3</sup> Let me say at once that this idea was in the air as we have seen, and that it is quite possible that Patrocles believed it. But what we want to know (remembering always that the 'sailing-in point' is opposite to the 'bight,' and has nothing to do with hearsay about the Volga or the north at all) is, on what grounds geographers who used Patrocles' narrative believed in this connection, that is to say, why a true voyage confirmed a false notion. Now Strabo, after giving Eratosthenes' account of Patrocles' periplus, goes on to make the sufficiently astonishing statement that *a man sailing into the Caspian*<sup>4</sup> would find such and such things:—on his right hand Scyths and Sarmatians, on his left the eastern Scyths, reaching to the eastern sea and India; he distinguishes the northern and eastern Scyths accordingly. This statement has always been a stumbling block. Sir E. Bunbury says, 'So clearly indeed was this idea' (that the Caspian was a gulf of ocean) 'fixed in his (Strabo's) mind, that he describes the sea and the nations on its banks as they would present themselves *to a person sailing in from the North*.'<sup>5</sup> This is hard on Strabo. Let us suppose instead that he pictured it from this point of view because he, or his informant, had heard

<sup>1</sup> Cf. Moser, *À travers l'Asie Centrale* p. 228 seq.; and Komischke's article before cited p. 11. n. 2.

<sup>2</sup> *E.g.* the gulf of Kara Bugas; or the promontory of Mangischlak (von Gutschmid).

<sup>3</sup> Susseml, *i.e.*; Bunbury, *Hist. of Anc. Geog.* 1, 644.

<sup>4</sup> Strabo 11, 507, εἰσπλέοντι. That this is not a figure of speech (= εἰσιόντι) is proved by the use of εἰσπλοῦς just before: cf. 2, 121, where he balances the 4 great seagulfs, Caspian,

Persian, Arabian, and Mediterranean, each with a narrow εἰσπλοῦς from the outer sea. Cf. Pliny 6, 13 ab introitu; Pomponius Mela 3, 5, 4 introeuntium.

<sup>5</sup> Op. c. 2, 283. The italics are in the original. Strabo has been even worse treated by the writer of the article 'Caspian' in the *Encycl. Britannica*, who refers to him *à propos* of a great Aralo-Caspian sea discharging into the Obi—presumably at some geological epoch.

that some one had sailed or could sail, or that some people habitually did sail, in from somewhere.

From where? Strabo half answers that question himself. For, as if not content with his first statement,—after a few words about the Scyths, and a fling at Ctesias, Herodotus, and the rest,—he goes on to say that, at any rate, as a man sails into the Caspian, the nomads that he finds on his left are called by the present generation Daai and surnamed Parnoi; then comes a desert, and then Hyrcania, and here we reach the open sea, which continues to the ‘bight.’<sup>1</sup> This clearly has nothing to do with the north of the Caspian. The Parnoi, over against Parthia, are well enough known<sup>2</sup>; so is the desert north of Parthia and Hyrcania. In fact, while Strabo’s supposed voyager sees, on his right hand, a vague vision of Scyths joining the European Scyths and Sarmatians stretching to the Tanais, on his left he sees well-known people and things very precisely, and what he sees fits in pretty well with the supposition of a man sailing into or journeying to the Hyrcanian sea down the line of the Uzboi, roughly speaking, and does not, so far as appears to me, fit in with anything else. I may add that the ‘mouth’ of the Uzboi is roughly opposite to the ‘bight.’

Now what the supposed voyager sailed in by was an arm of the sea. We have a quantity of very explicit statements<sup>3</sup> on this point, which refer to a long narrow sea-strait, something like a river, and no bar to the intercourse of the Scythians on either side with each other. Down this sea-strait Strabo’s supposed voyager sailed; and our accounts represent that at the other end of this strait was ‘ocean’ *i.e.* open water.<sup>4</sup>

We can now take up Patrocles’ interrupted voyage again. Coasting along Hyrcania, as we may presume he did, he would naturally come to the arm of the sea down which Strabo’s imaginary voyager sailed, and equally naturally, if he followed the coast, sail up it; for it must be remembered that the whole coastline of Khiva Bay would be covered with water, if there were

<sup>1</sup> Strabo 11, 508: . . . Πάρνοι· εἰτ’ ἔρημος πρόκειται μεταξύ, καὶ ἐφεξῆς ἡ Ἵρκανία, καθ’ ἣν ἦδη πελαγίζει . . .

<sup>2</sup> Strabo 11, 515 Parnoi said to be Δάας μετανάστας from the Daai beyond Maeotis; some of them dwell on the Ochus. But the best commentary on the above is 511, where it appears clearly that Strabo imagines 3 parallel belts, (1) cultivated land, Hyrcania, Nesaia, Parthia; (2) Desert; (3) nomads, Daai, Aparnoi and others, the Aparnoi nearest Hyrcania; they raid regularly across the desert. Cf. Ptolemy 6, 10; and Agathodaemon’s map, which places the Daai and Parnoi south of the Oxus.

<sup>3</sup> Strabo 11, 507 already cited. Pomponius Mela 3, 5, 3 Mare Caspium ut angusto ita longo etiam freto primum terras quasi fluvius irrumpit. Pliny 6, 13 irrumpit autem arctis faucibus et in longitudinem spatiosis. . . . utrinque

accolunt Seythae et per angustias inter se conueiant. Pseud. Ar. *de mundo* 3, 11; Solinus 14, 18. It is not clear that Patrocles is the common source, but I am willing to assume it; anyhow he spoke of the ‘mouth’ of the Caspian (Strabo 2, 74).

<sup>4</sup> That this sea-strait cannot be far from where I have put it, and that it has nothing to do with the north, is also shewn by Strabo’s calling the ‘mouth’ of the Caspian ‘the Hyrcanian mouth’ (11, 519) [cf. n. 1, p. 24]. Pomponius Mela also connects the ‘os’ with the ‘sinus Hyrcanus,’ 3, 5, 3. His account has become very confused; but it may be worth noticing that on the narrow strait he places the Derbikes (3, 5, 4), a tribe whom Strabo (11, 514) places near the Hyrcanians and Pliny 6, 16, on either side of the Oxus. Ptolemy 6, 10 puts them in Margiana, on the Oxus.



(ex hypothesi) a sea-strait running in between the Balkans. If he sailed up this sea-strait—in fact discovered it—the notices of it in Greek writers are explained, while he himself proceeds in the right direction, towards the Oxus mouth.

Now we have seen that the measurements given need not mean personal measurements, and that it is, at least, quite possible that he never saw the Oxus mouth himself. Assuming that the Oxus had a mouth at lake Sary-Kamysh, and that the sea-strait up which he sailed did not join that lake,<sup>1</sup> how far did Patrocles get?

The only answer is, far enough to hear of the Aral, the great open water to the north, but not far enough to make sure that the gulf up which he sailed did not join it. In fact, the actual notices of this strait would, with one exception,<sup>2</sup> fit in better with the theory that the waterway continued to Sary-Kamysh<sup>3</sup> and the Aral; but except in a few cases we cannot discriminate what Patrocles saw from what he heard. We conjecture that he found people who gave him the distance in parasangs to the Jaxartes mouth; it would be very curious if this were the only information they gave him.

Now the net result of his voyage was, that geographers were strengthened in the opinion that the Caspian joined the ocean, and also asserted the possibility of sailing round to India. In my view, those who say that Patrocles asserted the possibility of sailing round to India by *sea* are confusing two different things.<sup>4</sup> What Patrocles said was this, that it was possible to sail from India to the 'mouth' of the Caspian (the 'sailing-in point').<sup>5</sup> Strabo adds that the 'mouth' appears to be the most northerly point of the sea-coast on the way to India,<sup>6</sup> and from the form of the sentence this last remark may also be Patrocles'. But even if it be, all that it proves is what we conjectured before, that Patrocles heard of 'sea' or 'open water' to the north; while the use of the word 'mouth' proves that he thought that the strait, up which he sailed, joined this open water. It does not prove that he reached it; but this much is clear, that to the open water at the 'mouth' there was, in his opinion, a waterway from India; and this waterway might extend, he thought, to Hyrcania.<sup>7</sup>

<sup>1</sup> I assume this, not as necessarily being the fact, but as being most against my own view.

<sup>2</sup> That the strait was no bar to the intercourse of the tribes on either side of it. But Turcomans swim the Oxus at its broadest. And the 'mouth' was looked on as narrow; Agathemerus (3, 13) says 4 stades across.

<sup>3</sup> Curtius indeed (6, 12) hints that great intermittent floods of water came into the Caspian. After speaking of the way this sea sometimes flooded the land and then retired, he says 'et quidam credidere, non Caspium mare esse, sed ex India in Hyrcaniam cadere.' Solinus appears to have heard a similar story and to refer it to snow-water; 14, 18 Caspii

maris . . . fauces maciantur imbribus, crescent aestibus (if Th. Mommsen's reading be correct). It would be interesting to know the source of this.

<sup>4</sup> *I.e.* that the Caspian joined Ocean, and that one could sail from India into it.

<sup>5</sup> Strabo 2, 74: τοῦ στόματος τῆς Κασπίας θαλάττης . . . ὕπερ . . . δοκεῖ . . . περίπλουον ἔχειν ἀπὸ τῆς Ἰνδικῆς δυνατόν, ὡς φησιν . . . Πατροκλῆς.

<sup>6</sup> 2, 74 same passage: ὕπερ . . . δοκεῖ αὐτῆς τῆς παραλίας μέχρι τῆς Ἰνδικῆς ἀρκτικώτερον εἶναι σημεῖον.

<sup>7</sup> Strabo 11, 518: see note 4, p. 19.

Now Patrocles *may* well enough have supposed that the open water which he heard of was the ocean; but for geographers at home it was probably sufficient to know that he had found a salt water strait leading towards unknown water of considerable extent; this *must*, on general principles of geography, be part of the circumfluent ocean.

Pytheas, too, had familiarised men's minds with the idea of great masses of water toward the north as an ascertained fact. However, there was more than this, and Pliny gives the hint.<sup>1</sup> He says, 'From the Caspian sea and the Scythian ocean the route turns eastward, the shore now fronting toward the east; the first part (of this land) is uninhabitable on account of the snow.' That is to say, somehow or other, a report of the actual polar sea was abroad.<sup>2</sup> I submit that Pliny's words can mean nothing else; and there is a curious bit of confirmatory evidence. In Ptolemy Philadelphus' procession there figured, among other strange beasts, a polar bear<sup>3</sup>; this creature could not have been passed south without some knowledge of its habitat being passed down with it, if only for the purpose of keeping it alive.

Be this as it may, Patrocles does not appear to have spoken of a sea route from the Caspian to the Indian ocean; and the idea that he did so is perhaps a misunderstanding of what he did say, as reported by Strabo. What are the facts of the case?

Patrocles had been sent by Seleucus to report on the possibilities of trade; principally, that Indian trade for which Syria and Egypt were rivals. At present Egypt, through Arabia, monopolised the *sea*-traffic; even if the Arab captains ran their cargoes up the Persian gulf instead, the caravan journey through Seleucia could hardly compete in cheapness with the way of the Red Sea and the Nile. Seleucus paid much attention to his north-eastern provinces; his eldest son, half a Sogdian by birth, governed them, his general Demodamas guarded the Jaxartes frontier; clearly, in contemplating a canal from the Caspian to the Euxine, and exploring the Caspian, he hoped to create a rival water-route; the Oxus should be a thoroughfare like the Nile, and Syria should have her sea-canal as well as Egypt.

Patrocles' report on the canal must have been adverse, of course; that on the Oxus seems to have been more encouraging. It entered the 'Caspian'; it was navigable; it brought down Indian goods to Hyrcania, whence they were taken across to Albania and up the Cyrus, etc. But whether any one had actually sailed from India to Hyrcania was a matter of doubt; anyhow it was possible to do so.<sup>4</sup> So far the report. Trade found its way down

<sup>1</sup> Pliny 6, 17. Cf. Pomp. Mela 1, 2, 3; Solinus 50, 1.

<sup>2</sup> *I.e.* that the cold land of the north was bounded by water. Pytheas had spoken of *τῆς πεπηγυίας θαλάττης*. Strabo brings the mouth of the Caspian and Ierne into connection as being both far north 2, 119. In 11, 507 the *εἰσπλους* of the Caspian is *συνάπτων πως ἤδη τῇ οὐκίτῃ*.

<sup>3</sup> Ath. 5, 201 *c* ἄρκτος λευκή μεγάλη μία.

<sup>4</sup> The passages in Strabo are (1) 2, 73: τὸν Ὠξον οὕτω φασὶν εἶπλουν εἶναι ὥστε τὸν Ἰνδικὸν φόρτον ὑπερκομισθέντα εἰς αὐτὸν βραδίως εἰς τὴν Ἰρκανίαν κατάγεσθαι καὶ τοὺς ἐφεξῆς τόπους μέχρι τοῦ Πόντου διὰ τῶν ποταμῶν. (2) 11, 509: φησὶ δὲ καὶ εἶπλουν εἶναι (τὸν Ὠξον) καὶ οὗτος (Aristobulus) καὶ Ἐρατοσθένης παρὰ Πατροκλέους λαβὼν καὶ πολλὰ τῶν Ἰνδικῶν φορτίων κατάγειν εἰς τὴν Ἰρκανίαν θάλατταν ἐντεῦθεν δ' εἰς τὴν Ἀλβανίαν περαιούσθαι καὶ διὰ τοῦ Κύρου καὶ τῶν

the Oxus; query, if anyone had actually sailed the whole distance to Hyrcania.

Upon this, he has been made responsible for the idea of a N.E. sea passage to India,<sup>1</sup> that is to say, to the eastern or Indian Ocean. But surely that is a forced interpretation. What he had in his mind was India itself,<sup>2</sup> and not any Indian Ocean. India was not the unknown country it had been when Alexander wondered if the Caspian joined that ocean; on the contrary, the dominions of Seleucus' son-in-law were just now particularly well known; the practical question for Patrocles was merely whether trade with them viâ Bactra could not be made as paying as trade viâ Barygaza. And just in the same way that much goods came from Barygaza to Egypt, but even so late as the time of Ptolemy Physkon it was looked on as a wonderful thing for a man to do the whole voyage,<sup>3</sup> so Patrocles most naturally observes that the goods came down the Oxus, but that it was doubtful if anyone had done the whole voyage, though he thought it was a possible one.

And this brings me to one other point in connection with Patrocles. Is it possible to determine from his narrative where and into what the Oxus flowed? I think not. All that we have to go upon are the measurements quoted by Eratosthenes, Strabo, and Pliny, calculated from a point which we do not precisely know, following the windings of a coast different from our coast, and probably only guessed at by some sort of dead reckoning, at best. However, for what they are worth, they come to this,<sup>4</sup> that the Oxus mouth was 4,800 stades from the 'bight,' the

$$\text{Jaxartes mouth } 4,800 + \begin{cases} 2,400 \text{ at least} \\ 4,800 \text{ at most} \end{cases} = \begin{cases} 7,200 \\ 9,600 \end{cases} \text{ stades}$$

ἐξῆς τόπων εἰς τὸν Εἰξεινον καταφέρεισθαι. (3) 11, 518: οὐχ ὁμολογοῦσι δ' ὅτι περιέπλευσάν τινες ἀπὸ τῆς Ἰνδικῆς ἐπὶ τὴν Ἑρκανίαν ὅτι δὲ δυνατὸν, Πατροκλῆς εἶρηκε. Of these (1) and (2) represent a common original. There is nothing here about any Indian ocean, and I doubt if there ought to be anything about the Caspian either. (1) and (3) only say 'to Hyrcania:' (2) says 'to the Hyrcanian sea.' Now it is not natural to say that from the Hyrcanian sea (ἐντεῦθεν) goods were carried across (i.e. across the Hyrcanian sea—περαιοῦσθαι, from one side to the other) to Albania. I would suggest that θάλατταν may be a gloss, inserted by some one who had Pliny 6, 17 in his mind, where the Caspian is certainly mentioned. If it be the right reading, there is nothing to account for its omission in (1), and this appears to me conclusive. Of course, it may be contended that τὴν Ἑρκανίαν alone means the Hyrcanian sea; but is this possible unless the context render it unmistakable? I have been through practically every instance of ἡ Ἑρκανία, the sea, given in Pape's *Wörterbuch d. Griech.*

*Eigennamen*; there are 4 cases (Arr. *Anab.* 5, 26, 1 Strabo 2, 129 and 11, 519 and Ptol. 5, 13, 6) where θάλασσα is left to be supplied, and in all these passages ἡ Ἑρκανία θάλασσα has been mentioned just before and the wording of the context makes the meaning unmistakable: neither of these is the case in (2).

<sup>1</sup> E.g. von Gutschmid in art. 'Persia' in *Enc. Brit.* Tozer, *Hist. of Anc. Geog.* 136. Pliny gives a wild story of circumnavigation 6, 21; 2, 67.

<sup>2</sup> It may be of interest, in this connection, to note Peter the Great's orders to the ill fated Bekovitch expedition. They were to go up the old bed of the Amu to Khiva, win over the Khan, turn the Amu back into the Caspian, and sail in the Khivan boats towards India. Humboldt, *Asie Centrale* 1, 425.

<sup>3</sup> The story of Eudoxus of Cyzicus, Strabo 2, 98 *seq.*

<sup>4</sup> Strabo 11, 507 compared with 518. Pliny 6, 13 gives 4,800 and 2,400 stades, presumably following Eratosthenes. The symmetry of these measurements is suspicious.

from the 'bight'; while the total length of the Caspian from the 'bight' to the 'mouth' or 'sailing-in point' is variously given at 6,000 stades<sup>1</sup> or something over 5,000 stades<sup>2</sup>; that is to say, the point where the Caspian joined 'ocean' falls *between* the mouths of the Oxus and Jaxartes, and the Jaxartes must discharge into 'ocean.' Now the one thing which is absolutely certain is that the Jaxartes was thought to flow into the same sea as the Oxus, and that sea the 'Caspian'<sup>3</sup>; so that we now get this far, that 'Caspian' and 'ocean' may occasionally be synonymous.<sup>4</sup> For anything more accurate than this we cannot rely on the measurements; all that I like to say is, that they are not a hindrance to a theory that the Oxus then entered lake Sary-Kamysh.

Now even if Patrocles never saw the Oxus mouth himself, the periplus already cited shews that he thought it possible to reach it, and also the mouth of the Jaxartes; that is to say, he thought that the Jaxartes flowed into the Caspian or some water connected with the Caspian, and (according to the measurements) beyond the narrow strait. In plain English, he treated the Aral as part of the Caspian. What I think happened was, that he spoke so vaguely of the open water beyond the strait, that geographers, with a predisposition to believe in ocean there, were able to misunderstand, and to place the narrow strait outside a united Caspian, instead of, as a fact, between two Caspians.

For (Patrocles apart) that the 'Caspian' sometimes meant the Aral there can be no doubt whatever. Quite apart from the story given by Strabo,<sup>5</sup> that men, to flatter Alexander, identified the Maeotis that receives the Tanais with the Caspian, saying that this latter also was a lake and that the two were connected, each a part of the other, one Polycleitus (of whom we know nothing) undertook to prove that the Caspian was a lake from the fact *that its waters were sweetish*.<sup>6</sup> Now wherever Polycleitus got his information, and whatever mistakes men may make, no man in a steppe country ever yet took salt water for sweet;<sup>7</sup> it appears to be a conclusive proof

<sup>1</sup> Strabo 2, 74.

<sup>2</sup> Strabo 11, 507.

<sup>3</sup> Strabo 11, 507, 510, 518; Arrian 7, 16; Pomponius Mela 3, 5, 6; Ptolemy.

<sup>4</sup> Is this what Strabo means in 2, 173: τὸν ὠκεανὸν τὸν τε ἔξω καὶ τὸν τῆς Ἰρκαρίας θαλάττης? There is no difficulty in the supposition. The list of names of oceanus in Solinus 23, 17, includes Hyrcanus and Caspius.

<sup>5</sup> Strabo 11, 509: this story must rest upon the real confusion of the European and Asiatic Tanais (Jaxartes). It does read very much like the supposition of a waterway between the Aral and Caspian. Cf. Curtius 6, 12 'alii sunt, qui Maeotiam paludem in id (Caspium mare) cadere putent.' A very clear case of Maeotis meaning the Aral is Polyb. 10, 48; the Apasiacae dwell on the middle Oxus and Tanais, the

Oxus entering the Hyrcanian sea and the Tanais the Maeotis.

<sup>6</sup> Strabo 11, 509, 510: ὑπόγλυκν.

<sup>7</sup> Prof. Walther (l.c.) uses this argument about Anthony Jenkinson's journey. Pliny repeats the statement (6, 17 haustum ipsius maris dulcem) on the authority of 'Alexander Magnus' and M. Varro, attributing the fact to the inflow of the rivers. So Solinus 19, 3. Curtius (6, 12) also gives it, as due to the inflow of the Maeotis. The Caspian is salt, the northern section (which is very shallow compared to the rest) being 'less so than the rest of the sea, owing to the inflow of the Volga and Ural. The Aral is generally said to be only slightly brackish. M. Sven Hedin, however, (*Through Asia*, 1, 49), says, that it is too salt to drink, except at the river mouths: 'but

that this piece of information refers to the Aral, under the name of the Caspian.<sup>1</sup>

And though we have no description of the Oxus mouth, we have, probably, one very curious allusion to it. Strabo has taken the Araxes story<sup>2</sup> bodily from Herodotus, and has put it, as did Herodotus, among the Massagetæ, marshes islands fish-eaters and all, but *he has altered Herodotus' statement about the mouths*; he says that all the mouths but one fall into 'the other sea' (or, 'the rest of the sea') which is toward the north,<sup>3</sup> while the one clear mouth enters the Hyrcanian gulf.<sup>4</sup> Whether the genesis of this extraordinary confusion can be traced or not, it can only mean that some one had known of and reported the true facts about the Oxus mouth, viz., a great marshy delta on the Aral Sea, and a clear arm falling either into lake Sary-Kamysh or some other point which was understood as being a part of that Hyrcanian gulf or strait up which Patrocles had sailed and which debouched into 'ocean.'<sup>5</sup>

Before quitting this part of the subject, it is necessary just to mention Ptolemy's idea of the Caspian, as he is generally praised for reverting to the true view of Herodotus, that the Caspian was a lake.<sup>6</sup> To a certain extent this praise is deserved, that is to say, he rightly recognised, as against Eratosthenes and Strabo, that the ocean was not thereabouts. At the same time, so far as his 'Caspian' (egg-shaped, with the longer axis E. to W., and receiving the Oxus and Jaxartes) proves anything, it proves that the Aral and Caspian were confused together, as we have seen already.

Before proceeding to the question of trade, it will be necessary to notice briefly the theory of a southern branch of the Oxus, because, though the physical evidence is all against it, it is often supposed that statements in Greek

far out in the lake there are said to exist certain fresh-water belts.' I must thank Mr. G. F. Hill for calling my attention to this.

<sup>1</sup> This explains why the Greeks (apparently) never mention the Aral, a fact which has led some to suppose, either that they did not know of it (Bunbury), or that it did not exist. They always mention it as something else, Caspian, Maeotis, or (perhaps) Ocean. This view also perhaps throws some light on the confused arrangement of the three gulfs of the Caspian in Pomponius Mela 3, 5; his Scythicus sinus, on the *left* hand as one enters by the 'mouth,' and receiving the Oxus and Jaxartes, must be the Aral. That the Aral *existed* is clear from the Chinese accounts. In A. Wylie's translation of *Notes on the Western Regions*, from the Annals of the elder Han (*Journ. Anthropol. Inst.* 1881 at p. 44) the Yentsai are said to live about 2,000 le N.W. of the Khang-kin (the nomads settled on the Polytimetus) 'on the border of a great marsh without banks, which is the Northern sea.' Tchchang-kiên, on whose report this account is based, had per-

sonally visited the Khang-kiu (p. 67); the date is now generally given as about 128 B.C. In the corresponding passage of the Shi-ki of Sze-ma-t'sien ch. 123, T. W. Kingsmill's translation ('Intercourse of China with Eastern Turkestan,' *J.E.A.S.* 1883, vol. 14, p. 80) gives 'a great marsh, without defined banks, covered with reeds, and (communicating with) the Northern sea.' Gigantic swamps (one of 2,000 sq. miles) still exist near the mouth of the Syr.

<sup>2</sup> Strabo 11, 512, 513.

<sup>3</sup> τὴν ἄλλην τὴν πρὸς ἄρκτοις θάλατταν.

<sup>4</sup> πρὸς τὸν κόλπον τὸν Ἰρράκιον. It is clear that this will not suit the Jaxartes.

<sup>5</sup> Incidentally, this shews the confusion in Strabo's mind as to whether this strait ended in ocean or in some sea: cf. p. 21.

<sup>6</sup> It is perhaps interesting to note that in the same chapter in which he defines the Caspian as a lake, 'rather like the opposite of an island,' he calls the Peloponnese an island. On the whole, his notions of this part of the world are confused, and inferior to those of Strabo.

writers support it; and should this prove to be the case, it would have some bearing on the general question of how far those writers are trustworthy.

This theory, which is, I believe, supported in Russia by Baron Kaulbars and General Annenkoff, was often advanced by the late Sir H. Rawlinson.<sup>1</sup> He believed that a sheet of water—or rather a basin sometimes water sometimes marsh—existed to the north of or about the present terminations of the Murghab (Margus) and Tejend (Arius)<sup>2</sup>; that it was fed by a split channel of the Oxus, which issued again from it and followed what is now the railway line and reached the Uzboi N.E. of the passage between the two Balkans; that this river was the Ochus of Strabo, and that this was the route by which trade went; that this river made these districts very fertile, and helped to account for the sudden rise of Parthia.

The historical arguments brought forward by Sir H. Rawlinson in support of his theory are drawn chiefly from mediæval times; with these we are not now concerned. The Greek evidence in its favour, so far as I know, other than that indicated above, is: (1) Strabo says the Oxus flowed through Hyrcania<sup>3</sup>; (2) Ptolemy makes the Margus join the Oxus<sup>4</sup>; (3) we have mention of a river Ochus, which defies location.

The balance of the Greek evidence, however, appears to be strongly against the theory. The different points are briefly as follows. The theory is inconsistent with what we know of Merv. This town was difficult of approach;<sup>5</sup> it was surrounded by deserts;<sup>6</sup> it formed a safe and remote natural prison, in which the Parthians could place the prisoners of Crassus' army. The whole line of this country, Hyrcania, Nesaia, Parthia, was habitually raided across the desert by the nomads, a fact telling somewhat against a great river to be crossed; this desert too is called by Strabo waterless.<sup>7</sup> Ptolemy's statement about the Margus cannot stand with Strabo's very positive assertion that the Arius, then as now, ended in the sand,<sup>8</sup> a fact so well known that he uses it as an illustration for the Polytimetus doing the same thing. Herodotus' Akes pool is a fairy tale.<sup>9</sup> There is no reason to suppose that Strabo's description of Parthia proper as small and unimportant<sup>10</sup> is incorrect. A theory cannot well be founded on the Ochus,<sup>11</sup> for Strabo, our

<sup>1</sup> Proceedings *R.G.S.* vol. 20 (1876) p. 178; vol. 1. (1879) p. 161 *seq.* 'The road to Merv;' vol. 4 (1882) p. 355; vol. 5 (1883) p. 14.

<sup>2</sup> The Aria palus of Ptolemy, the Akes pool of Herod. (3, 117.)

<sup>3</sup> Strabo, 11, 509, 518.

<sup>4</sup> Ptolemy, 6, 10.

<sup>5</sup> Pliny, 6, 16 *difficilis aditu propter arenosas solitudines.* Solinus 48, 2 has turned this into 'paene inaccessa.'

<sup>6</sup> Strabo, 11, 516.

<sup>7</sup> Strabo 11, 511. The desert is *ἀνυδροσ*. So in the Zend Avesta, the 'plague' of Merv is an evil concourse of horsemen and robbers.

<sup>8</sup> Strabo 11, 518.

<sup>9</sup> This appears from the names of the five nations connected with it.

<sup>10</sup> Strabo 11, 514.

<sup>11</sup> Strabo's notices of the Ochus (11, 509-511, 518) come to this; it flows through Hyrcania and Nesaia, and near Parthia; and comes from the Indian mountains. Some say it falls into the Oxus, some into the Caspian, after an independent course; some say it flows through Bactria, some that it bounds it. So far as I know, no one else tells any *new* fact about it. But a statement is sometimes quoted from Curtius, to the effect that Alexander crossed both Ochus and Oxus marching from Samarcand to Merv: *e.g.* by Sir H. Rawlinson *Proceedings*

best authority, was clearly unable to get any information about it which was not contradictory. In fact, as far as Strabo is concerned, we are left with two apparently inconsistent statements, one that the Oxus flows through Hyrcania, the other that the Arius ends in the sand. These statements cannot stand together unless we can give to Hyrcania a wider meaning than that which it usually bears;<sup>1</sup> for it is clear that the Oxus, to flow through Hyrcania proper, must intersect the Arius. Perhaps sufficient traces of such wider meaning are found to shew that Strabo's statement about the Oxus flowing through Hyrcania cannot be used, as against his very positive assertion about the Arius, to support the theory of a southern Oxus, and also that it does not necessarily conflict with the theory that the Oxus entered lake Sary-Kamysk.

But after all, the real argument against a southern Oxus, so far as Greek writers are concerned, is to be found, not in their statements, but in their silence. Droysen has already noticed it as strange, that Alexander founded no town at the mouth of the Oxus.<sup>2</sup> If the Oxus then flowed by Merv and along the northern base of the Kopet Dagk, how came it that Alexander, who had just before found time for hill expeditions against the Mardi, found none, if not to explore the river mouth, at least to establish settlements on the river sufficient to secure this valuable frontier, this considerable highway of commerce? On the contrary, while he founded eight, or twelve, cities in Bactria and Sogdiana, and took infinite pains to secure the Indus, he left the Oxus and the rich districts about it so severely alone that it was from here, from Parthia, that the most important reaction against his work

*E.G.S.* 20 (1876) p. 178. No such march of Alexander's is known, and a reference to Curtius 7, 40 shews that Curtius says he started from Bactra to punish the rebels, on the 4th day reached the Oxus, and then crossing Oehus and Oxus (*superatis deinde amnibus Ocho et Oxo*, one MS. *Oxo et Meo*) reached Margania (*ad urbem Marganiam pervenit*—Margianam is only a conjecture). That is to say, he crossed back into Sogdiana after the rebels. Round Margania, says Curtius, he built 6 towns. Margania seems unknown. There seems no need to make even Curtius romance unnecessarily; there is nothing here about Merv or a southern Oxus. All that can safely be said about Strabo's Oehus is that it seems to be a confusion of two rivers, one a Bactrian tributary of the Oxus; the other would be well suited by the Atrek (Bunbury).

<sup>1</sup> There seem to be traces of such a wider meaning in Strabo. 11, 519 he speaks of the 'mouth' of the Caspian as the 'Hyrcanian' mouth; on any theory, it was not in Hyrcania proper. 11, 513 the one branch of the 'Araxes' enters the Hyrcanian *κόλπος*, *i.e.* the narrow

strait (507), between Balkan bay and the Aral. Did 'Hyrcania' follow the 'Hyrcanian gulf'? It would be a tempting conjecture that somewhere in Strabo's sources a confusion had occurred of Gurgān (Hyrcania) and Gurgānj (Orgunje); but there appears to be no real authority for the name Gurgānj till much later. (Dr. E. Sachau, 'Zur Gesch. und Chronologie von Khwārizm' in *Sitzb. der K. Akad. der Wiss.*, Wien 1873 vol. 73 at p. 472). Sir H. Rawlinson had conjectured this name for Urva in the 1st Fargard of the Vendidad (verse 38); but see now Darmesteter's trans. in 'Sacred Books of the East.'

<sup>2</sup> *Hellenismus*<sup>2</sup>, III, 2, 253. Enough is known, perhaps, about Alexander and the towns he founded to make the argument from silence a fair one. It is sometimes stated (*e.g.* Roesler, 'die Aralseefrage,' *Sitzungsber. der philosophisch-hist. Classe d. K. Akad. der Wiss.*, Wien 1873 vol. 74 p. 186) that Ptolemy places a town Aspabota at the Oxus mouth. It is really put two degrees from it, and much nearer the Polytimetus (Ptol. 6, 14, 2).

started. . . To any one who carefully follows Alexander's work the thing is inconceivable.

This brings us to the last point I wish to notice, viz. :—the evidence for the existence of a trade route from Bactria by waterway down the Oxus and across the Caspian, by which raw silk in particular found its way to Europe. We have in effect three notices of this route; two (from a common source) in Strabo, and one in Pliny, which seems to be quite independent. Those in Strabo have already been dealt with.<sup>1</sup> The passage in Pliny,<sup>2</sup> given on the authority of M. Varro from information acquired by Pompey's expedition, is a clear one; the Indian trade was carried down the Icarus (supposed to be the Bactrus<sup>3</sup> or river of Balkh) into the Oxus and thence into the Caspian and from the Caspian up the Cyrus and so to the Black Sea, to Phasis, with a land journey of only 5 days. As Strabo's account represents information coming from the east of the Caspian, so Pliny's was obtained from the western or Armenian point of view, which may or may not have carefully distinguished how the goods reached the Caspian.

There is no need to multiply modern citations of this route as an ascertained fact, from Hüllman and Lassen to the present day; now and again some doubt has been thrown on it. I give a few recent references.<sup>4</sup>

Now it is quite clear that if as a fact the Oxus never entered the Caspian, Pliny's statement as to trade passing down it into the Caspian requires reconsideration. If, in addition, it should ultimately be proved to be a fact that there never was any waterway between Sary-Kamysh and the western Uzboi, then any goods coming this way would have required to be twice handled in transit, at least, a matter which would have seriously

<sup>1</sup> See p. 19, note 4. In the first passage (2, 73) there cited, Strabo appears to have himself added the word 'easily' to his original, for purposes of controversy, his argument in that part of book 2 compelling him to insist on the fertility and resources of the provinces north of 'Taurus.'

<sup>2</sup> 6, 17; repeated by Solinus 19, 4.

<sup>3</sup> The Bactrus is said to have then reached the Oxus, Strabo 11, 516. Later, a Turkish geographer says that the Balkh river entered the Oxus at Termedli (Ritter, *Erdkunde* pt. 8 bk. 3, 219).

<sup>4</sup> Among recent writers, who repeat without comment the statement that goods could be shipped on the Oxus and taken by its ancient course to Balkan Bay, may be mentioned Brunnhofer, *vom Aral bis zum Gangâ*, (1892) who has a good deal about it, p. 129, p. 134-141, and who (*Iran und Turan*, p. 113 *seq.*) speaks of the 'ungeheuern Transithandels;' Skrine and Ross, *The Heart of Asia*, (1899), p. 315; Tozer, *Hist. of Anc. Geog.* (1897), p. 134. On the contrary, among older writers, who are generally positive about it, Roesler, *die Aralseefrage*

(cited above, 1873), while believing the Oxus reached Balkan Bay, already suggested it was of little importance for trade (p. 215). Sir W. W. Hunter, *History of British India*, (1899) vol. 1. p. 31-33 has a very guarded statement about this route; his map shews no trade-route to the Caspian by the Oxus, but a land route from Kashgar viâ Merv to Asterabad, thence (1) ship to mouth of Cyrus, (2) caravan through Armenia to Trebizond (3) caravan viâ Euphrates to Syria. Mr. J. Kennedy, 'The early commerce of Babylon and India,' *J. R. A. S.* 1898, expresses, I think, the facts of the case in saying, (p. 242), 'Articles of commerce doubtless passed along this way from early times; but the trade was of little importance, fitful, intermittent, and passing through many intermediate hands,' but he adds 'until the Parthian domination forced trade into this channel.' What is the evidence for the statement about the Parthians? And, *a priori*, why should they try to force trade into a channel entirely *outside* their own dominion or control? See note 5, p. 26.



handicapped the already lengthy Oxus route, whose recommendation (ex hypothesi) was ease of transport. No doubt too each handling would have meant a toll.

I have ventured to think that all that Strabo, or his authority, ever said may have been that goods came down the Oxus to Hyrcania,—an elastic geographical expression. But whether that be so or not, we have in any case to deal with Pliny; and we have two pieces of evidence, to set against his express account. One is Strabo's witness that the Caspian, which had never been properly exploited either during the brief Macedonian rule or by barbarians, was unnavigable and unnavigated.<sup>1</sup> The other, somewhat later, is Ptolemy's account of the land road, partly on the authority of the Macedonian Maes, a trader as his father had been before him. Ptolemy gives the whole route,<sup>2</sup> the road running from Hierapolis on the Euphrates viâ Ecbatana to Hekatompylos, thence northward to Hyrcania and through Aria to Merv, and so to Bactra and thence by the Stone Tower to Sera Metropolis. If the water route had been of any importance it might be expected that Ptolemy would have mentioned it here.

There is also the cardinal argument that Alexander made no attempt to secure this water route; and we may remark, for what it is worth, that there is nothing to shew that (after Patrocles) Macedonian,<sup>3</sup> Bactrian,<sup>4</sup> or Parthian<sup>5</sup> ever attempted to found settlements or acquire trade along it; or even that the Greeks exploited the trade by means of native agents, as we know was done in the case of the silk route between the Tarim-valley and Bactra.<sup>6</sup> The enormous size and wealth of Seleucia in Parthian times is some evidence that this city must have attracted a disproportionate amount of trade with the East, so far as it did not go by sea; and the value of the overland trade is also shewn by the wealth that the Aorsi derived from this source,<sup>7</sup> and by the fact that, at a later time, when the Parthians closed the land routes, the Roman merchants attempted to reach the silk countries by sea.<sup>8</sup>

<sup>1</sup> 11, 509: ἄπλους τε οὖσα καὶ ἀργός. Cf. Pomponius Mela 3, 5, 3: omne atrox, saevum, sine portibus . . . belluis magis quam cetera refertum et ideo minus navigabile.

<sup>2</sup> Ptolemy 1, 11 and 12. See Bunbury *op. cit.* 2, 529 seq., who follows Colonel Yule in thinking that the silk came by this road. Ptolemy does not say so; but he does rather imply that the whole of it was one route; and of course it was the silk route in the portion east of Bactra. Frazer (note to Pausanias 6, 26, 6) says the silk went overland from N. China by Samarcand to the Caspian, citing Ptolemy, 1, 11; this may be correct, but is hardly what Ptolemy says.

<sup>3</sup> The mere argument from silence is of little value in this history of scraps and fragments, after Alexander. As to the Macedonians, we have some little evidence in Strabo 11, 509. They had no time.

<sup>4</sup> No coin-finds, so far as I know. And see

Appendix, p. 23.

<sup>5</sup> The Parthians, a small aristocracy of great slave-owners, did not usually bear a mercantile character: see von Gutschmid, *Gesch. Irans*, pp. 56, 65; though no doubt glad to enrich themselves by tolls. But the fact that Vardanes, when he pursued a beaten enemy to the Tejend (lower Arius) boasted of having reduced nations who never before paid tribute to an Arsacid, is very much in point here, as shewing what strangers the Parthians had then become in this part of the world (von Gutschmid, *Gesch. Irans* p. 126).

<sup>6</sup> Ptol. 1, 11 § 7.

<sup>7</sup> Strabo 11, 506: ἐχρυσόφορον δὲ διὰ τὴν εὐπορίαν.

<sup>8</sup> This attempt is known only from Chinese sources, as to which see Dr. F. Hirth, *China and the Roman Orient* (1885), p. 42.

Chinese sources begin to throw some little light upon north-east Iran about the last quarter of the second century B.C., when the emperor Wu-ti sent Tchang-kien as envoy to the Great Yueh-chi, who had just driven the Greeks out of parts of Sogdiana and Bactria, and were encamped on the north bank of the Oxus. He brought back much information about the neighbouring countries, and among other things says of Anhsi (Parthia), which he had not visited personally, 'As the country extends to the Wei (Oxus) river, their traders traverse the adjoining kingdoms both by land and water.'<sup>1</sup> The Parthian rule did not extend to the Oxus, and therefore there is some mistake here, unless the passage be used as evidence for a branch of the Oxus passing Merv; but Tchang-kien did not distinguish peoples much, except as nomads and settled races, and it *may* be good proof of traffic on the Oxus as ascertained by an eye-witness.

More than two centuries later (97 A.D.) the Chinese general Pan-ch'ao sent one Kan-ying as ambassador to Ta-ts'in (Syria), with a view probably to getting into some sort of direct trade communication with its merchants. Kan-ying (I quote from Dr. F. Hirth's translation)<sup>2</sup> 'arrived in T'iao-chih, on the coast of the great sea. When he was about to take his passage across the sea, the sailors of the western frontier of An-hsi (Parthia) told Kan-ying "The sea is vast and great; with favourable winds it is possible to cross within three months; but if you meet slow winds it will also take you two years. It is for this reason that those who go to sea take on board a supply of three years provisions. There is something in the sea which is apt to make man homesick, and several have thus lost their lives." When Kan-ying heard this he stopped.'

This story is generally referred by older writers to the Caspian, and, if this were the case, would have an important bearing on the question of the trade crossing that sea. There can however be little doubt that the sea in question is, as Dr. Hirth thinks, the Persian gulf, whether we accept all the details of his exhaustive examination of the evidence or not. The mere fact that you first sail south, then make a round at sea and take a northern turn, is alone a very strong argument. I may add one further mark of accuracy in the Chinese account to those given by Dr. Hirth. It appears that before 59 A.D. the Parthian kingdom had been cut off from the Persian gulf by a row of little states;<sup>3</sup> now the Chinese account does not speak of sailors of Anhsi, but of sailors of the western frontier of Anhsi. The western boundary of Parthia extended *beyond* the Caspian.<sup>4</sup>

<sup>1</sup> A. Wylie 'Notes on the Western Regions,' *J. Anth. Inst.* 1881, p. 40, cited above.

<sup>2</sup> 'China and the Roman Orient,' where everything bearing on the question is collected. The passage quoted is p. 39, from the Annals of the later Han.

<sup>3</sup> Von Gutschmid, *Gesch. Irans*, pp. 56, 134.

<sup>4</sup> Hirth p. 146.—See also on this story T. de Lacouperie, *The western origin of Chinese*

*civilisation*, pp. 222, 226. Among recent writers M. E. Drouin (Art. 'Bactriane' in *Grande Encyclopédie*, p. 1120) still refers it to the Caspian; von Gutschmid *op. c.* p. 138 seq. to the Mediterranean, which is out of the question for quite a number of reasons. There is an odd parallel to what the sailors told Kan-ying to be found in Dionysius Periegetes, who says of the Caspian that you would not cross

On the whole, it appears to me that we are safe in saying that whatever trade came down the Oxus and across to the Caspian was entirely in native hands during the whole period of Greek knowledge of this river; and that it was of no great extent. It would not be safe to assert that any Greek ever set eyes on the Oxus lower down in its course than the confines of Bactria and Sogdiana.

In conclusion, it may be convenient to summarise the views here very tentatively put forward. Patrocles sailed up a gulf of the Caspian stretching towards, but perhaps not reaching, the Aral. He heard of the Oxus and Jaxartes mouths, and of the Aral; that trade came down the Oxus from India to 'Hyrcania,' and that one *could* sail all the way. He thought the Aral joined with and was part of the Caspian, as did Polycleitus, who identifies his Caspian as the Aral by saying that the water was sweetish. Geographers, who thought that the Caspian ought to join ocean, then put Patrocles' strait, not between two Caspians, but outside a united Caspian, leading to ocean, and brought the Oxus and Jaxartes into a united Caspian, as appears most clearly in Ptolemy: the Aral was ignored, and, so far as it ceased to be Caspian or Macotis, actually became 'ocean'; a glimpse of the truth appears for the last time in Strabo's Araxes story. There is no good evidence for a southern Oxus, nor for an *important* trade route by the Oxus, though some trade undoubtedly came that way. The geographical evidence would on the whole suit best with the theory of the Aral and Caspian being connected; but the state of trade is not inconsistent with goods having to be taken overland from the Oxus and reshipped on that Hyrcanian gulf, down which men 'sailed in'—a long and no doubt a difficult journey.

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APPENDIX (P. 26, NOTE 4, THE BACTRIAN GREEKS).

If there had been any considerable trade passing by the Caspian, the Bactrian Greeks would probably have made some attempt to secure it. To secure the silk trade, on which their wealth depended, they extended their rule to the Tarim-valley and conquered to the mouth of the Indus; but their coins, so far as I know, are never found in connection with the Oxus route, outside Bactria and Sogdiana. On the other hand, it is just possible that

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it in three months (719, 720); I do not think this has been noticed, but it must be mere coincidence. A missing link in his proof, on which Dr. Hirth and others lay some stress, is that according to the Hou-han-shu the rhinoceros was found in T'iao-chih (in his view Babylonia), and this cannot be proved for Babylonia. If the rhinoceros had once lived here, it would not be difficult to credit its return after the canals began to go to ruin under the Seleucids; and we know that some pachydermata had a very different range in antiquity to the present day; both Thothmes III.

and Tiglath-pileser I. found wild elephants numerous about the upper Euphrates. But so far there seems to be no proof of the rhinoceros at all, in spite of the fondness of the Assyrians for representing animals; for the 'rhinoceros' of the black obelisk of Salmanser II. is an ox (Hommel, *Gesch. Babyloniens und Assyriens* 602, 603), like the 'unicorns' or 'rhinoceros' of Isaiah 34, 7. Is it *quite* certain that the animal mentioned in the Hou-han-shu is a rhinoceros? Anyhow, the same difficulty applies to any other location of T'iao-chih.

they stretched out westward to cover the *land* silk-route. Diodotus already could make his power felt on the Ochus (Strabo 11, 515). In Strabo 11, 517 the names of two satrapies which were taken from Eucratides by the Parthians (and which must be west of Margiana, which remained Bactrian) are given as Ἀσπιωνου and Τυρνια, two meaningless words. For the latter Du Theil read Ταπυρία, comparing Polybius 10, 46 and Strabo 11, 514, and this has been often followed, though Tapuria, on the S. and S.W. of the Caspian, is clearly a geographical impossibility. I believe, however, that the conjecture is right in this, that the three passages conceal a common word. Strabo 514 says that the Tapurians (Ταπύρους) live between the Hyrcanians and Arians; of course they do not. Polyb. 10, 49 says that Euthydemus, holding the line of the Arius against Antiochus, was at Taguria (Ταγουρίαν). Reiske conjectured Ταπυρίαν; von Gutschmid τὰ Γουριανὰ (Ptol. 6, 10 giving a city Γουριανή in Margiana) which may be correct, but the article seems unnatural. The latest edition I know (Büttner-Wobst, 1893) reads Ταπουρίαν.

Now whatever the word is, it occurs a fourth time, in Ptolemy 6, 10, who gives a people Ταποροι (v.l. Ταπουροι), about the lower Arius, and in connection with the desert part of Margiana; Agathodaemon's map puts them near Nisaea. I think all four passages refer to the same people, whose name may have been Ταποροι, or Ταπυροι (perhaps a branch), or some lost name. If so, I would conjecture that the other satrapy, Ἀσπιωνου, conceals the name of the Ἀσταυηνοί, whom Ptolemy 6, 9 gives as near the Caspian, and connected with the Nisaeans (6, 17). Astauene appears later among the Parthian satrapies, having its place in the list between Hyrcania and Parthyene; and the main road from Hekatompylos to Bactra passed through it.

Brunnhöfer 'Vom Aral bis zum Gangâ' 1892 p. 61 seq. interprets Ἀσπιωνου (reading Ἀσπιωνο) by the help of Zend as = *ihpōsotas*, and Τουριουαν to the same effect, bringing them into connection with the Nisaeans fields, which he appears to place between Merv and Balkh. This raises an interesting question, but foreign to this article.

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