

THE GARAMANTES AND TRANS-SAHARAN ENTERPRISE IN CLASSICAL TIMES

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THE first trans-Saharan contacts certainly preceded the arrival of the Arabs in North Africa. But these earlier contacts, of such interest for the early history of the Western Sudan, are difficult to trace or document in any detail. The evidence is limited—a few notices in classical writers, incomplete archaeological data, such inferences as can be drawn from Saharan rock art. It is also lopsided, tied to the horizons of the Mediterranean world. The literary sources inevitably present the viewpoint of their own societies, and all the useful archaeological material is of Roman origin. Consequently, far more is known of relations between the coastal areas and the Saharan peoples than of relations between the Saharans and the Sudanese; far more also of the central Sahara, easily accessible from the coast at Tripolitania, than of the west, secluded by the barrier of the Atlas mountains. It is due to the state of the evidence, and not to any judgement of its special historical importance, that this study is almost exclusively concerned with the central Saharan traffic in which the Garamantes were the chief middlemen. But, despite all these limitations, the attempt to collate the available sources is worthwhile. Taken together, they do yield a pattern. And, even if little can be established with certainty, a study of the evidence will show which hypotheses are at least possible, or better supported than others.

THE SAHARAN 'CHARIOT-ROUTES'

The evidence of rock art is at once the most dramatic and the most difficult to evaluate. It has been thought to provide conclusive proof of regular trans-Saharan contacts. Rock paintings and engravings in the desert frequently depict two-wheeled horse-drawn war-chariots. The upper limit for their use is the introduction of the horse-drawn war-chariot into Egypt from Syria by the Hyksos in the seventeenth century B.C.,¹ the lower limit the replacement of chariotry by cavalry, which took place among the Libyans north of the desert *ca.* 300 B.C.² The known representations of chariots are almost all distributed along two routes crossing the Sahara from north to south. In the western Sahara they occur along a route running from the region of Figuig (Southern Oran) and the Djebel Bani in the north, via Zemmour, Mauritanian Adrar, and the Dhar

¹ R. Mauny, 'Tableau géographique de l'ouest africain au moyen âge', *Mém. I.F.A.N.*, no. 61 (Dakar, 1961), 283.

² The last reference to Libyan war-chariots is of 307 B.C. (Diodorus Siculus, xx. 64, 3); the first to Libyan cavalry is of 261 B.C. (Polybius, i. 19, 2-4).

Oualata to Tondia, near Goundam on the Niger.³ In the central Sahara, the route runs from the Fezzan and Fort Polignac in the north, via Tassili des Ajers, Hoggar and Ti-m-Missao to Es-Souq in Adrar des Iforas.⁴

The alignment of the chariots has been held to prove regular traffic, even trade, along the two routes. The interest of this suggestion is increased by the fact that literary sources attribute the use of chariots to two peoples known to have been involved in trans-Saharan enterprises: the Garamantes of the Fezzan and the Pharusii of the western Sahara.⁵ But the inference seems altogether inadmissible. The alignment of the chariots along a recognizable 'route' is not in itself evidence that any chariot ever made the journey from end to end of the route. And, as for trade, the chariots are after all war-chariots: apart from the rare examples of four-wheeled chariots, and the rather less rare ox-drawn chariots, they would hardly have been used to carry merchandise.

However, the chariot representations do indicate two routes by which it was possible to cross the Sahara with horses. That the central Saharan route at least was so used seems to be confirmed by the literary and archaeological evidence.

HERODOTUS

The earliest, and the most valuable, of the literary sources is Herodotus (ca. 430 B.C.). Herodotus had a very schematic idea of the geography of North Africa. In one passage (II. 32, 4) he divides it into three zones: the inhabited littoral, south of this a region of wild beasts, and south of this a waterless desert of sand. In another passage (IV. 181-5) he adds an interesting elaboration: between the wild-beast zone and the desert is a 'ridge of sand' (ὄφρυς ψάμμης), stretching from Thebes in Egypt to the Stelai of Herakles, and along this ridge, at intervals of ten days' journey, are 'lumps of salt... in columns, and at the top of each column there shoots up from the middle of the salt cool and sweet water, and there are people living around it' (IV. 181, 2). These places, and the peoples inhabiting them, he then enumerates from east to west: the Ammonioi, Augila, the Garamantes, the Atarantes, the Atlantes, and then others whose names he does not know.

Apart from some minor inaccuracies,⁶ Herodotus is evidently describing a line of oases running west from the Nile Delta along the northern edge

³ R. Mauny, 'Une route préhistorique à travers le Sahara occidental', *Bull. I.F.A.N.* (1947), 341-57.

⁴ H. Lhote, 'Le cheval et le chameau dans les gravures et les peintures rupestres du Sahara', *Bull. I.F.A.N.* (1953), 1138-228, and 'The Search for the Tassili Frescoes', trans. A. H. Broderick (London, 1959), 124-8.

⁵ Garamantes: Herodotus, IV. 183, 4; Pharusii: Strabo, XVII. 3, 7.

⁶ Especially his belief that the line of oases runs from Thebes. There was a route to Siwa from Thebes (via Kharga: cf. Herod. III. 26), but it would take about twenty, not ten, days, and it would not follow the 'ridge': these data are applicable only to a route from the Nile Delta. (Pliny, *NH*, V. 50, gives twelve days for the journey from Memphis to Siwa.)

of the Libyan Desert.⁷ The 'ridge of sand' is presumably the southward-facing scarp which forms the northern limit of the Qattara Depression. The Ammonioi are in the Oasis of Siwa, and Augila is Audjila, in the Oasis of Djalo. But despite Herodotus's conviction that the ridge extends all the way to the Atlantic, and that the line of oases forms the northern limit of the desert, after Audjila the scarp disappears, and the line of oases turns south-west *across* the desert. The Garamantes are in the Fezzan. Their capital, named as 'Garama' by Pliny (*NH*, v. 36) and Ptolemy (iv. 6, 12), is Djerma, where extensive cemeteries of Roman and earlier date have been excavated.

Herodotus locates the Garamantes ten days' journey from Audjila, which is about half the actual distance, and thirty days from the Lotophagoi on the coast, which is correct. His account of them contains one very interesting note: 'The Garamantes hunt the Troglodyte [i.e. Cave-Dwelling] Ethiopians in four-horsed chariots: for the Troglodytes are the fastest on their feet of all men that we know... they eat snakes, lizards, and such reptiles, and they speak a language unlike any other—they shriek like bats' (iv. 183, 4). These 'Cave-Dwelling Ethiopians' are almost certainly the Negroid Tebu of the Tibesti mountains, whose language was described to Hornemann by the inhabitants of Audjila as 'like the whistling of birds'.⁸ The operation of chariots along the route from the Fezzan towards Tibesti is confirmed by two rock engravings, at Djebel ben Ghnema and Latouma.⁹ The only difficulty in the equation Troglodytes = Tebu is that Pliny (v. 34) locates his *Trogodytae* (*sic*) south-west of Ghadames, apparently in Tassili des Ajjers. However, there were many 'Troglodyte' races (in Africa, we hear of them in the Anti-Atlas range¹⁰ and in the mountains east of the Nile);¹¹ Pliny need not be talking of the same cave-dwellers as Herodotus.¹² Presumably the Garamantes 'hunted' the Troglodytes in order to make slaves of them.

Ten days beyond the Garamantes Herodotus places the Atarantes.¹³ Nothing he says of them enables us to locate them precisely. But, if the conjecture¹⁴ that their name is derived from the common Berber place-name 'Adrar' or 'Atar', meaning 'upland', is correct, they should be in mountain country: probably in Tassili des Ajjers,¹⁵ west of the Fezzan. Ten days beyond the Atarantes are Mount Atlas and the Atlantes (iv. 184, 3-4).

⁷ See, for the earlier part of Herodotus's route, Rhys Carpenter, 'A trans-Saharan caravan-route in Herodotus', *Am. J. Archaeol.* (1956), 231-42.

⁸ For reference see G. Rawlinson, *The History of Herodotus*, II (London, 1875), 162, n. 9.

⁹ Djebel ben Ghnema: H. Lhote (1953), loc. cit. Latouma: P. Huard, 'Gravures rupestres des confins nigéro-tchadiens', *Bull. I.F.A.N.* (1953), 1573.

¹⁰ Hanno, *Periplus*, 7.

¹¹ Strabo, xvii. 1, 2, etc.

¹² Though Pliny evidently thought he *was*: cf. v. 45, echoing Herodotus.

¹³ The text of Herod. iv. 184, 1 actually has Ἀτλαντες, but this is impossible, as it duplicates the next people. The reading Ἀτράραντες is quoted by Eustathius (*ad. Dionys.* 66) as from Rhianos; Nicolas Damascenus (F 140) has the form Ἀφάρραντες.

¹⁴ Carpenter, loc. cit.

¹⁵ There is, in fact, an Adrar massif in Tassili.

'Atlas' is, of course, not a genuine Berber name, but borrowed from Greek mythology. Atlas, already recognizably a mountain, had been located in the west by Aeschylus.¹⁶ Thinking of this,¹⁷ Herodotus or his informant called the great mountain reported away to the west 'Atlas'. His mountain has nothing to do with the Moroccan range later known as 'Atlas'; as Pliny appreciated,¹⁸ it is in the middle of the desert. The only plausible location for it is in the Hoggar massif, south-west of Tassili.

After his account of the Atlantes, Herodotus continues: 'As far as the Atlantes I can give the names of the peoples living on the ridge, but after them no longer. The ridge continues as far as the Stelai of Herakles and the area outside them. And at a distance of ten days' journey there is a salt-mine, and people living there: they all have houses built of salt-blocks... salt is mined there white and *πορφύρεος* in colour' (IV. 185). The significance of this passage is sometimes overlooked. The reference to salt-mining (*ἀλὸς μέταλλον*) is a completely new detail, not merely a repetition of the 'salt-columns' of the previous oases.¹⁹ Herodotus is clearly saying that there is a salt-mine ten days beyond Mount Atlas. The details—the houses built of salt and the different colours mined—recur in medieval and modern accounts of the Saharan salt-mines.²⁰ In historical times, salt from the Saharan mines was the most important commodity carried south into the Sudan. In Herodotus's day, too, it can be assumed, the salt was mined to be carried southwards. Unfortunately, Herodotus's mine cannot be located. I suspect that it is identical with a mine described by El-Bekri, writing in 1067: by his account, Kawkaw (Gao) on the Niger got its salt from Tadmekka (Es-Souq) in Adrar des Iforas, whither it was brought from underground mines at Tawtek, six days' journey away. However, Tawtek has not been satisfactorily identified.²¹

Herodotus's account indicates that the Sahara could be crossed to beyond Hoggar, but does not take us right across into the Sudan. However, in another passage (II. 32) he does relate a story of a complete crossing of the Sahara. Five young nobles of the Nasamones, a nomadic tribe living on the shore of the Gulf of Sirte, set out in an attempt to penetrate farther across the desert than any had before. They crossed the wild-beast zone, then struck out across the desert, travelling westwards. After many days' journey they came to a plain with fruit-trees growing in it. They made to touch the fruit but found themselves seized by 'small men, less than

¹⁶ *πρὸς ἰσπέρους τόπους* (*Prom. Vinct.* 348–50).

¹⁷ Herodotus's statement that the natives called Atlas *κίονα τοῦ οὐρανοῦ* (IV. 184, 3) is clearly an echo of Aeschylus (*loc. cit.*), who speaks of Atlas bearing on his shoulders *κίον' οὐρανοῦ τε καὶ γῆνός.*

¹⁸ V. 44: 'quidam solitudinibus interposuerunt Atlantes'.

¹⁹ As assumed by W. W. How and J. Wells, *A Commentary on Herodotus*, I (Oxford, 1912), 363.

²⁰ Salt-houses: Mauny (1961), 467; colours: e.g. Leo Africanus gives 'candidi, rubei, cinericii coloris' (Rawlinson, II, 164, n. 7).

²¹ Mauny (1961), 332, who suggests, with reservations, Erebeb, north-west of Adrar des Iforas.

average height', whose language they could not understand, and were led by these through great marshes to a city inhabited entirely by small black-skinned men, situated on a great east-flowing river with crocodiles in it.

The Nasamones were familiar with the oasis of Audjila, to which they went every summer to harvest the dates.²² So we can assume that when they crossed the wild-beast zone they came to Audjila; and consequently

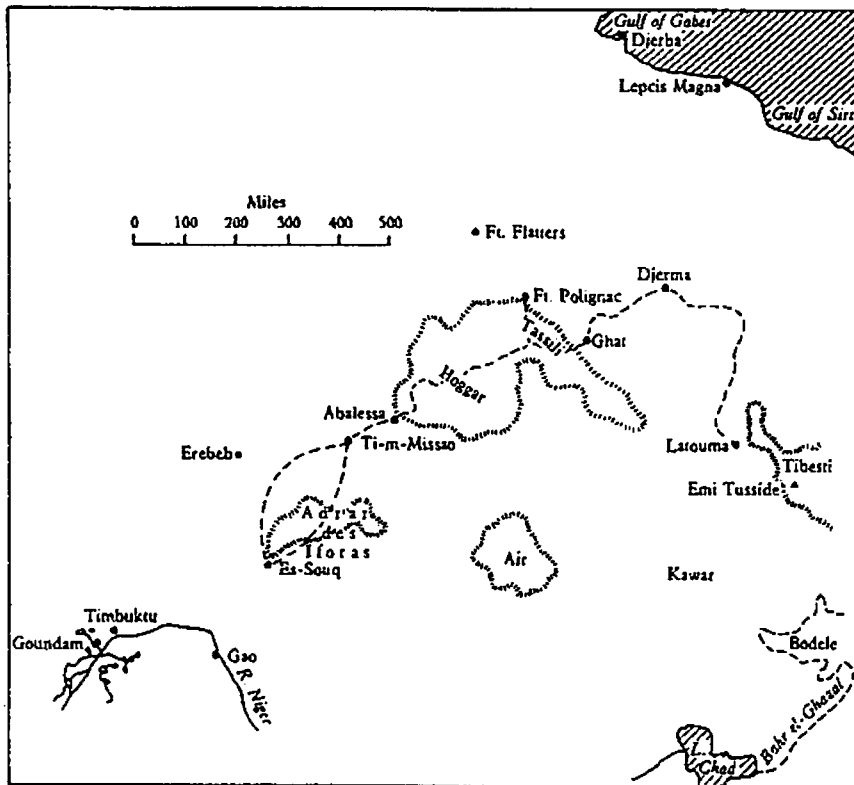


Fig. 1. The central Sahara showing the 'chariot-routes'.

that when they set out across the desert in a westerly direction they took the route described by Herodotus in Book iv, which took them, in fact, south-west via the Fezzan and Hoggar. Along this direction, the great east-flowing river can only be the Niger. The 'great marshes' are often identified with the vast system of lakes and marshes formed by the Niger upstream of Timbuktu. But this seems rather out of the way for travellers approaching from the north-east. More probably, they were the evaporation basin of one of the now disappeared watercourses which flowed north into the desert from the Niger bend.²³

²² Herod. iv. 172, 1, 182.

²³ Mauny (1961), 205-6.

In historical times the cities of the Niger bend, especially Gao and Timbuktu, were important termini of trans-Saharan trade-routes. From them, there was easy access by boat up the Niger to the gold-bearing regions of Bambouk and Boure. Nothing, however, permits us to assert that the city reached by the Nasamones was similarly the terminus of a regular trans-Saharan route. Herodotus's whole account implies the reverse—that the penetration of Berbers so far south was unusual.

The route reconstructed from Herodotus, from the Fezzan via Tassili and Hoggar to the Niger bend, corresponds exactly with the central Saharan 'chariot-route'. This correspondence helps to vindicate the reconstruction. However, Rhys Carpenter²⁴ has put forward an entirely different version: on his account, Herodotus's route runs south from the Fezzan to skirt the western edge of Tibesti and end in Borkou. Mount Atlas is Mt Emi Tusside in Tibesti; the salt-mine is Budu, south of Tibesti; the great east-flowing river is the Bahr-el-Ghazal; and the great marshes those originally formed by it in the Bodele Depression. But this interpretation is surely excluded by Herodotus's statement that the Nasamones travelled *westwards* (πρὸς ζέφυρον ἄνεμον): 'westwards' may reasonably be stretched to mean south-west, but hardly south.

The only difficulty in taking the Nasamones to the Niger bend is the story of the small, black-skinned men they encountered. If these were Negrillo pygmies, it is surprising to find them so far west. But the distribution of races in West Africa may well have been different *ca.* 450 B.C. from today. 'Small men' (not stated to be black) were also encountered on the Guinea coast by the Persian Sataspes in the early fifth century B.C.,²⁵ and oral traditions indicate that pygmies once lived in the Ivory Coast.²⁶ It is also worth pointing out that 'small, black-skinned men' need not be pygmies. Pomponius Mela (III. 96) also calls the West African Negroes 'small' ('minores') by comparison with the more familiar Negroes of the Upper Nile.

THE GARAMANTES AND CARTHAGE

Herodotus's account carries a serious distortion. For him, the route he describes runs westwards from Egypt. Presumably his sources were Egyptian.²⁷ Egyptian influence along the route can be traced.²⁸ But in Herodotus's day the important termini of the trans-Saharan routes lay not in Egypt, but on the coast of Tripolitania. Herodotus indeed notes in his account of the Garamantes: '[from them] is the shortest distance to the

²⁴ Cf. n. 7.

²⁵ Herod. iv. 43, 5.

²⁶ Mauny (1961), 453-4.

²⁷ His source for the journey of the Nasamones was some Cyrenaians, who had heard it from the king of the Ammonioi (II. 32, 1).

²⁸ Notably religious: Amen was worshipped at Siwa (Herod. II. 42) and Audjila (Procopius, *Aed.* vi. 2, 16-17); Bes and Osiris are apparently depicted in rock engravings in the Fezzan (C. B. M. McBurney, *The Stone Age of Northern Africa* (Penguin, 1960), 266); bird-headed goddesses in Egyptian style appear in the rock paintings of Tassili (Lhote, *The Search for the Tassili Frescoes*, p. 202).

Lotophagoi, from whom it is a journey of thirty days to them' (IV. 183, 2). The Lotophagoi inhabited a headland on the coast (IV. 177), apparently the peninsula of Zarzis, just east of Gigthis.²⁹ The route to them would therefore have passed through Ghadames.³⁰ The Garamantes thus controlled the junction of the routes from Egypt, from the coast, and from the south. Populous,³¹ and united under a king,³² they became the chief middlemen in the trade of the central Sahara.

The coast of Tripolitania was covered with the Punic colonies known as the *Emporia*. The most important of these, Lepcis Magna, may have been settled as early as the seventh century B.C.³³ It was a wealthy land, Lepcis alone paying to Carthage a revenue of 1 talent per day.³⁴ It is often supposed that this wealth was due wholly or entirely to trade across the desert with the Garamantes, and it is even argued that the density of Punic settlement on the coast is itself evidence of the existence of such trade.³⁵ This is very dubious. Ancient writers speak of the *Emporia* as a fertile corn-growing area.³⁶ Olives and flax were also grown, and the sea produced fish and purples. The *Emporia* would have been wealthy even without any desert trade.

However, there is direct evidence that there was such trade. The evidence is purely literary: though tombs of pre-Roman date have been excavated in the Fezzan, they produced no imported material attributable to the Carthaginians. The evidence is also limited to a single commodity—the precious stones known as 'carbuncles'. Theophrastos (*De Lap.* III. 18) is the first to note the export of these stones from Carthage: they are so valuable, he says, that even a small one is priced at 40 gold staters. Carthage got them from the Garamantes. So Pliny, following Greek writers,³⁷ speaks of 'the Garamantian carbuncle, also called the Carthaginian because of the wealth of Carthage' (XXXVII. 92), and Strabo refers to the land of the Garamantes as the source of 'Carthaginian stones' (XVII. 3, 19). The precise provenance of the stones is not clear. Pliny speaks of a 'Mons Gyri, in which precious stones occur' (V. 37), and this has been suggested as the source.³⁸ But 'Gyri' sounds like Garian,³⁹ which is too

²⁹ The Lotophagoi are immediately east of the Machlyes (IV. 178), who are on the shores of 'Lake Tritonis' (Gulf of Gabes): the Island of Djerba, opposite Gigthis, was identified with the Island of the Lotophagoi by Eratosthenes (Pliny, V. 41).

³⁰ I do not understand why S. Gsell, *Histoire ancienne de l'Afrique du nord*, IV (Paris, 1920), 138, assumes that the route in question is that via Bu Njem and Sokna.

³¹ ἄνθος μέγα ισχυρῶς, Herod. IV. 183, 1.

³² At least in Roman times: Tacitus, *Ann.* IV. 23; Pliny, VIII. 142; Ptolemy, I. 8, 4; Augustine, *Lib. Qu.* CXV. 23.

³³ Greek pottery of the seventh century is reported from there (J. Boardman, *The Greeks overseas* (Penguin, 1964), 222).

³⁴ Livy, XXXIV. 65, 3.

³⁵ E.g. E. W. Bovill, *The Golden Trade of the Moors* (Oxford, 1958), 22.

³⁶ Herod. IV. 189; cf. Polyb. III. 23, 2; Livy, XXIX. 25; XXXIV. 65.

³⁷ His sources for the passage on carbuncles are Callistratos of Rhodes (*fl. ca.* 155 B.C.) and Archelaos (King of Cappadocia 36 B.C. to A.D. 17).

³⁸ Bovill (1958), 30, n. 1.

³⁹ Ptolemy's Γάρυρα, the source-mountain of the Kinyps (IV. 6, 3) must be Garian.

far north. Anyway, another passage of Pliny (v. 34) refers to the Troglodytae, of Tassili des Ajjers, 'with whom our only trade is in the precious stone we call the carbuncle, which is imported from Ethiopia'. This indicates that the source was not in the Fezzan itself, but somewhere beyond Tassili—along the 'chariot-route', perhaps, if 'Ethiopia' can be taken to mean 'Negroland', in the Sudan. Unfortunately, it is not clear what the Garamantian carbuncles were. Most of the *carbunculi* described by Pliny appear to be garnets, but garnets have no known provenance in West Africa. Various alternative identifications have been suggested—carnelian, amazonite, 'aggrey beads'—but the problem remains unsolved. The excavations in the Fezzan were unhelpful.

Carbuncles may not have been the only commodity imported by Carthage from the Garamantes. Slaves are a possibility. There were black slaves in Carthage,⁴⁰ and these might easily have come from the Garamantes, who could raid them from the 'Troglodyte Ethiopians'. There is no evidence for what was taken south in payment.

It is possible that Punic merchants travelled to the Fezzan in connexion with this trade. Athenaios (II. 44c) has a tall story of a Carthaginian called Mago who 'crossed the desert three times, eating dry barley and not drinking'. Presumably he went to the Fezzan.⁴¹ There is no reason to believe that the ties of the Garamantes to Carthage were more than commercial. The testimony of the Roman poet Silius Italicus that the Garamantes provided a contingent for the Punic army⁴² is worthless.

WEST AFRICAN GOLD

Some scholars⁴³ have surmised that Carthage imported West African gold via the Garamantes. She certainly imported it by sea. Herodotus describes how the Carthaginians traded for gold down the west coast of Africa (IV. 196). This trade can be connected with a voyage of colonization undertaken by Hanno, perhaps *ca.* 470 B.C. On Hanno's own account, he founded or reinforced various colonies along the coast, the most southerly being on the island of 'Kerne' (*Periplus*, 8). Kerne was evidently the scene of the gold trade, since the fourth-century mythographer Palaiphatos (§31) describes its inhabitants as 'very rich in gold' (*σφόδρα χρυσοῖ*). However, there is no mention of gold in our most detailed account of Kerne, that of the fourth-century Pseudo-Skylax (*Periplus*, 112). He relates how the Phoenicians trade with a 'great city' of 'Ethiopians' on the mainland opposite Kerne: perfume, 'Egyptian stone' (faience?) and Attic pottery are exchanged for hides, ivory and wine. The location of

⁴⁰ Several Negroid skulls have been found in Punic cemeteries (Gsell, IV, 174), presumably of slaves. Note also the Carthaginian nurse 'corpore aquilo' in Plautus, *Poenulus*, 1112-13.

⁴¹ There is, of course, no reason to suppose that he 'crossed the desert' in the sense of crossing into the Sudan.

⁴² *Punica*, III. 313-14 and *passim*.

⁴³ E.g. Gsell, IV, 139.

Kerne is disputed. Mauny⁴⁴ has argued strongly for Mogador, the most southerly point on the coast to have produced Punic material. But the statement of Hanno that Kerne was calculated to be in the same meridian as Carthage, because it was about the same distance from the Stelai (*Periplus*, 8), points to an island much farther south—perhaps Herne. Excavation of Herne would help to settle the question.

The west-coast trade seems to have died out in Roman times. Possibly the last allusion to it is from Caelius Antipater (*ca.* 120 B.C.), who met a man who claimed to have sailed 'for trade' from Spain to Ethiopia.⁴⁵ Perhaps he had, and 'Ethiopia' was West Africa. The end of the trade is presumably to be attributed to the destruction of the Punic colonies along the coast by the Pharusii and Nigritae, recorded by Ophelas.⁴⁶

It would be intelligible enough if the Carthaginians, like the Portuguese later, heard of West African gold through acquaintance with an overland trade, and sought to go by sea to its source to cut out the middlemen. Indeed, Hanno's enterprise is scarcely explicable unless he had reason to believe that he would find *something* of commercial value: this would have to be gold, since hides and ivory were still readily obtainable north of the desert. However, there is no evidence for such an overland trade in gold in Punic times. Evidence for the Roman period indicates that, if there was a gold trade, it was limited to the western Sahara. The excavations in the Fezzan produced no gold objects.⁴⁷ Strabo, on the other hand, reports that the Moors wore gold ornaments (xvii. 3, 7). There is no difficulty in supposing that they got their gold from across the Sahara. Casual trans-Saharan contacts in the west are attested by the discovery of two Roman coins, of 58 and 2 B.C., at Rasseremt in Mauritania,⁴⁸ and by Strabo himself (*loc. cit.*), who notes that 'the Pharusii⁴⁹ are infrequently in contact with the Moors, across the desert, fitting water-skins under the bellies of their horses: sometimes, they come to Cirta also, through certain marshy places and lakes'. Their approach to Cirta would be through the Biskra gap and the lake-system of the Chotts. If the Pharusii ever brought gold to Cirta, this might have inspired the Punic explorations down the west coast; and, if the Pharusii found themselves being cut out of the trade by Punic maritime enterprise, this might explain their attack on the Punic colonies.

All this is completely hypothetical. But it is at least certain that a West Saharan traffic in gold had been established before the arrival of the Arabs.

⁴⁴ 'Cerné, l'île de Herné, et la question des navigations antiques sur la côte ouest-africaine', *Conférence internationale des africanistes de l'Ouest*, IVe Conférence (Fernando Po, 1951), II, 73-80.

⁴⁵ Pliny, II, 169.

⁴⁶ Strabo, xvii. 3, 3.

⁴⁷ The monument of Tin Hinan at Abalessa did produce several gold objects (for *ref. cf. n.* 94).

⁴⁸ Mauny, 'Monnaies anciennes trouvées en Afrique au sud du limes de l'empire romain', *C.I.A.O.* no. IV (1951), vol. II, pp. 51-70.

⁴⁹ The precise location of the Pharusii is uncertain: Strabo (xvii. 3, 3) says they are thirty days' journey from Lixus; Pliny (v. 43) has them separated by 'deserta' from the Gaetuli in the north, and by 'vastae solitudines' from the Garamantes in the east.

When the Arabs reached the Sous in A.D. 734 they at once launched a raid across the desert into the land of the Negroes, and brought back a great quantity of gold.⁵⁰ The first contemporary allusion to the West Saharan gold trade is the reference by al-Fazari to the Kingdom of Ghana, 'land of gold', in A.D. 773.⁵¹

THE GARAMANTES AND ROME

Carthage, defeated by Rome in 202 B.C., was too weak to retain control of the Emporia. In 162/1 they were conquered by Masinissa of Numidia.⁵² They were soon absorbed into the Roman sphere. In 111 B.C. Lepcis Magna, taking advantage of the war between Rome and Iugurtha of Numidia, broke away from Numidia and became an ally of Rome.⁵³

Rome's acquisition of the Emporia brought her into contact with the Garamantes. The commerce of Punic times was not maintained. Rome's attempts to impose peace and order in North Africa provoked a series of wars with the tribes of the desert. L. Cornelius Balbus, proconsul of Africa in 21-20 B.C., is known to have fought the Garamantes. Pliny lists the places conquered by Balbus (v. 36-7). Several appear to be in southern Numidia, in the land of the Gaetuli,⁵⁴ but Balbus also penetrated by way of 'Cydamus' (Ghadames) to capture the Garamantian capital 'Garama' (Djerma). There was, of course, no permanent occupation: the purpose of the campaign was purely punitive and deterrent.⁵⁵

Henri Lhote⁵⁶ has argued that Balbus penetrated beyond the Fezzan following the 'chariot-route' over Tassili as far as the Niger. He identifies 'Alasi' of Pliny's list with Ilesi, a Berber name for Fort Polignac, 'Balsa' with Abalessa in Hoggar, and the river 'Dasibari' with 'Da Isa Bari' (Great River of the Da), a Songhai name for the Niger. These equations are no more than guesses: indeed, the Abalessa identification can be discounted, since the correct text is probably 'Balla'.⁵⁷ It is against all probability that Balbus could have got so far.

Despite this defeat, the Garamantes continued to give trouble. At an uncertain date,⁵⁸ P. Sulpicius Quirinius had to defeat an alliance of the Garamantes and the Marmaridae of Cyrenaica.⁵⁹ Later the Garamantes

⁵⁰ Mauny (1961), 300.

⁵¹ J. S. Trimingham, *A History of Islam in West Africa* (Cambridge, 1962), 48.

⁵² Polybius, xxx. 2.

⁵³ Sallust, *Iug.* 77, 2.

⁵⁴ See especially P. Desanges, 'Le triomphe de Cornelius Balbus', *Revue africaine* (1957), 5-43.

⁵⁵ The nature of Rome's desert wars is well summarized by Orosius's account of the Gaetulan war of A.D. 6 (vi. 21, 18): 'Gaetulos latius vagantes Cossus...artatis finibus coeruit atque a Romanis limitibus metu compulit.'

⁵⁶ 'L'expédition de Cornelius Balbus au Sahara en 19 av. J.-C. d'après le texte de Pline', *Rev. Afr.* (1954) 41-83: answered by Desanges, loc. cit.

⁵⁷ The variants are 'Balsa' and 'Balla': as the preceding name is 'Galsa', a corruption from 'Balla' to 'Balsa' is more likely.

⁵⁸ An inscription from Cyrene (*S.E.G.* ix. 63) celebrates the end of a *Μαρμαρικὸς πόλεμος* in A.D. 2: but this date raises difficulties for the chronology of Quirinius's career, and R. Syme (*The Roman Revolution* (Oxford, 1939), 399, n. 1) conjectures ca. 15 B.C.

⁵⁹ Florus, ii. 31.

supported the rebel Tacfarinas. In A.D. 22 we find them affording him a base for raids on Lepcis Magna,⁶⁰ and in 24 the king of the Garamantes went so far as to send out small detachments in his support.⁶¹ However, on the defeat and death of Tacfarinas in 24, the Garamantes sent an embassy to Rome to sue for peace.⁶²

It was a peace they had no intention of keeping. They remained notorious for their plundering raids—'gens indomita et inter accolas latrociniiis fecunda'.⁶³ If pursuit was attempted, they simply retreated into the desert and filled up the wells with sand behind them.⁶⁴ In A.D. 69 they intervened at the coast, supporting Oea in a war with Lepcis Magna. They ravaged the territory of Lepcis, but were driven off by forces under Valerius Festus.⁶⁵ It appears that the Romans again penetrated to the Fezzan, for Pliny (v. 38) says that in this war a new, shorter route to the Garamantes was discovered.

The knowledge of the interior gained during these campaigns is reflected in Pliny (writing A.D. 77).⁶⁶ From him we get some idea of the routes south to the Fezzan then in use. In one passage (v. 26) he speaks vaguely of a route from the Lesser Syrtis (Gulf of Gabes) over 'vast deserts' (the Grand Erg Oriental) to the Garamantes. Another (v. 34-6) is more precise. Pliny's starting-point is a people otherwise unknown, the Amantes, located twelve days' journey west of the Greater Syrtis (Gulf of Sirte), 'surrounded by sands on the west', i.e. on the eastern edge of the Grand Erg Oriental. From the Amantes, it is a journey of seven days south-west over sand to the Trogodytae, with whom the Romans trade for carbuncles. A journey south-west from the region indicated would take the traveller (though in more than seven days) to the mountains of Tassili des Ajjers, where Pliny's Trogodytae are to be located. Such a route would pass through Ghadames. And Pliny, in fact, continues: 'In between [the Amantes and the Trogodytae] and facing the deserts referred to beyond the Lesser Syrtis [the Grand Erg Oriental] is Phazania...the tribe Phazanii, the cities of Alele and Cilliba, and Cydamus...'. Of these names, 'Cydamus' is Ghadames. 'Phazania' sounds as if it should be 'Fezzan', and it is sometimes stated that the land of the Garamantes (which *was* in the Fezzan) was known as 'Phazania'.⁶⁷ This is quite wrong: in Pliny, Phazania and the Garamantes are clearly distinct.⁶⁸ If 'Phazania' is the same name as 'Fezzan', its application has changed. Pliny continues: 'From these there stretches for a great distance from east to west the mountain called by the Romans Black (Ater) from its nature...'. It is tempting to identify 'Mons Ater' with the Djebel es-Soda, whose name means 'Black Mountain'. But it is not quite in the position indicated by Pliny, immedi-

⁶⁰ Tac. *Ann.* III. 74.

⁶¹ Ibid. IV. 23.

⁶² Ibid. IV. 26.

⁶³ Tac. *Hist.* IV. 50.

⁶⁴ Pliny, v. 38.

⁶⁵ Tac. *Hist.* IV. 50.

⁶⁶ Pliny's main source was evidently the campaign of Balbus (cf. v. 36).

⁶⁷ For example, Bovill (1958), 34.

⁶⁸ Ptolemy also has a *Φαζαρία* somewhere in Africa (IV, 7, 10), but is completely vague about its location.

ately east of Ghadames. 'Mons Ater' must be the rocky plateau of the Hammada el-Homra, which stretches east from Ghadames to the Djebel es-Soda. Beyond Mons Ater are 'deserts' (the Edeyen d'Oubari), then 'Thelgae, a town of the Garamantes, Dedris. . . and the famous capital of the Garamantes, Garama' (Djerma).

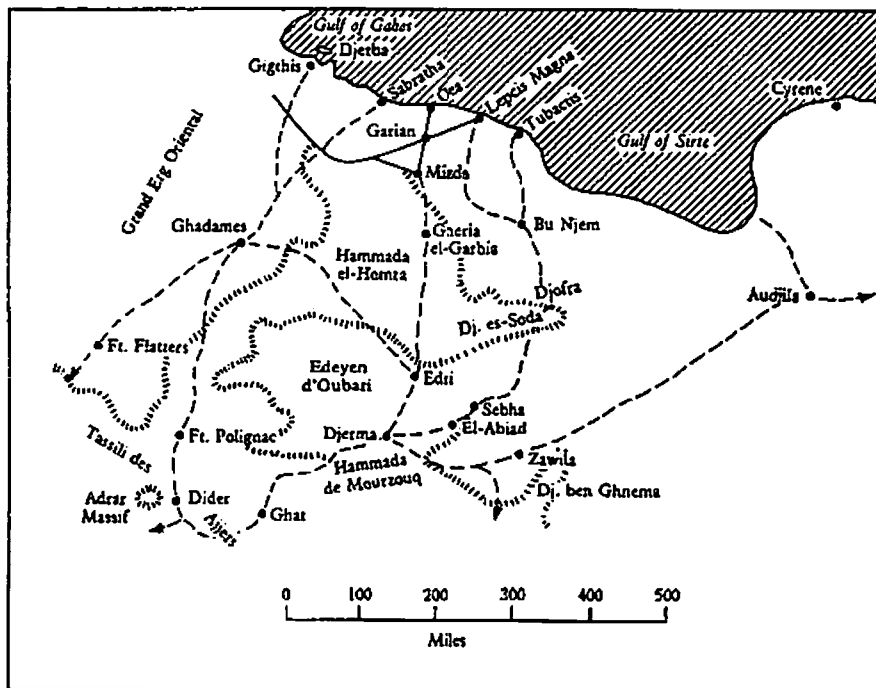


Fig. 2. The routes to the Fezzan and Tassili — Roman roads; - - - other routes.

Pliny's route runs from the Gulf of Gabes to Ghadames. This is the same as Herodotus's route, whose northern terminus was in the vicinity of Gigthis. Pliny's description of Ghadames as 'Cydamum e regione Sabratae' (v. 35) shows that Ghadames could also be approached from Sabratha in the north-east. From Ghadames, the traveller could go either south-west to Tassili des Ajers, or south-east over the Hammada el-Homra, probably to Edri, and south over the Edeyen d'Oubari to Djerma. The route discovered in A.D. 69, which was shorter by four days ('conpendium quadridui') and known as the 'iter praeter caput saxi',⁶⁸ cannot be certainly identified. It may have been the direct route over the Hammada, from Gheria to Edri.

After A.D. 69 we are less well informed about Rome's relations with the Garamantes. Ptolemy (writing *ca.* A.D. 140) cites two incidents from Marinus of Tyre (1. 8, 4). Septimius Flaccus took an army 'from Libya' to

⁶⁸ Pliny, v. 38.

the land of the Garamantes, and penetrated beyond them in three months' march southwards to 'the Ethiopians'. This sounds like another punitive expedition, and Septimius Flaccus may be the Flaccus who *ca.* A.D. 86 crushed a revolt of the Nasamones:⁷⁰ the Garamantes may have aided the Nasamones. There is no way of estimating how far south Flaccus's three months' march took him: he would not have to go far to encounter 'Ethiopians', namely the Tebu. The second story is more curious: 'Julius Maternus [setting out] from Lepcis Magna and journeying southwards from Garama in company with the king of the Garamantes, who was going against the Ethiopians, in four months arrived in Agisymba, a land of the Ethiopians, where rhinoceroses gather'. The rhinoceroses show that Maternus got right across the desert into the Sudan. It is not made clear what he was doing in Garama: was he a trader, a soldier, a diplomat, or a bona fide explorer? But the story does indicate that friendly relations had at last been established between Rome and the Garamantes. Ptolemy indeed asserts (I. 10, 3) that by his day many people had travelled on the routes between Lepcis and Garama: he speaks of two routes, of thirty and twenty days, which may be the same as the two routes of Pliny. He is able (IV. 6, 12) to name seven towns in the interior, among which are recognizable Djerna (Γαράμη μητρόπολις), Sebha (Σάβαι), and perhaps Bir Ghelania (Γέλανος) and Edri (Βέδειρον).

At the beginning of the third century there was more trouble. Septimius Severus (197-211) had to campaign against 'very warlike tribes' threatening the Tripolis:⁷¹ these may have included the Garamantes. It is in this context that the first organization of the 'limes Tripolitanus' is to be placed.⁷² A permanent defence system thus replaced the old policy of keeping the desert tribes in hand by periodic punitive expeditions. In the interior, beyond the *limes* proper, three isolated forts were built,⁷³ representing the farthest extension of effective Roman occupation south into the desert. At Ghadames, no trace of the fort itself remains, but inscriptions attest the presence of a garrison under Septimius Severus and Caracalla (212-217) and building works under Severus Alexander (222-235). At Gheria el-Garbia there is a large fort, built under Severus Alexander in the period 230-235 and restored under Gordian III (238-244). At Bu Njem a smaller fort was built, under Septimius Severus in 201/2. In the latter half of the third century these forts were presumably abandoned or turned over to native *foederati*. Continued contacts with the Roman world are attested at Ghadames by some fourth-century coins.⁷⁴ Even in the

⁷⁰ Zonaras, XI. 19.

⁷¹ Victor, *Caes.* 20, 19; S.H.A. *Severus*, 18, 3.

⁷² R. G. Goodchild and J. B. Ward Perkins, 'The "Limes Tripolitanus" in the light of recent discoveries', *Journal of Roman Studies* (1949), 81-95.

⁷³ Goodchild, 'Oasis forts of Legio III Augusta on the routes to the Fezzan', *Papers of the British School at Rome* 1954, 56-68.

⁷⁴ Mauny, 'Monnaies anciennes...', loc. cit. There are also civilian gravestones at Ghadames, with inscriptions in both Latin and Libyan (J. M. Reynolds 'Three inscriptions from Ghadames in Libya', *P.B.S.R.* (1958), 135-6).

sixth century, the inhabitants of Ghadames maintained a treaty with the Romans.⁷⁶

The three forts were presumably intended to watch over the routes to the south, to afford security to caravans passing along them. Ghadames guarded the oldest route, from Gigthis or Sabratha. Gheria lay on the shortest, direct over the Hammada to Edri—perhaps the route discovered in A.D. 69. The northern outlet of this route was Oea. A Roman road ran at least part of the way from Oea to Gheria, first marked under Caracalla in A.D. 216: numerous milestones survive from the stretch of it between Garian and Mizda.⁷⁸ From Bu Njem, the route would run south to the Oasis of Djofra,⁷⁷ over the Djebel es-Soda, and south-west to approach Djerma via Sebha. Bu Njem was presumably reached from Lepcis or Tubactis.

Rome's relations with the Garamantes are also documented by the finds of the Italian excavations in the Fezzan.⁷⁸ Attention was especially concentrated on the valley of the Wadi el-Agial, which runs east by way of Djerma between the sands of the Edeyen d'Oubari to the north and the Hammada de Mourzouq to the south. This must have been the homeland of the Garamantes. The finds can be conveniently divided into three categories: the Roman-style irrigation system; evidence for Roman residents; and Roman imports.

In the hammada to the south of the wadi is a system of embanked irrigation canals and subterranean galleries to capture and preserve the rainfall. There is nothing to date them, but they are presumably modelled on Roman irrigation works in the province to the north. Wheeler even suggests⁷⁹ that the Romans loaned engineers to the Garamantes for their construction, hoping by thus encouraging agriculture to transform them from troublesome nomads into manageable sedentary cultivators—'a political agency disguised (as so often nowadays) in the shape of a technical mission'.⁸⁰

The presence of Roman residents is indicated by the Roman-style funerary shrine at Djerma known as the 'Mausoleum'. Its architectural character, and the fragments of Roman clay lamps, pottery and glassware found inside it, indicate that it was built *ca.* A.D. 100. Close by it were found buried two cremations contained in Roman amphorae of first- and second-century type. The normal Fezzani rite was inhumation, so the occurrence of these cremations in association with the Mausoleum confirms what the nature of the monument itself suggests, that we have here to deal with foreign intruders into the Fezzan, visitors from the Roman world. The Mausoleum has hitherto been regarded as unique, but I

⁷⁶ Procop. *Aed.* VI. 3, 11.

⁷⁷ Goodchild, *Roman Roads and Milestones in Tripolitania* (Tripoli, 1948), 14-20, 29.

⁷⁸ A find of ancient coins is reported at Waddan in the Oasis of Djofra (Mauny, 'Monnaies anciennes...', *loc. cit.*).

⁷⁹ Pace, Sergi and Caputo, 'Scavi Sahariani', *Monumenti Antichi* 1951, coll. 151-552; Sir M. Wheeler, *Rome Beyond the Imperial Frontiers* (London, 1954), 97-107.

⁸⁰ *Loc. cit.* 105-6.

⁸⁰ *Ibid.* 178.

understand⁸¹ that recent excavations in the Fezzan have uncovered the bases of at least two similar monuments. There was evidently a colony of Romans resident in the Fezzan. These were presumably traders, though some have thought of a permanent Roman 'consulate', and Wheeler, as we have seen, of a mission of technical advisers in connexion with the irrigation works of the Fezzan.

The 'native' monuments also produced Roman material in some quantity. The various cemeteries at Djerma, the cemetery of El-Charaig, three miles to the east, and the cemetery of El-Abiad, 100 miles to the east along the wadi, all yielded Roman imports: clay lamps, pottery, glassware and amphorae, ranging in date from the late first to the fourth centuries. Outside the Fezzan, the cemetery of Ghat produced a quantity of glassware of the third century.

The finds indicate regular imports from the Roman world from the late first to the fourth centuries, with perhaps a peak in the third. This pattern accords well with what we know of relations between Rome and the Garamantes from other sources. The beginning of the trade at the end of the first century can be related to the establishment of friendly relations implied in the incident of Maternus. And the peak in the third century can be attributed to the activities of Septimius Severus and his successors in protecting the routes to the Fezzan.⁸² The failure of the trade after the fourth century is of course due to the collapse of Roman rule in North Africa.

From the north, the Garamantes imported above all glassware; secondly pottery and lamps, and also the contents of the numerous amphorae, i.e. oil and wine. Another import can be substantiated from the excavations. One tomb at Djerma contained fragments of dyed woollen cloth, perhaps a purse.⁸³ It was no doubt an import from the north, a product of the dye-factories of the coast.⁸⁴

With the exports going north in payment, the pattern seems to have changed since Punic times. No doubt the caruncle trade continued, but under the Roman Empire ivory also became important. The evidence is indirect, but conclusive.⁸⁵ It is difficult to account for the erection of a statue of an elephant in the main street of Leptis unless ivory was commercially important to the city, and inscriptions show that at least two citizens of Leptis were able to make dedications of pairs of tusks. Another inscription actually refers to the exhibition of 'ferae dentatae

⁸¹ From information given by Miss O. Brogan.

⁸² Gsell, I (1913), p. 60, n. 8, suggests that the Severi also introduced the camel for desert travel in Tripolitania: camels were certainly known earlier, but they did not become numerous till the third century (for a different interpretation of the evidence, see O. Brogan, 'The camel in Roman Tripolitania', *P.B.S.R.* (1954) 126-31, and Bovill (1958), 39-43).

⁸³ *Monumenti Antichi* 1951, coll. 313-14 (and figs. 106-7).

⁸⁴ For which cf. Strabo, xvii. 3, 18 (Zouchis), Pliny ix. 127 (Djerba Is.).

⁸⁵ S. Aurigemma, 'L'elefante di Leptis Magna e il commercio dell'avorio e delle 'Libycae ferae' negli Emporia Tripolitani', *Africa Italiana* (1940), 67-86.

quattuor vivae'—presumably elephants—in games at Lepcis. These elephants could have been brought live across the Sahara,⁸⁶ but the wording of the inscription indicates that this was rare. No ancient writer ever mentions a trade in ivory with the Garamantes, though Lucian (*De Dips.* 2) speaks of the Garamantes hunting elephants in the remote south. The key to the rise of the trans-Saharan ivory trade is, of course, the drying up of supplies nearer home, by the extinction of the elephants of North Africa and Syria. In the first century Pliny already reports (VIII. 7) that supplies of ivory (except from India) had become so short that hunters had taken to cutting the elephant's bones into layers as a substitute.

One other Garamantian export is attested—slaves. There were a few Negro slaves in North African cities in Roman times.⁸⁷ These might have come from Egypt as well as from the Fezzan, but in one case at least a Garamantian origin is indicated explicitly. This is from Hadrumetum:⁸⁸

faex Garamantarum nostrum processit in axem,
et piceo gaudet corpore verna niger,
quem nisi vox hominem labris emissa sonaret,
terrere visu horrida larva viros.
dira, Hadrumeta, tuum rapiant sibi Tartara monstrum!
custodem hunc Ditis debet habere domus.⁸⁹

It was possible, then, for Hadrumetum to import a black slave from the Garamantes, but the epigram equally indicates that this was unusual. Among other possible exports dates, natron, civet, amazonite (from Tibesti) and hides have been suggested, but there is no evidence for them.

THE GARAMANTES AND THE SOUTH

The commodities which the Garamantes traded to the north—ivory, slaves, carbuncles—did not come from the Fezzan. They all had to be sought in the lands to the south. The Romans knew little about this end of the trade. Roman merchants might come to Djerma, but farther south the Garamantes kept the trade in their own hands. It can only have been rarely that individuals like Julius Maternus were allowed to observe their operations in the south. In all the literature of the Roman period dealing with the Garamantes, only two passages have anything to say about these operations. Lucian (*De Dips.* 2) has a story that the Garamantes went on hunting expeditions in the remote south of Libya, 'especially about the winter solstice, waiting for rain to quench the heat and dampen the sand and make

⁸⁶ An elephant was brought across the Sahara to Marrakech at the end of the sixteenth century (Bovill (1958), 184).

⁸⁷ For references see Gsell, I, 302, n. 2.

⁸⁸ *Anthologia Latina* (ed. Bücheler and Riese), no. 183.

⁸⁹ The excrement of the Garamantes has come into our world, and the black slave rejoices in his pitch-coloured body. If the voice emitted from his lips did not prove him human, people would be frightened at the sight of this terrible ghost. May the Underworld, O Hadrumetum, carry off your monster for itself! Pluto's house should have him as its guardian.

it passable'. They hunt 'wild asses, ostriches, especially apes, and sometimes elephants'. The second passage is the story already quoted from Ptolemy (I. 8, 4) of the journey of Julius Maternus across the Sahara. Maternus accompanied the king of the Garamantes on an expedition against 'the Ethiopians'. In four months' journey south from Garama they came to 'Agisymba, a land of the Ethiopians, where rhinoceroses gather'. Ptolemy adds the curious detail (I. 8, 5) that the king of the Garamantes was also king of the Ethiopians he was attacking: presumably the Garamantes claimed some sort of dominion over the Negro peoples to the south. 'Agisymba' defies location. In a later passage (IV. 8, 2) Ptolemy names five mountains which he appears to locate in Agisymba, and the assumption that Agisymba was mountain country has prompted identifications with Air or Tibesti.⁹⁰ But the rhinoceroses indicate savanna rather than mountain country. Today, rhinoceroses do not occur west of Lake Chad.⁹¹ But this may not have been so in Maternus's day. Anyway, if the Garamantes ever penetrated as far as Chad, these contacts had evidently ceased by Islamic times. When the Arabs overran the Fezzan in A.D. 666 they were able to push on to Kawar, but there they could find nobody able to give them information about the lands farther south.⁹²

In fact, the archaeological evidence indicates that the Garamantes were still operating along the old 'chariot-route' to the south-west. We have seen that the cemetery of Ghat, on the route from the Fezzan to Tassili des Ajjers, produced Roman material. And it will be remembered from Pliny (v. 34) that from Ghadames the traveller could by-pass the Garamantes and seek direct access in Tassili to supplies of carbuncles coming up from 'Ethiopia'. From Ghadames, there would be a choice of two routes, south to Fort Polignac and over Tassili by the 'chariot-route', or south-west to Fort Flatters and around the western end of Tassili. Reported finds of ancient (presumably Roman) coins attest the use of both routes: at Fort Polignac and Dider in Tassili on the first route, and around Fort Flatters on the second.⁹³

Farther along the 'chariot-route', Roman material has been found at Abalessa in south-west Hoggar.⁹⁴ In the ancient cemetery at Abalessa stands a ruined oval dry-stone building. According to tradition, it is the tomb of Tin Hinan, ancestress of the nobility of the Tuareg of Hoggar, who came to Hoggar from Tafilalet (Southern Morocco) in the days before Islam. However, the building is clearly a fort. And there is a variant tradition according to which it was originally built as a fort, by a 'Roman' (Rumi) called Jolouta. When the Muslims arrived in Hoggar, Jolouta first fled to Es-Souq, then returned with an army and fell in battle in Hoggar. Tin Hinan only occupied the place later.

⁹⁰ For example, Bovill (1958), 40, identifies Ptolemy's Βάρδηρον and Μέαχη with Bardai and Miski in Tibesti.

⁹¹ Mauny (1961), 265.

⁹² Ibid. 435.

⁹³ Mauny, 'Monnaies anciennes...', loc. cit.

⁹⁴ M. Reygasse, *Monuments funéraires préislamiques de l'Afrique du nord* (Paris, 1950), 88-117; Wheeler (1954), 107-11.

Excavation of the building produced a Roman clay lamp of the third century and fragments of another. Under the floor in one of its rooms, covered by stone slabs, was found a small tomb-chamber containing the skeleton of a woman—presumably Tin Hinan. She was richly adorned with bracelets of gold and silver, a gold pendant, and beads of silver, agate, amazonite, carnelian, chalcedony, antimony and glass. Near the skeleton were found sundry objects, including a gold ring, two balls of gold, pieces of gold leaf bearing imprints of coins of Constantine I (A.D. 306–337), and fragments of Roman glassware of third- and fourth-century type.

The occurrence of gold and silver objects in the tomb is interesting. The silver might have come via the Garamantes from the Roman world or (more probably, in view of Tin Hinan's origin in Tafilalet) from Tamedelt in Southern Morocco. The gold was presumably brought from the Sudan, up the Niger and along the 'chariot-route'. The glass and coin imprints indicate that Tin Hinan was buried in the fourth century. The building itself is earlier: the lamps point to the third century. It seems likely that it was built, probably by the Garamantes, to dominate and secure the route south-west to Es-Souq and the Niger. It may have been inspired by the example of the Roman forts at Ghadames, Gheria and Bu Njem.

Farther along the 'chariot-route' a find of Roman coins is reported at Ti-m-Missao.⁹⁵ In the Sudan there is nothing.⁹⁶ It is possible that something will be found with further excavation. It is also possible that there is nothing to find. But such negative evidence would not prove that the Garamantes never established regular contacts with the Sudan. First, their relations with the Sudan were as much predatory as commercial. We have the evidence of Herodotus and Lucian that they could acquire black slaves and ivory directly, without having to pay for them. Secondly, for those commodities which they did have to buy from others—carbuncles perhaps, and the gold at Abalessa—they would have paid largely in raw materials which leave no trace in the archaeological record—above all salt, perhaps also foodstuffs such as corn and dates, and metals such as copper. Perhaps the Negroes were not yet organized in kingdoms strong enough to demand a share in the profits of trade in the form of imported luxury goods. However, in the present state of the evidence, even if we are not disposed to deny altogether that the Garamantes ever traded to the Sudan, we cannot assert that this trade was very substantial or important. It is difficult to detect any contribution which the Garamantes might have made to Sudanese civilization.⁹⁷ The most that can be claimed for them is that they were the pioneers of trans-Saharan trade.

⁹⁵ Mauny, 'Monnaies anciennes...', loc. cit.

⁹⁶ In the forest, a coin of Constantine has been found at Buea in Cameroun (Bovill (1958), 41, n.).

⁹⁷ Unless they are credited with the introduction of iron-working into West Africa: cf. Mauny, 'Essai sur l'histoire des métaux en Afrique occidentale', *B.I.F.A.N.* (1952), 545–95, and against this Huard, 'Contribution à l'étude du cheval, du fer, et du chameau au Sahara occidental. I. Le fer', *Bull. I.F.A.N.* (1960), 134–78.

THE BYZANTINE PERIOD

The Roman order in North Africa was eroded by nomadic incursions and Berber revolts in the latter half of the fourth century, and finally swept away by the invasion of the Vandals under Gizeric in 429. On the death of Gizeric in 477, the Vandal state in turn began to disintegrate, and there was a series of revolts among the Berbers. In Tripolitania, at the beginning of the sixth century, there arose an independent Berber kingdom—that of the Leuathai.⁹⁸ The deepening chaos was arrested by Byzantine reconquest. In 533 Justinian sent Belisarius to reconquer North Africa. The Vandals were quickly eliminated, but the Berbers resisted the reimposition of Roman rule, and were only subjugated by Iohannes in 546–8.

Peace established, contacts with the interior could be resumed. It was now that Christianity was carried into the Sahara. Procopius, writing *ca.* A.D. 558, records the conversion by Justinian of the inhabitants of Audjila⁹⁹ and of *Kιδαμη* (Ghadames).¹⁰⁰ In 569 the Garamantes themselves adopted Christianity.¹⁰¹ It was no doubt through the Garamantes that the Tuareg acquired the Christian elements that have been observed in their culture, such as monogamy, and the use of Biblical names such as Samuel, David and Saul, and of certain terms of Christian origin: *mesi* (God), *andjelous* (angel), *abekkad* (sin) from *peccatum*, *afasko* (Spring) from *πάσχα*.¹⁰² Renewed trade with the Garamantes is attested by proto-Byzantine pottery (sixth and seventh centuries) in tombs of the Fezzan.¹⁰³ And Byzantine influence is also evident at Zawila, the medieval capital of the Fezzan, where there survive a strong city-wall and a domed tomb built in Byzantine style.¹⁰⁴

Byzantine rule in North Africa collapsed before the attacks of the Arabs after A.D. 639. In 666 an Arab force raided south across the desert, taking Waddan and Djerma and pushing on as far as Kawar.¹⁰⁵ That, presumably, was the end of the state of the Garamantes.

SUMMARY

The sources for pre-Arab trans-Saharan contacts are poor, but at least for the central Sahara a picture can be made out. The alignment of rock paintings and engravings of chariots along two trans-Saharan routes has been supposed to prove regular traffic across the desert. The inference is unjustified, but literary and archaeological sources indicate that the conclusion is correct. Herodotus attests the use of a route running west from Egypt to the Fezzan, then apparently south-west via Taasili and Hoggar to the Niger. This corresponds with the central Saharan 'chariot-route'.

⁹⁸ Procopius, *Bell. Vand.* 1. 8, cf. II. 21.

⁹⁹ *Ibid.* VI. 3, 9–10.

¹⁰⁰ Trimmingham, *ibid.*; Bovill (1958), 51–2.

¹⁰¹ Especially in the cemetery of Tag'lit (*Monumenti Antichi 1951*, coll. 381–4).

¹⁰² *Ibid.* coll. 416–19.

⁹⁹ *Aed.* VI. 2, 18–20.

¹⁰¹ Trimmingham (1962), 15, n. 1.

¹⁰² Cf. n. 91.

There was also a route to the Garamantes of the Fezzan from the Punic settlements on the coast of Tripolitania. Carthage imported from the Garamantes the precious stones known as 'carbuncles', which were apparently brought to the Fezzan from the south-west. Other possible imports are slaves and gold. Carthage imported gold from West Africa by sea, and it seems likely that her explorations down the coast were inspired by an overland trade in gold. But there is no direct evidence for such a trade.

In the second century B.C. Rome replaced Carthage in control of the coast of Tripolitania. Between 20 B.C. and A.D. 86 she fought a series of wars with the Garamantes. Later friendly relations were established, but further trouble led to the organization of the 'limes Tripolitanus' after A.D. 201. Trade is attested by imported Roman material in tombs of the Fezzan dating from the late first to the fourth centuries. There is evidence that the Romans imported ivory from the Garamantes, and slaves are now attested directly.

The commodities exported north by the Garamantes came not from the Fezzan, but from farther south. Literary sources refer to hunting expeditions and raids to the south, and finds of Roman material have been made along the 'chariot-route' south-west of the Fezzan as far as Ti-m-Missao.

Trade ended with the collapse of Roman rule in North Africa. It was revived with the Byzantine reconquest after A.D. 533, and Christianity penetrated to the Fezzan. In 666 the Arabs overran the Fezzan.

The Garamantes and Trans-Saharan Enterprise in Classical Times



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