5.1 A Dense Network of Routes and Oases

Jacqueline Passon

The map “Important Caravan Tracks and Oases” offers an overview of the progression of the most significant caravan and pilgrim routes and local trading routes. It reveals the location of the most important oases in present-day Libya.

Because of its geographical location, at the point where the Mediterranean reaches its furthest southern point, Libya has been a transit country for goods and travellers between the Mediterranean region and the countries south of the Sahara since time immemorial. Adapting to the climatic and environmental conditions, the transport of goods and travellers proceeded by caravans right up into the twentieth century.

Since ancient times, caravan transport has played a significant role for the economy of northern and inner-African countries. In addition to the starting and finishing points at Tripoli, the transit hub of trade on the way to the south was formed by the oases of Ghadamis as well as Zawilah and later Murzuq. From Tripoli, Murzuq could be reached via many routes: the most important caravan and postal route led to Murzuq via the Bani Walid and the Zillah oases. Two routes, that ran further southwards, led to the

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Fig. 5.1 Numerous caravan tracks running straight across Libya. They describe the traditional paths that were handed down since primeval times which merchants, herdsmen and pilgrims were supposed to follow. These trade and pilgrim routes connected Europe, the Middle East and the African mainland.
trading metropolis of Fezzan via Gharyan, Mizdah and the Wadi ash-Shati. These various routes eventually diverged in Murzuq. The northern routes met on the ancient north–south route, a significant pilgrimage route between Cairo and Timbuktu, which established the connection to Ghat. The continuation of the northern routes to the south formed the famous Bornu route, which led, on the one hand, to the Sokoto Caliphate and the Bornu Empire, both of which lie in present-day northern Nigeria and, on the other hand, to Kanem and to the Sultanate of Wadai in present-day Chad. Ghadamis could also be reached via numerous routes. The main road led to Ghadamis via the mountain villages of Yafran, Az Zintan and the Sinawin Oasis. Routes also spread out from the larger settlements of the Jabal al Nefusah and met near Sinawin, where they then followed the main road. A further junction before Ghadamis was formed by the eastern oasis of Dirj, where two roads from Mizdah met with a road coming out of
Sinawin. One of these roads joined the pilgrimage route about 90 km east of Dirj and ran between Fez (Morocco), Ghadamis and Cairo (Egypt). From Ghadamis, one could reach Ghat and from there Agadez (Niger) and Timbuktu (Mali).

Another significant route marked the way from Benghazi to the Wadai Empire (Chad) and the Sultanate of Fache (Sudan) via Awjila and al Kufra. Due to the difficult political situation in the region, which affected this route, the caravans there were often exposed to unpredictable risks, which allowed this route to be used only at times. The road became particularly important during the second half of the nineteenth century. With regard to the value of the goods, the significance of the east–west routes cannot be compared to the north–south connections. The coastal road, which stretched out along the Gulf of Sidra, served as a pilgrimage and postal route. The exchange of goods between Europe and Africa was conducted via the north–south routes. Europe supplied mainly industrial products such as weapons, dishes, materials, tea, spices and paper. Africa exported gold, leather and furs, cotton products, indigo, ivory and ostrich feathers, but most importantly slaves (Figs. 5.1 and 5.2).

5.2 From Tripoli to Ghadamis

Jacqueline Passon

The map “Tripoli–Ghadamis” shows the various routes that led from the north to the significant trade metropolis of Ghadamis. An important and regularly frequented caravan route ran via the Jabal Nafusah. Two other routes went via the Mizdah Oasis.

From Tripoli, Ghadamis could be reached by various roads. The shortest and fastest way led over the mountain villages of Yafran, As Zintan and the Sinawin Oasis to Ghadamis. On his way to Ghat, the British traveller Richardson went along this regularly used route. There he collected much valuable information about the Tuareg and established important contacts with the leaders of this large Berber ethnic confederation.

From Tripoli, the route went first towards West to Az-Zawiya, where it branched off to the south and led through the Jefara Plain in the direction of Wadi al Athel at the foot of the Jabal al Nefusah. From here, it followed the difficult climb into the mountain range to Yafran, which at this time was home to an Osman garrison. The mountain range is a hilly limestone massif, which is called after the largest Berber tribe in this region, the Tamazight Nefusah. It is a mountainous desert plateau interspersed with deep valleys and fertile oases. Because of its rough topography, governments located in the coastal areas historically found the Jabal al Nefusah hard to control. People often fled there to escape government rule. Therefore, the region has historically been associated with groups seeking refuge. Due to its rough terrain and a large number of secluded valleys, the Jabal used to be ideal for retreat. It was used as a hiding place by the original population, the Berbers, when the Arabs attempted to settle in Jabal al Nefusah in the wake of the Muslim invasion in the middle of the seventh century. It remains one of the few areas in Libya, where Berber culture still thrives. Beyond that, it was home to the oldest Jewish settlements in Libya. Many Jews escaped from Tripoli during the incursion of the Spanish in the sixteenth century.

Yafran (Fig. 5.3), hub of the mountain region, is composed of several villages spread over the mountain slopes overlooking the Jefara Plain. It was known in Tripolitania for its renowned synagogues. The Jewish presence in Yafran was the oldest in Tripolitania. Until around 1945, there had been a synagogue on this site for almost 2000 years. The remains can be seen today. Economically, the region prospered from agriculture and, of course, from the trans-Saharan trade (Figs. 5.4, 5.5, 5.6 and 5.7).

The next stops on the way to Ghadamis were Jadu and Nalut. Caravans usually stopped within reach of an oasis. Like in Jadu, there was always an arrival or a departure point for caravans, where the caravans rested (Fig. 5.8). From here, the way continued to an important crossroads of the caravan trade, the Sinawin Oasis. According to Richardson, it lays a four days’ march from the mountains. The road was very good to travel. As Richardson reports, the greater part was a “beautiful broad carriage-road”. Sinawin itself in the middle of the nineteenth century drew a bleaker picture, as we can gather from James Richardson’s report, which says: “Seenawan is but a handful of date-trees, thrown upon the wide waste of the Sahara, with one or two pools of sluggish running water, sheltering beneath its palms thirty or forty inhabitants. There are four or five spots of vegetation, gems of emerald on the rugged brow of the Desert. The houses, if such they are, consist of half a dozen or more of mud hovels huddled together, here and there a little stone stuck in the walls, and some dark passages running beneath them. One or two had a couple of stories and a stone wall round them. Yet, within, they are cool, and have dark rooms to protect the inhabitants from both heat and cold. There are also two or three mud and stone burges, or round towers, to protect the few dates and spots of green. Nevertheless, in this pretence of existence, surrounded by the frightful sterility of the Desert, glowed the warmth of true hospitality.”

In Sinawin, construction relics such as the well, and two water basins from the traditional settlement mentioned by Richardson in his account, still persist to this day (Figs. 5.9 and 5.10). The old town of Sinawin, however, has left its golden age far behind (Fig. 5.10). Today, the old settlement
is abandoned, and the wells are filled with waste. Nevertheless, the various routes, which radiated outwards from the larger settlement centres of the Jabal al Nefusah, come together at this oasis as they did in the old days. The Dirj Oasis to the east is a further crossroads before Ghadamis. Here, two routes from Mizdah came together: a road met about 90 km east of Dirj with the pilgrimage road that ran between Fez, Ghadamis and Cairo. The others led directly from Mizdah to Ghadamis. Both came together in Dirj with a route from Sinawin.

The caravan routes departing from Mizdah to Ghadamis separated at the nearby Fassanu Oasis. The southward route was

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Fig. 5.3 During the nineteenth century when the British traveller Richardson visited the Castle (kser) of Yafran, Turkish soldiers were lounging here. He describes it “as a most formidable thing to look at from a distance, but a wretched mud-built place in reality. To the Arabs, however, it is a terrible bulwark of strength, and for them impregnable”. Today, it houses a hotel with a great panoramic view
Fig. 5.4 Map: Tripoli–Ghadamis
Fig. 5.5 Yafran overlooks the Jefara Plain

Fig. 5.6 Jabal al Nefusah is also known as al Jabal al Gharbi (Western Mountain) or Adrar n Infusen, as the Berbers called it. The region extends some 170 km south-west of Tripoli to the Tunisian border and includes the areas around Yafran, Gharyan and Nalut. Yafran was situated on the ancient caravan road which linked Tripoli and Ghadamis with the Sudanic inland ports. The drawings above from de Mathuisieux’s publication “Attraverso la Libia” published in 1912 give a strong impression of the village and the Ottoman castle at the beginning of the twentieth century. As part of their effort to improve security, the Ottomans established garrisons throughout the Jabal like in Yafran or Nalut. For many centuries, Berbers were living together with Jews in the same neighbourhoods, as was customary elsewhere in Jabal al Nefusah. Both communities promoted trade and the exchange of ideas across cultural and religious divisions. The long-standing relations between Jews and Berber tribes guaranteed the safety of the trade routes. The last picture shows a very small caravan on the route to Ghadamis.
Fig. 5.7 An abandoned old Berber village which is situated 5 km east of Yafran in the Nefusah mountain region. Two main routes connected Tripoli and the Sudanic empires by crossing the Jabal al Nefusah: The Tripoli–Ghadamis–Ghat route to Hausaland and Air and the Tripoli–Fezzan–Kuwur route to Bornu and Lake Chad. The Berbers supplied the needs of passing caravans.

Fig. 5.8 An arrival or a departure point for caravans from the oasis of Jadu.
once travelled and described by Rohlfs. He characterises the region as “appalling desolate and uniform” and goes on: “The wide valley in which Mizdah lies divides into two arms above the place; the main direction goes from West to East. Far and wide there is not a tree to be seen. Some herbs grow, though they are kept down by the strong sand storms, on the Southern bank.”

The more northward route follows the watering holes of Bir Fassanu, Bir Jadida, Bir al Hamera, where caravan tracks can be still traced today (Fig. 5.11), and Bir al Chalab. These wells are said to have been used since antiquity. The wells were built by the Italians during the colonisation of the country in the 1930s, which is testified, for example, by a plaque installed at Bir...
Jadida by the Italians (Fig. 5.12). Today, the wells are maintained by the Libyan Government. The wells are equipped with troughs for cattle (Fig. 5.13), and they are regularly sought out by the herdsmen or the camel herders.

Rohlfs, who needed eight days altogether for his trip from Mizdah to Ghadamis, also speaks in his memories of one of the above-mentioned wells, the Bir al Chalab, and provides an insight into the functioning of a caravan. He reports that the caravan, with which he travelled, had set up their tents at the Aghadir-el-Cheil (horse watering hole), a place that is located in a straight direction about 10 km from the Bir al Chalab, according to Rohlfs. There, it emerged that the convoy was indeed equipped with enough feed for the animals, but that the water supplies would only last two more days. This posed a problem since the travellers were faced with at least five more days’ march. In desert areas, where water was scarce, it was critical for the survival of the caravan to employ paid scouts called taksif to find water. The scout, who knew the area very well, was then sent with other camel drivers and a few servants as well as all of the camels to Bir al Chalab, so that the animals could be watered and the water holes could be freshly filled. Today, Bir al Chalab (Fig. 5.14) is a small modern high-tech oasis, which is among other things, equipped with solar panels, in the middle of the inhospitable semi-desert area, and serves as a shelter for herdsmen. A well supervisor (Fig. 5.16), who is in service for a number of weeks, oversees the facilities. Regularly, water trucks arrive (Fig. 5.15), which transport the valuable resource to the individual, dispersed cattle troughs. The water is provided free of charge by the Libyan Government.

The two routes that led from Mizdah to Dirj in their onward course also involved the difficult climb into the Hamadah al Hamra, a plateau of rocky desert, that was difficult to cross for the long processions of heavily loaded camels (see From Ghadamis to Bir Inazar and Adiri).
Fig. 5.12 Bir Jadida (see map 🗺️) is a well that was cemented by the Italians.
5.3 From Ghadamis to Bir Inazar and Adiri

Jacqueline Passon

The map “Ghadamis–Bir Inazar–Adiri” shows the course of several caravan routes in the direction of Ghat to Adiri. This region is characterised by difficult terrains, which is devoid of any fixed settlement.

The Ghadamis–Air–Kano route was, commercially speaking, one of the important routes especially in the nineteenth century. Due to the successful establishment of the Sokoto Caliphate, political and commercial live was concentrated in Sokoto and Kano. This part of the Sahara was under the control of two powerful branches of the Tuareg of the Sahara, who ensured the security of the routes.

The caravan routes, which started from the trading metropolis of Ghadamis and led to Ghat, are characterised by the fact that there are no fixed settlements along the entire route that can offer rest and supplies. Because of this, the caravans made a habit of creating a store at the halfway point of the route, where they laid down provisions for the return journey. According to Duveyrier, who had seen the sacks left behind by other caravans on the way to Ghat, it was no
idle fear that other travellers might seize them. On the return journey, the caravans gathered up the provisions that they had deposited. The French explorer added that in the Sahara there were routes, looked over by the population. For their use, low duties had to be paid by the caravans in order to be guaranteed safe passage. These routes are examples for the safe passage that could be found even in the desert. As a result of this system along the Ghadamis–Air–Kano route, not only large annual caravans but also small caravans were to be seen on it throughout the year. Large caravans usually had an armed escort. Nevertheless, there were other routes that crossed territories where anarchy still reigned. Large armed caravans could use these but only as long as they had a means of defence.9

The way from Ghadamis to Ghat is long and arduous: after leaving the Ghadamis Basin, there was the climb into, and subsequent crossing of the Hamadah al Hamra (Fig. 5.17), a barren desert full of rocks. The surface of this territory is almost always rocky and totally devoid of vegetation, except in small basins where the limestone has dissolved. Richardson characterises the way to Bir Amsin and further on to Bir Inazar as follows: “As far as the eye can stretch on every side is one vast, solitary, lifeless, treeless expanse of desert earth! (…) Ground strewn with small flints and other sharp chips of stone. Saw nothing alive in The Desert but one solitary bird … Arrived at the well of Maseen [Bir Amsin], at 4 p.m. Much the same scenery as yesterday. The road good, not quite so stony as yesterday, and scattered over with pieces of very fine quartz and shining felspar. No sand in quantity, and a little herbage for camels” (Fig. 5.18).12

Following this were the Hamadat Tinghert and the western offshoots of the sand sea of Awbari (Fig. 5.19) that had to be crossed. This was a very difficult route for the camels that frequently upset their loads in mounting or descending the groups of hills (Fig. 5.20).

For “path finding” in the Sahara, central significance is given to countless caravan tracks, way markers and above all watering holes and wells, as caravans must orientate themselves to these. The photographs on the following pages show, for example, the situation in the region of Bir Inazar (Fig. 5.22). The Bir Inazar, an important well even today, is a crossing point of old and new ways across the desert. “Single tracks”, recognised in the terrain as paths, prove that this place was a central meeting point for countless caravans. This is backed up by the fact that in immediate proximity the grave of Sidi Mohammed ag Ikhenukhen (Fig. 5.21) can be found. He was one of the greatest chiefs of the northern Tuareg in the nineteenth century and assistant to European travellers and Sahara explorers like Henri Duveyrier and Alexandrine Tinné.

The caravan routes in the western part of modern-day Libya were primarily controlled by the Tuareg in the nineteenth century. They consisted of a number of large ethnic groups, who lived in the desert in the region that had to be traversed in
Fig. 5.18 Map: Ghadamis—Bir Inazar—Adiri

Data Sources
- U.S. Army Map Service, Africa, 1:1,000,000 (1942 - )
- U.S. Army Map Service, Series F502, North Africa, 1:250,000 (1954 - )
- Topographic Map of Libya 1:1,750,000 (2005)
- GeoNames Geographical Database (2014)
- SRTM Digital Elevation Data Version 4 (2008)
- Blue Marble Next Generation (2004)
order to reach the southern edge of the Sahara. Richardson and Rohlfs also met with them in order to negotiate safe passage on their way from Ghadamis to Ghat. Without the protection or friendship of one of the powerful leaders or another person respected by the Tuareg, a journey across the desert was more than just a bit risky. For European travellers, and also for traders, the choice of an *amandi*, a friend and protector, was an important affair at that time.

Duveyrier, who was travelling in North Africa on assignment for the government of Napoleon III, met with Ikhenukhen for the first time in 1860. As he was the political leader of the northern Tuareg, he guaranteed Duveyrier protection and friendship on his travels from then on. For example, he accompanied him on his journey from Ghadamis to Ghat. Ikhenukhen held the position of a king, *amanokal*, of the entire collection of the Adjer-Tuareg. Among the tribes of the Adjer, the Oraghen and Imanghassaten were the most powerful and important. The leader of the Oraghen was simultaneously king of the entire collection of the Adjer. In December 1862, a treaty was signed in Ghadamis between France and the political leader of the Tuareg of the Adjer—by name Ikhenukhen in order to kick-start a lively flow of trade, which has, however, never materialised. Through this contract with France, Ikhenukhen was also obliged to protect all French people who travelled across the Adjer region. The Tuareg leaders were looking for allies against a threatened occupation of their land by the Ottomans, who had advanced into the Sahara from Tripoli and had already occupied Murzuq, the capital of Fezzan. The English travellers in turn found their protection in this region

*Fig. 5.19* Crossing the Awbari sand sea was a great challenge both for man and camels. Richardson reports: “The Arabs smooth the abrupt ascents, forming an inclined plane of sand, and then, in the descents, pull back the camels, swinging with all their might on the tails of the animals. No herbage—no stone—no earthy ground—all, everything one wide waste of sand, shining under the fervid sun as bright as the light, dazzling and blinding the eyes.”
Fig. 5.20  Vast, undulating mounds of sand lying in the hot desert sun but they do not—as many would think—make up the majority of the Sahara desert. Most of it consists of stony plains (Serir) or rocky areas (Hamadas).

Fig. 5.21  Grave of Sidi Mohamed ag Ikhenukhen (see map ④) is situated on a ridge on the caravan route from Ghadamis to Ghat. The topographic position emphasises his importance as a chief of the northern Tuareg in the nineteenth century. Along the Ghadamis–Air–Kano route the northern Tuareg acted as transporters and ensured the safety of the caravans. The grave with its engraved stone is one of the few visible reminders of this powerful man of the northern Tuareg: “Mohammed known as Ikhenukhen, son of Osman, died in 1876”
Fig. 5.22 Bir Inazar: The images portray the situation around the Bir Inazar in the Wadi Inazar on the caravan route from Ghadamis to Ghat. The Quickbird image from September 2004 gives an impression of the position of Bir Inazar and the grave of Sidi Mohamed ag Ikhenukhen.
from the Imanghassaten. That is why Richardson, who travelled the route from Ghadamis to Ghat in 1845, found his amidi in Hatita, a leader of this tribe. Krause, a German traveller and historian, spoke of a kind of “historical law” that the Tuareg saw evolve for the dispersal of responsibility in the accompaniment of travellers. The travellers coming from the north (Algeria) belonged to the Oraghen, those from the east (Tripolitania, Fezzan) to the Imanghassaten.  

After leaving the sand dunes of Awbari, the road stretches quite good to travel ahead. Most of the stones scattered en route to Ghat turn into black shingles, and all the regions have a volcanic look. The whole region is intersected and bounded on every side with the ranges of black, gloomy, and uniquely shaped mountains (see *rom Murzuq to Ghat*). It is, therefore, no surprise that many mysterious stories arose against the backdrop of this rugged scenery (Figs. 5.23 and 5.24).
5.4 Excursus

5.4.1 Ikhenukhen—the Leader of the Tuareg from Adjer

5.4.1.1 Ikhenukhen Seen Through the Eyes of Henri Duveyrier 1864

Ikhenukhen belonged to the tribe of the Oraghen, which was counted among the Adjer. According to tradition, this tribe had its roots in the surroundings of Sokna. They inhabited Fezzan, the land of Ghat and Ahaouagh, a territory found on the left bank of the Niger, east of Timbuktu. At this last station, the tribe divided; one part remained in the Ghat area, and the other larger part moved towards Ahaouagh. In Ghat, the Oraghen seized power, which they had held before the nineteenth century.

Ikhenukhen was the son of Osman. After his death, he was, by custom of the Tuareg (Fig. 5.25), heir of the title amchar, a Berber term used historically to designate a lay tribal chief. However, he passed this up in favour of his cousin, Mohammed-eg-Khatita, who was the husband of his sister Zarah. He did not want to put himself under the constraint of being settled, as befit an amchar of the Adjer. Ikhenukhen held the position of amanokal, an overlord of the entire collective of the Adjer. He had three sons and three daughters. According to rules deriving from the matriarchal regime, political succession was, in principle, transmitted to the eldest brother of the preceding amanokal, to the eldest son of his maternal aunt or to the eldest son of his eldest

Fig. 5.24 This map—according to Richardson (1845)—reflects the different paths that led to Ghadamis
sister. Thus, the heir of Ikhenukhens power was the son of his sister Outiti.

Ikhenukhen and his brothers are praised by a native poet. The following lines make the high opinion the poet had of them clear:

"The sons of Osman are stronger and braver men, who do not dirty the blood of their parents and who measure the corn generously. If a man goes to seek them, he can only try to fight with them. Their thoroughbred camel mares come neither from Adjer nor from Air, neither from the place of the Arabs, who pay taxes; and if one of them is mistaken, do not believe that she does it to escape and return to her home country. Their pack camels have feet as large as drums and the burdens they bear are like the peaks of mountains. They have mares with beautiful manes, which are saddled day and night. In them God has united the abilities and necessary qualities for the path of the journey. It is not only today that the sons of Osman shine in this splendour; all of Ahaggar and Adjer know it."

This excerpt not only tells something of the history of the Tuareg of the north and Ikhenukhen, but it also provides an interesting glimpse into the standards used in their culture to measure recognition, wealth and social status. In the song by the unknown poet, strength and bravery are praised as the highest-valued personal qualities. The poet lists the most important possessions as camel mares of noble origin, able-bodied pack camels and noble horses.

According to the French African explorer, the reason why Ikhenukhen took such a high position within the Tuareg is that he is said to have also been the most skilled among the Tuareg with the broadsword and shield. Duveyrier gives the following judgement of the then already 76-year-old leading personality of the Tuareg:

"After almost seven months of living together with Ikhenukhen and careful observation, I am of the opinion and convinced that the qualities of his heart and his spirit, his generosity and integrity of character contribute to his outstanding skill in the handling of the weapon. (...) he bears the stresses of nomad life like the youngest of his sons. Everything, his behaviour, his voice, his methods of leadership, unveils a man of a yet uncivilised society; but within all the inherited mistakes of his race, one cannot help but recognise a man with great commitment to his principles, a boundless devotion to what he knows to be his duties."

Regarding the fighting abilities of Ikhenukhen and the nobles of his family, Duveyrier writes that these had 100 soldiers available mounted on camels. In total, the most influential of the Adjer had over 200 warriors available. By European standards, 200 warriors might have represented quite a weak contingent. If one regards the conditions in the desert, however, the number of 200 warriors was sufficient, because there were few wells from which 200 camels could drink quickly. Yet, a further reason was that between one stage and the next there were sometimes distances of 200–300 km. With regard to the wealth of Ikhenukhen, the French explorer mentions that he numbers among the richest of the Adjer. His wealth consisted principally of camels, of which he is said to have owned around 60. Because of the power of the Oraghen, many tribes had to pay tribute, in order not to fear an attack from them.

5.5 From Tripoli to Mizdah

Jacqueline Passon

The map "Tripoli–Mizdah" shows the course of two important caravan routes which led from Tripoli to Murzuq: a westward route via the small oasis of Mizdah and an eastward route via Bani Walid. This last one has evolved into a proper caravan and post road due to its more favourable natural conditions.

Two important caravan routes led from Tripoli to Murzuq, the capital of Fezzan. The shorter ran via Gharyan and Mizdah and divided there again into a westward route and an eastward route. The stretch with a westward direction was traversed and described by the British explorer and traveller Richardson as well as by his companions, the German African explorers Barth and Overweg. The eastward route was well known to Rohlfis. The other, longer route, which Duveyrier, Lyon, Vogel and Nachtigal followed, deviated considerably to the east from the first route. In spite of the insignificant detour, this path was much more frequented and evolved into a proper caravan and post road. The reasons for this lay in the rest and supply opportunities. On the one hand, this stretch had watering holes at regular intervals. On the other hand, with its regular
settled, it offered the desired stop-off points and guaranteed a greater degree of security for the caravans. This route would usually take around thirty days, while the westward route would only require about twenty days.

The former main caravan route led first through the Wadi Melgha via the Tarhuna Plateau to Bani Walid. The oasis, which consisted of a row of individual villages on both sides of the Wadi, was considered to be the most fertile of the African interior. Already in ancient times, the region was richly populated. At the end of the nineteenth century, an estimated 3000–5000 people still lived here. There is much archaeological evidence attesting to the propensity of the area at the museum of Bani Walid. From there, the route led to Abu Nujaym (Fig. 5.26), an important outpost of the Limes Tripolitanus which sunk into complete insignificance following constant raiding by steppe nomads. According to Nachtigal, in the nineteenth century, this place was half covered with sand and featured a derelict castle, several huts, a few palms and barely 200 inhabitants, who were engaged in barter trading with the passing caravans. Barter trading is a system of exchange, where goods or services are directly exchanged for other goods or services without using a medium of exchange, such as money. The wells of Abu Nujaym (Fig. 5.26), an important outport of the Limes Tripolitanus which sunk into complete insignificance following constant raiding by steppe nomads. According to Nachtigal, in the nineteenth century, this place was half covered with sand and featured a derelict castle, several huts, a few palms and barely 200 inhabitants, who were engaged in barter trading with the passing caravans. Barter trading is a system of exchange, where goods or services are directly exchanged for other goods or services without using a medium of exchange, such as money. The wells of Abu Nujaym (see From Zillah to Murzuq), where the road bends towards Zillah and the oases of Awjila and Jalu, the life-giving wetness is again to be found. From there, a chain of oases can be reached via the Black Mountains (Jabal as Sawda), which stretches from Az Zighan to Murzuq. The modern road system, so few relics can be traced (Fig. 5.27).

The westward route, which in Roman times formed the main road in Fezzan, was, however, easy to follow from Mizdah. In this respect, it should be regarded more closely. In 1850, Richardson, Barth and Overweg decided to investigate this route and therefore to cross the Hammadah al Hamra, a barren rocky desert. Four years earlier, Richardson had chosen the easier route via Suknah on his return to Tripoli. Thus, they were the first Europeans to pursue this route. From Tripoli, the stretch led first across the Jefara Plain in the direction of al Aziziya and beyond to the foot of Jabal Nefusah (Fig. 5.28) and to Rabdah. The place offered favourable conditions for rest before beginning the climb on the steep path over the Jabal (Fig. 5.29).

Rabdah was divided into a west and an east village (Fig. 5.30). The date palm groves of the two village communities were only separated from each other by a small distance. The topographical element dominating the scenery is Jabal Manterus, which is volcanic in origin, and as a result, its colour stands out well from the settlement surrounding it. Barth and his companion Overweg climbed the interesting bicorn of the dark-coloured Jabal Manterus, where on the eastern and higher summit lies the tomb of a Marabout, a holy shepherd called Sidi Bu-Maza. The westward village of Rabdah, like the eastward village, was fed by a copious spring. In the nineteenth century, for example, the water in the westward village was collected in a basin of about 15 m in length and 9 m in width. Barth was quite
surprised by it as he recounts: “It [Rabda] is fed by a copious spring, which arrested our attention. Following it up to trace its source, we were greatly surprised to find, in the heart of some date-trees, a basin fifty feet in length, and about thirty in breadth, in which the water was continually bubbling up and sending forth a considerable stream to spread life and cheerfulness around.” In Italian times, the basin was renovated and cemented (Fig. 5.32).
Fig. 5.28 En route to the south, the Jabal Nefusah, a limestone escarpment running parallel to the Libyan Mediterranean coast, had to be overcome. This was a difficult march over steep paths and through gorges of the Jabal Nefusah. On the right-hand edge of the picture, the town of Qawasin can be seen, which is situated on the foot of the Jabal Tekut and is just like Jabal Manerus of volcanic origin. On the top are the ruins of a chapel of Sidi Ramadan.

Fig. 5.29 Routes to Sudan climbs into the Nefusah mountain range and traverses the Hamadah al Hamra.
From an agricultural perspective, Rabdah was characterised by the cultivation of dates and a large quantity of onions. For a long time, the westward village functioned also as the residence of Hamid, a powerful Arab chieftain, who ruled the entire mountain region in the first half of the nineteenth century. He must, however, have been defeated by the Ottomans and must have lived in Barth’s time in Bani Walid. On the northern side of the westward village, there are also seven holy chapels, which were known as “al Hhararat” (Fig. 5.31).17

From Rabdah, the difficult march continued over steep paths and across gorges of the Jabal Nefusah to Gharyan (Fig. 5.33), which in those days were controlled by the Ottomans. The Ottomans established a fort in Gharyan, too, in order to guarantee the safety of the region as well as of the trade routes. Gharyan has been a major settlement in the mountains. Today, it even has a university. Lyon and later Barth mention the underground apartments, typical for this landscape. Traditionally, the families lived in caves or in underground residences (Figs. 5.34 and 5.36) as much as 10 m deep, where, they were safe from marauders, and were they conducted their daily life, worked and raised their families.18 Those residences are still abound today and are maintained by their owners and used for tourism.19
Fig. 5.31 Holy chapels of Rabdah, which were known as “al Hhararat”

Fig. 5.32 Water is a valuable commodity, which was collected by the people of Rabdah in a water basin that was cemented by the Italians
Fig. 5.33 Gharyan, which is about 80 km south of Tripoli, has been a major settlement in the mountains. It is considered to constitute a unit with the nearby towns of Tighrinna and Batu Abbas. As indicated above, the Jabal Nefusah used to be ideal for retreat and was used as hiding places by various population groups. Governments historically found the mountainous region hard to control. The Ottomans built a castle in order to guarantee the safety of the region. But this place has only been successfully controlled by the Italian colonists. Economically, the region prospered from agriculture. 26 Barth gives a brief account of the situation in the middle of the nineteenth century: “The villages, at least those above the ground, are generally in a wretched condition and half deserted; still the country is in a tolerable state of cultivation, saffron and olive-trees being the two staple articles of industry”. 21 Another branch was the trans-Saharan trade, several of whose routes passed through Gharyan to Tripoli. The market was held on a normal weekday on the open ground as the photograph above from Laronde’s publication “La Libye a travers les cartes postales 1900–1940” shows. Once Italian control was fully established, the modern town of Gharyan came into being with buildings above ground (photograph below, Laronde 1997). The Italian settlers expanded the range of agricultural products to tree crops, including figs, apricots, almonds and olives. Tobacco was also grown in the Gharyan area and kitchen garden crops were widespread 22
The photograph above from Laronde’s publication (1997) shows the so-called troglodyte house which is situated in Gharyan. Lyon vividly reports: “As the natives live, as I have observed, underground, a person unacquainted with the circumstance might cross the mountain without once suspecting that it was inhabited. All the dwelling-places being formed in the same manner, (...). The upper soil is sandy earth, of about four feet in depth; under this sand, and in some places limestone, a large hole is dug, to the depth of twenty-five or thirty feet, and its breadth in every direction is about the same, being as nearly as can be made, a perfect square. The rock is then smoothed so as to form perpendicular sides to this space, in which doors are cut through, and arched chambers excavated, so as to receive their light from the doors. These rooms are sometimes three or four of a side, in others a whole side composes one; the arrangements, depending on the number of the inhabitants. In the open court is generally a well, water being found at about ten or twelve feet below the base of the square. The entrance to the house is at about thirty-six yards from the pit, and opens above ground. It is arched overhead; is generally cut in a winding direction, and is perfectly dark. Some of these passages are sufficiently large to admit a loaded camel. The entrance has a strong wall built over it, something resembling an ice-house. This is covered overhead, and has a very strong heavy door, which is shut at night, or in cases of danger. At about ten yards from the bottom is another door, equally strong, so that it is almost impossible to enter these houses, should the inhabitants determine to resist.”

Fig. 5.34
Gharyan is famous for its functional tableware which is made by local craftsmen. Even the people from Tripoli come to Gharyan to buy dishes for daily use. And of course, tourists used to have a little stop there.

Pictures taken from de Mathuisieulx’s book “Attraverso La Libia” (1912) showing a troglodyte house and the castle of Gharyan.

Fig. 5.37  Remains of the Roman and later Muslim settlement of al Qaryah al Gharbiya

Fig. 5.38  Drawing taken from Barth shows that the Roman gate of al Qaryah al Gharbiyah had not been collapsed at that time. Barth reports: “(...) the building at Gharyan consists of three archways, flanked by towers with receding walls. The two smaller gateways have been almost entirely filled with rubbish; the upper layer likewise is gone, and only those stones which form the arch itself are preserved.”
Fig. 5.39  Traces of a mosque in the old town of Qaryah al Gharbiyah

Fig. 5.40  In Wadi Tabunia, water can be found close to the surface. It was a favourable terrain for resting
Fig. 5.41 Wadi Tabunia: The images portray the situation in the Wadi Tabunia on the caravan route from Tripoli to Mizdah and further on to Murzuq. The Quickbird image from February 2003 gives an impression of the position of the remains of a caravan-resting place in Wadi Tabunia.
(see map 3). Features include ramparts made of stone, behind which tents could be set up 3, and a well 3, which is still important and kept in working order today. Numerous tracks 3 prove that this place was a focal point for countless caravans.

From here, the way led further into the Mizdah Oasis (see Mizdah—important crossroads in western Libya), which enjoyed great significance despite its small dimensions. As it is here that the two important caravan roads from Tripoli to Murzuq and from Tripoli to Ghadamis come together.

The route then followed the edge of the Dahar Plateau towards the south and led through barren and stony territory until it entered the Wadi Tabunia, which cuts into the northern edge of the Hamadah al Hamra. The caravans traversed the edge of the valley. Barth speaks of a well of Tabunia, at which the caravans he accompanied made their camp. As the map indicates, there are in fact several wells in that area. From the information recorded by Barth, it is today no longer possible to locate the place he called Bir Tabunia. Relevant preparations had to be made before the imminent difficult march across the Hamadah al Hamra could really start. Usually, a whole day was needed for the camels to drink at the wells, to graze and rest and to refill the water stores. Barth used this day to undertake an excursion to the nearby oasis al Qaryah al Gharbiyah, a former Roman military camp at the Limes Tripolitanus (Figs. 5.37, 5.38 and 5.39).

At the fault edge of the Hamadah, at the central plateau in the mountains of Qaryah, there are two villages that have this fault area to thank for their names: Al Qaryah al Gharbiyah (the western Qaryah) and al Qaryah ash Sharqiyyah (the eastern Qaryah). Both places were presumably devastated by robberies at that time. According to Barth’s descriptions, the old town of the western village (al Qaryah al Gharbiyah) had already fallen into disrepair. In earlier times, it had stood in high regard because the chapel of a saint was said to have been there. Around 30 inhabitants, fit to bear arms, lived in near-derelict dwellings, the ruins of which can still be visited today.24 Besides the remains of the Islamic settlement (Figs. 5.37 and 5.39), there are further remains of the Roman camp (Fig. 5.38), which have been nowadays partially reconstructed by archaeologists. The Roman site was appreciated accordingly by Barth and was presented as a contrast to the Islamic culture. Capturing the Zeitgeist of the nineteenth century, Barth has a tendency towards evaluating the Roman achievements higher than the way Arab people live and work: “We crossed the ravine, leaving the grove on our left, and ascended the opposite cliffs towards the ruined cluster of miserable cottages [al Qaryah al Gharbiya], when, having traversed the desolate streets, we encamped outside the Roman gate, the massive and regular architecture of which formed a remarkable contrast to the frail and half-ruined structures of the village. We were greatly astonished to find such a work here.”25

For Barth, as well as for most of the nineteenth-century travellers, the monuments created by the Romans in this vast area rose “like a solitary beacon of civilisation over this sea-like level of desolation, which, stretching out to an immense distance south and west, appears not to have appalled the conquerors of the ancient world, who even here have left behind them, in “lithographed proof,” a reminiscence of a more elevated order of life than exists at present in these regions”.27

Underneath the place, there was a palm grove with about 350 date palms, which still exists today. The springs of the small oasis were already collected in a basin in the nineteenth century. To a certain extent, dates, wheat and barley were cultivated. According to Barth, the place was avoided by the caravans as they regarded the water as harmful.28 Since the caravans camped outside the settlement anyway and entered the oasis when necessary,29 several things indicate that they halted in Wadi Tabunia. Presumably, the climb to the plateau was also easier to accomplish from there. The remains of a supply station for caravans, a caravan-resting place (see From Zillah to Murzuq), which was arranged here above the Wadi, also support these theories. Along the caravan route, there were further wells (Abyar at Tabuniyah) and stone shelters in close proximity to this site, similar to that found at the caravan-resting place. The satellite image (Fig. 5.41) shows the location of the caravan-resting place. As equipment for this place, there were ramparts made of stone, behind which tents could be erected (Fig. 5.41), and in the near vicinity piles of stones used as loading stations for camels. A well also belonged to this place, which was located in the immediate vicinity underneath the plateau in the Wadi (Fig. 5.40). Furthermore, spacious pastures offered camels the possibility to graze.

It is interesting to note that Barth remarks that mosque attendance decreased greatly in this area in the mid-nineteenth century. One possible explanation is that he did not mention the place Tabaqah, a central hub of communication of theological knowledge. The town was located on a pilgrim road, which led from Fez via Ghadamis and Tabaqah to Cairo and finally to Mecca (see map). The place housed a large zawiya, primarily a meeting place for spiritual pursuits and religious instruction (monastery), with a madrasa, an institution of learning where the Islamic sciences are taught, that had been laid out on the plateau above the Wadi (Fig. 5.43). The size of the site alone proves its great significance. The first monastery sites in North Africa are documented from the thirteenth century. They are comparable with hermitages. The zawiya has its origins in the kubba shrine, a tomb surrounded by a dome, as well as in the rabita, a hermitage. In the course of the dissemination of the Sufi movement across North Africa, it was accompanied by an enormously quick expansion. It evolved finally into
Fig. 5.42  New town of Tabaqah is situated amidst the Wadi

Fig. 5.43  Old town of Tabaqah. The place became a hub of theological knowledge
centres of religion and political power. A rural zawīya like Tabaqah also provides lodging facilities for pilgrims (fundiqa) and contains libraries, schools, mosques and workshops. In addition, a zawīya may function as an intellectual centre, a sanctuary-offering asylum and a political focus. In the past, monasteries often played an important commercial role by protecting trade routes and creating networks of exchange among its members. The important structures of a medieval zawīya have lasted until today: they include a place for prayer, a shrine, a madrasa and accommodation for students, pilgrims and travellers.

The old town of Tabaqah is laid out on the terraces of the Wadi, whereas the new town was built below the monastery (Fig. 5.42). The grouping of theological knowledge is still a characteristic of the place today. Tabaqah houses a theological faculty as a branch of the University of Gharyan, which is equipped with a comprehensive archive.

"Religion" generates a persistent structure of the place (Fig. 5.43).

After leaving the Wadi Tabünia, the difficult march across the Hamadah al Hamra began. Water was next to be found only at Bir al-Hassi (Fig. 5.44). The importance of the well is underlined convincingly by Barth: “No name could be more appropriate to this place than el Hasi (the well). There is no need of any discriminating surname; it is “the Well”—the well where the traveller who has successfully crossed the Hamadah may be sure to quench his own thirst and that of his animals. But it is not a cheerful resting place, though it is the great watering place on this desert road, as he has to cross the fearful “burning plain” of the Hamadah before he reaches the spot.” It took about six days to cross the highland of the Hamadah. The caravans progressed only very slowly in this sector of the route, while the camels made a habit of walking alongside each other when the territory allowed for it. Adiri, situated in the Wadi ash-Shati, one of the important lifelines of the Fezzan oases, was then reached via the waterless rocky desert. Finally, the way continued through the sand dune landscape of Idhan Awbari to Murzuq.

5.6 From Zillah to Murzuq

Jacqueline Passon

The map “Zillah-Murzuq” shows the southern progress of the caravan routes from Tripoli to Murzuq and depicts the course of the trade routes from Zillah to Murzuq as well as a part of the pilgrim road from Cairo to Timbuktu.
In early 1862, the German African explorer Karl Moritz von Beurmann undertook an attempt to clarify the fate of his compatriot Eduard Vogel, who had died in Wadai in the first half of 1856. His original plan intended to advance from Benghazi on the direct route via the al Kufra oases group (see From Benghazi to al Kufra via Jalu). The port city was the only place on the Mediterranean coast with which the Kingdom of Wadai had a trading relationship at that time. However, the direct route to Wadai was not traversable due to feuds and wars between various local groups living in the south of Libya. Therefore, Beurmann was forced to travel to the African interior via Murzuq. Already at the end of the eighteenth century, Hornemann, who with his travels had heralded the epoch of the European scientific explorations of Africa, had traversed the ancient north–south way, an important pilgrim road between Cairo and Timbuktu. In particular, the route he had taken passed over the famous oases of Siwa and Awjila through the basalt volcanic region of Harudj al Aswad and Tmissah to the trade metropolis of Murzuq.32 As recent research indicates, the Cairo–Timbuktu route already has been travelled since the sixth or fifth century BC. This route seems to refer to Herodotus’ list of the Libyan desert people. In fact, it might have been a straight caravan road linking the lower Nile valley to the Niger bend.33 Beurmann chose a more northerly route. This route was yet new and unknown in Europe, and it led him from Benghazi via Ajdabiya, Awjila, Maradah and then to Zillah (see map Benghazi–Jalu) (Fig. 5.46).

The oasis of Zillah (see Zillah-Oasis of the Palm Trees) was only seldom visited by Europeans. It was not until 1878 that the German geographer, explorer and adventurer Gerhard Rohlfs first visited the place on his way from Tripoli to al Kufra. It counted, however, among the richest in the eastern Sahara because of the existence of over 100,000 date palms. Furthermore, the inhabitants offered significant camel breeding, which could not be found in any other oasis. The place is enclosed on all sides by steep sloping mountains belonging to the Jabal as Sawda. In the Middle Ages, it enjoyed great significance as a center of trade and marked the northern boundary of the Kanem and Bornu Empires. Al Idrisi reports in his book The pleasure of him who longs to cross the horizons, completed in 1154, about Zillah: “From Awjila to the town of Zala is ten stages in a westerly direction. This is a small town with a lively market, full of commercial activity. There live a people mixed of Hawwara Berbers among whom one finds protection and generosity. From Zala, too, one may go to the land of the Sudan...”35 Nothing remained of this splendour when von Beurmann visited the oasis in 1862. According to his information, around 500 people lived then in the oasis. He further reported that the inhabitants sustained themselves on the cultivation of date and grain but did not engage much in trade.36

From Zillah, the stretch led first along the Wadi al Jarad in the direction of al Fuqaha. The caravans kept mostly to the banks of the Wadi al Jarad (Fig. 5.45) as dangers loomed in the Wadi itself. During rainstorms, even when the rain did not fall locally, the Wadi swelled to ranging torrents, which represented a danger for man and beast. The path markers (Fig. 5.45), still in use today, show where the Wadi can be crossed. Not far from these markings there is a prayer site, which is part of a campsite. The short part of the marking

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**Fig. 5.45** Course of the caravan route along the Wadi al Jarad (large photograph, see map). The “tumulus of stone” or path marker shows where the Wadi can be crossed (small photograph at the bottom). Those tumuli of stones, set by the people to mark the route, are called alam.34 Within the same area, there is also a praying site (small photograph at the top), as a sign pointing to Mecca.
points to the north-east and shows the direction of Mecca (Fig. 5.45).

The way leads further across stony territory, the Harudj al Aswad in the eastern Jabal as Sawda (Figs. 5.47 and 5.49). This area consists of boulders of up to one metre in diameter. Between the sometimes densely, sometimes more widespread angular and often very sharp-edged rocks, there is gravel or sand. The relief in this section of the route only...
Fig. 5.47 For the caravans, it was difficult to cross the stony Harudj al Aswad

Fig. 5.48 A "grae" (pasture ground) at Harudj al Aswad

Fig. 5.49 Rocky Harudj al Aswad
Fig. 5.50 Caravan tracks at the endlessly wide, stone-strewn, water and vegetation-free plateau (see map @). This area is called al Ashhab

Fig. 5.51 Watering hole at Harudj al Aswad: as the shadows of night fell fast, the caravans used to encamp. But there was neither the time nor the mood for campfire romanticism. James Richardson reports that when a caravan passed a well, there was the greatest confusion to get all the camels to drink. The people quarrelled and fought about this, as well as for their turn to fill their gurbahs and skin bags for water^{37}
allowed the caravans to progress very slowly. Not far from the caravan route, there is a watering hole (Fig. 5.51), next to which there is a pasture (Fig. 5.48). On the overhangs of the rocky walls, the careful observer can discover rock art (Fig. 5.52), which could be evidence that this place has been a sheltering place for travellers and inhabitants of the desert since time immemorial. From here, the route continued across rocky terrain (Serir) to the nearby oasis al Fuqaha (see Al Fuqaha-Isolated Oasis in the Libyan Desert), which von Beurmann was the first European to visit after a six-day march in April 1862.

The old town, which lies in an undrained hollow surrounded by steep limestone walls, was inhabited in the mid-nineteenth century by 300–400 inhabitants, who lived on date and grain cultivation. Like most other traditional settlements in Libya, the old town was abandoned in the 1970s in favour of a modern settlement. The elders of the place report that until the early 1960s, goods were still brought in by caravan. Local traders passed by, for example, from al Fuqaha via Zillah, Maradah and Ajdabiya to Benghazi and back. Such a journey lasted around 15 days. On 15–30 camels, dates were transported to the Cyrenaican metropolis. They primarily brought back wheat and barley on their return. An older inhabitant of the oasis describes further that caravans from Murzuq also came to al Fuqaha. In this context, these caravans can be described as transnational caravans. The camels were finally replaced by cars in the course of the 1960s. In the 1970s, according to the local Libyan elders, trade was restructured by the state and the caravan trade was completely disrupted.

When leaving al Fuqaha in the direction of Tmissah, travellers were offered only an endlessly wide, stone-strewn, water and vegetation-free plateau (Serir) for the next one to one and a half day. This area is called al Ashhab. Dirt trails still cross the area today. After the descent from this high plain, which stretches over two altitude levels, there is a supply station for caravans. It is a “caravan-resting area” located there for this purpose, and its layout and facilities have a counterpart in Wadi Tabunia (see map Tripoli-Mizdah). The spot offers places for prayer, countless piles of stones used as loading stations for camels (Fig. 5.53), and a rampart made of stone behind which tents could be erected (Fig. 5.54). The satellite image (Fig. 5.54) shows the location of the caravan-resting area, which is directly next to a wadi that is called Wadi Bu Rashadah. It is said that many watering holes have been there that are, however, untraceable today. With the plants growing there, the wadi also offered sufficient grazing opportunities for the sustenance of the camels. Furthermore, barley was said to have been cultivated in this area. This underlines again the significance of
this place, which also lies one to one and a half day march away from Tmissah, the next southward oasis. The shelter was of vital importance for caravans coming from both north and south. Depending on the direction, the difficult passage across the water and vegetation-free high plateau lay before or behind the travellers. The place provided rest and supplies for the livestock.

Tmissah (Fig. 5.55) was described by von Hornemann at the end of the eighteenth century as an insignificant village. The indigenous population, which according to Beurmann numbered 300–400 inhabitants in the mid-nineteenth century, constructed their living quarters between the rubble of the older houses. The place with its derelict qser was further surrounded by a wall, which, however, provided little protection because in many places it had fallen down. Tmissah was surrounded by date forests, which provided the staple food. In contrast to the town, von Beurmann found the gardens and fields in good condition: in summer, figs, pomegranates and melons could be found in abundance. Furthermore, the inhabitants also owned large herds of sheep and goats. The situation was different in medieval times. The Arab geographer al Bakri mentions Tmissah in the eleventh century as an important commercial point with various markets (bazaars) that after 918–19 assumedly...
Fig. 5.54 Ashhab Plateau and Wadi Bu Rashadah: the images portray the situation at the ascent or descent from the Ashhab Plateau, which stretches over two altitude levels on the caravan route from Zillah to Murzuq. After the descent from this high plain—when travelling southwards—there is a supply station for caravans, a “caravan-resting place”, providing rest and supplies for the livestock. The Quickbird image...
participated in the Kanem trade. The fate of the town’s economy may have been the result of the decline of Zawilah, the nearby mediaeval political and economical heart of the Fezzan.

According to al Bakri, the traveller passed Zawilah, a historically significant landmark, two days ahead. Once the prosperous capital of the region and a flourishing caravan centre, it had then declined into a village. Zawilah was the mediaeval Islamic capital of the Fezzan and since 918–19 dominated by Hawwara Berbers, predominantly Ibadis. However, the origins of Zawilah are much older. British archaeologists suspect the establishment of the oasis settlement to have been in the late first or second centuries AD. The presence of substantial Garamantian activity in the Zawilah region is evident from the numerous cemeteries and the presence of ceramics from the first to fourth centuries AD. In contrast to previous assumptions, that means, that trans-Saharan trade and Zawilah both existed prior to Islam.

Under the suzerainty of the Banu Khattab dynasty, the town then developed both into a bustling economic centre of the trans-Saharan trade and a hub of contact between the expanding Islam and central Sudan (Fig. 5.57). It was a main point of departure for caravans going through Kuwar to the Lake Chad region via the so-called Bornu Road (see from Murzuq to al Qatrun), which was the continuation of the main north–south road coming from Tripoli. Furthermore, a subordinate trade and a pilgrim route from Cairo to Timbuktu passed through Zawilah. This east–west route reached Cairo, where it entered the Egyptian metropolis by the Bab Zawilah, the Zawilah gate. From the eighth to the twelfth century, the traders of Zawilah controlled commerce with the new political and economic centres east of Lake Chad. They were also able to dominate the roads northwards to Tripolitania and north-eastwards to Benghazi or Cairo. The trade in black slaves brought considerable prosperity to the central Saharan trade dominated by Zawilah. The demand of slaves in the new Islamic areas of North Africa, Egypt and primarily in the Middle East presented great opportunities. Thus, it is not surprising that slaves became the most important export items. Zawilah’s slave traders, many of them were Berbers of the Hawwara tribe, were famous throughout the Islamic world for the number of captives they brought from central Sudan. By the tenth century, most of the black slaves sold in Muslim countries were imported via Zawilah. Its traders established a network of strong trading links from Sudan across Fezzan to the North African coast. The Kuwar oases lay astride the Bornu Road and developed into a major hub for goods dominated by the Ibadi Berbers. They were also closely related to the Jabal Nefusah. The Berbers of the mountainous region and Kanem in turn were closely connected through the exchange of goods for a long time. Slaves were sold by local Sudanic rulers to traders from Zawilah. According to al Bakri, these traders brought them by caravan on a journey that lasted forty days from Kanem to Zawilah, from which they were further transported to their final destinations.

In the Middle Ages, the area around Zawilah was irrigated by wells and foggaras. Dates and vegetables were cultivated in large quantities. However, in the last third of the twelfth century due to al Idrisi “[the] Arabs roam the country causing as much trouble to the people [of Zawilah] as they can.” Sharaf al-Din Karakush, an Armenian mamluk, who had the support of the Arab tribes of Sulaym, occupied parts of the Fezzan in 1176–77. The term mamluk is most commonly used to refer to Muslim slave soldiers and Muslim rulers of slave origin. The quiet times were now a thing of the past. Since the Hilal and Sulaym Arabs had invaded Libya in the eleventh century, the political, economic and religious situation in the Maghreb changed constantly. The power vacuum created in the Fezzan region enabled raiders from the Sudanic state of Kanem to appear at the frontier post of the Maghreb, and by the end of the twelfth century, the Negro kings of Kanem had taken control of the Fezzan. Historically, there is much doubt about the political and commercial power Kanem wielded in Fezzan. But the representatives of the Kanimi, known as the Banu Nasr, wanted to keep the trade routes to the north.

Fig. 5.55 Abandoned old town of Tmassa
Fig. 5.56  Remains of old Taraghin, where the Kanem rulers established their capital by the end of the twelfth century

Fig. 5.57  Most important remaining landmarks at Zawilah: The tombs of the Banu Khattab (left) and the Al-Fath mosque (right)
functioning and tried to strengthen their diplomatic relationship with the Hafsids, a dynasty ruling Ifriqiya from 1229 to 1574. Their territories were stretched from the east of modern Algeria to the west of modern Libya. Ibn Khaldun mentions that Kanem maintained friendly relations with the Hafsids of Tunis. Kanem probably controlled the Fezzan through a subordinate king, whose own capital was newly established in Taraghin (Fig. 5.56), 70 km west of Zawilah.

Between 1300 and 1500, a number of political conflicts and hostilities took place in Kanem and Bornu. In the early fifteenth century, the struggle for political supremacy between Kanem and Bornu led to a reduction of the trans-Saharan trade that Zawilah still lived on. At the same time, the capital was probably reassigned to the town. The Khurman, a Fezzan group from the Wadi al Ajal, probably made Zawilah the capital of Fezzan once again for a short time. However, political and economic decline had already begun. The town definitely had lost its rank that of a capital and trading centre in the first half of the sixteenth century when the Awlad Muhammad dynasty took political power in Fezzan. Murzuq became the new capital of the country, remaining so until the twentieth century. Trade now took place there, and Murzuq became the vital caravan centre of the Fezzan and a stopping place for pilgrims from the west on their way to Mecca.

What is important to note is that much of the social hierarchy was still intact in Zawilah, even in the Ottoman period. The inhabitants still had a big social standing within Fezzan because of the sharif status of some inhabitants, which is mentioned by Hornemann. According to the German traveller, Zawilah was known as the “town of sharifs.” Many leading and wealthy men and relations of the Sultan of Fezzan were said to live in Zawilah.

The remainder of the route follows an almost continuous chain of oases into the trade metropolis of Murzuq. Von Beurmann left Murzuq in the summer of 1862 with a trade caravan to continue his journey to the African interior on the famous Bornu Road (see from Murzuq to al Qatrun).

### 5.7 Excursus

#### 5.7.1 Ibadi Berbers of Zawilah—Masters of Trade

Zawilah lay astride several caravan routes and developed into a major hub for goods, especially slaves, dominated by the Ibadi Berbers who became the masters of trade in the Fezzan region during the Middle Ages. Among others, the Arab historians al Yaqubi, al Istakri or al Bakri provide a clear insight into a bustling economic centre of the trans-Saharan trade and its inhabitants. The documents below are taken from the writings of al Yaqubi, al Istakri and an anonymous writer.

**Al Yaqubi: Kitab al buldan (889–90)**

“Beyond Waddan to the south is the town (balad) of Zawila. Its people are Muslims, all of them Ibadhiyya, and go on pilgrimage to Mecca. ... They export black slaves from among the Miriyyun, the Zaghawiyun, the Marwiyun and from other peoples of the Sudan, because they live close to Zawila, whose people capture them. I have been informed that the kings of the Sudan sell their people without any pretext or war. The skins known as al zawiyya come from Zawila. It is a land of date-palms, where sorghum (dhura) and other [grains] are sown. Various people live there from Kurasan, al Basra and al Kafa. Fifteen day’s journey beyond Zawila is a town (madina) called Kawar, inhabited by Muslims from various tribes, most of them Berbers. It is they who bring in the Sudan [slaves]. Between Zawila and the town of Kawar, and adjoining Zawila as far as the route to Ajdabiya live people called Lamta, who greatly resemble the Berbers.”

**Al Istakri: Kitab Masalik al mamalik (first half of the tenth century)**

“Zawila is on the frontier of the Maghrib, a town of middle size with an extensive district bordering on the land of Sudan. ... The black slaves who are sold in the Islamic countries are taken from among them. These slaves are not Nuba, Zanj, Habasha, or Buja. They are a race apart, deeper and purer black than all others. ... Most of those black slaves converge on Zawila.”

**Anonymous: Kitab al Istibsar fi aja ib al amsar (1191)**

“Zawila is a great and very ancient city in the desert. it is near the land of Kanim, who are the Sudan. ... It is the place of assembly for caravans and slaves are brought to it. It is the point of departure for Ifriqiya and other countries.”

### 5.7.2 Zawilah—Heart of the Medieval Fezzan

Al Bakri, who is one of the most important sources for the history of the Western Sudan, provided in his Book of routes and realms (Kitab al masalik wa l-mamalik) also a vivid account of Zawilah during one of the more crucial periods of its history. For the eleventh century, al Bakri notes that Zawilah was like the town of Ajdabiya which lies fourteen stages (this corresponds to fourteen halting places) ahead. He described Zawilah as a town without walls in the midst of the desert, which had a cathedral mosque, a bath and markets. Traders crowded the bazaars along the streets as caravans met there from all directions. From there, the ways of those setting out radiate.

By al Bakris words, Zawilah lay between the maghrib and the qibla from Atrabulus. The maghrib stands for the west, and the qibla from Tripoli is about south-east. From an agricultural perspective, palm groves could be found as well as cultivated areas which were irrigated by means of camel. However, trade was the prime concern of the inhabitants of Zawilah. From there, slaves were exported to Ifriqiya and other neighbouring regions (Fig. 5.58).
5.8 From Murzuq to Ghat

Jacqueline Passon

The map “Murzuq–Ghat” shows the southern connection of the caravan routes from Ghadamis to Ghat as well as their further course. The cross-link roads to Murzuq are also shown.

Ghat (see Ghat—A Picturesque Qsar on the Frontier between Fezzan and the Algerian Sahara), which is situated in the south-west of Fezzan, grew in the latter third of the nineteenth century to be the most important trans-shipment point for slaves. The Ottomans, who under pressure from the Europeans had banned the slave trade, did not manage to make their influence felt in this area—as opposed to in Murzuq—so that the slave trade from the African interior flourished. In Ghat today, very little of its former glory is to be seen—above all, the old town is in a particularly bad condition. As in Ghadamis, there were attempts to establish tourism in Ghat as well. The nearby Akakus Mountains and the Ghat Festival, which took place annually in December, drew people to the most south-westerly town of Libya.

There are two cross-link roads that ran between the two most important trading posts of the Fezzan, Murzuq and Ghat (Fig. 5.60). The stretch across the Wadi al Ajal (Wadi al Hayat) offered better rest and provision possibilities than the other road which ran parallel to the Wadi al Ajal, further to the south. Because of the natural conditions, watering holes can be found here at regular intervals. Furthermore, in Wadi al Ajal there is a series of settlements and desert castles that served as stopovers and to a large extent guaranteed safety for the caravans. However, there was a tragic accident on the southern route in the nineteenth century. Travelling women from Europe were, at that time, an exception in the desert. But Alexandrine Tinée was one of them. The intrepid Dutch woman wanted to be the first European woman to cross the Sahara. She had already reached Murzuq in 1868, where she met with the German doctor and explorer Gustav Nachtigal, who provided her with important contacts for the authorities and the Tuareg. The negotiations with the Tuareg lasted for half a year, before they made nine protection guards available for the expedition. Tinée, in making her way to Ghat, followed in the footsteps of Barth. After Barth had left Murzuq in 1850, he went to the oasis of Tasawah.
and then to the ancient city of Sharba (see Sharba—Disappeared Under the Sand of the Sahara) where he continued on his way to Ghat across the Wadi Barjuj (Fig. 5.59). The caravan road led further across different wadis. The traveller passed among others the Wadi Mathendous and the Wadi In Habeter, the middle course of Wadi Mathendous. This wadi is one of the main dry river beds on the southern edge of the Masak Plateau. It defines a wide area which includes the Wadi In Habeter and tributaries as the Wadi Telsaren. The valley and its tributaries are famous for their thousands of prehistoric rock art engravings along with numerous figures of more modern periods as horses and camels. Beds of dried rivers and water holes (Fig. 5.63) offered necessary possibilities to supply man and cattle. A number of landmarks bear witness to the human presence in this part of the caravan world. That includes caravan trails in Tajamoah Attorok (Fig. 5.61) that wind through the scenery like a motorway or various burial places that can be found in Wadi Telsaren (Fig. 5.62).

Tinné was probably taking the same path as Barth. But just a few days after she had set off, there was a tragic occurrence. After the travelling party had gotten involved in a quarrel, which Tinné sought to reconcile, she received a blow of a sword to the shoulder, broke down, was robbed of all her clothes and possessions and bled to death in the desert. Since then, there has been much speculation about the background to this event: while Nachtigal cited greed as the sole motive for the attack, other travellers see the cause as having originated in tribal disputes. The reputation of the Tuareg leader Ikhenukhken is said to have been severely affected. Younger tribal leaders vied for power. The German historians Gootlob Adolph Krause and Erwin von Bary infer from this that the female explorer and her European companions were victims of political intrigue. The attack on the expedition was rumoured to have been planned in order to demonstrate that Ikhenukhken was no longer in a position to safely lead his wards through the territory of the Adjer Tuareg. Whatever the reason for this attack was, it is clear that travelling involved enormous risks at that time. Of the 200 travellers during the period between 1820 and 1870, 165 died because of illness or murder.

The area between Murzuq and Ghat has already been settled for a long time. Testament to this is the thousands of rock drawings. The Masak Mastafet offers a unique universe of rock drawings, which first achieved scientific renown through Barth in 1850. As one of the first authors, he attested, at a time when research on prehistoric and early history was still in its infancy, to a very old age for the rock drawings and identified them as a historic resource and witness to the early ways of life of the inhabitants of the Sahara. He also saw in the rock drawings evidence of the climate change in the Sahara region during the last millennia. The rock drawings of Masak Mastafet were included in the list of UNESCO World Heritage Sites in 1985 (Figs. 5.64, 5.65 and 5.66).

The earliest drawings are commonly dated to the Late Palaeolithic Age with its large wild savannah fauna and to the

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**Fig. 5.59** Caravan Route in Wadi Barjuj. The pilgrimage route followed the Wadi Barjuj too. The photographs on the right hand show the Akakus mountains.
Neolithic cattle herdsman culture. Today, it is assumed that the oldest drawings can be traced back to hunters and gatherers, who settled here in the early Neolithic Age. The rock drawings were drawn on to overhangs, in caves (Fig. 5.64) or on other surfaces that were protected from rainfall and sandstorms. The sites of the rock drawings are living spaces or cult sites. The drawings relate to the details of the lives of their creators, such as hunting experiences or camp life. The value of the rock...
drawings lies chiefly in the fact that, apart from the remaining settlement artefacts, they are the only evidence of the way of life of the people in this period. They tell of abilities, organisation and the societal relationships. They also provide clues as to climatic changes. Around 10,000 BC, the climatic and ecological conditions in this area improved again to the extent that from all sides, people could penetrate into the interior of the Sahara. Today, it is assumed that during the Holocene, there were extended pluvial periods. Related to this, the vegetation must have been thicker; furthermore, animals must have made their homes here, which then soon disappeared. The early rock drawings show large animals such as the wild buffalo (*Bubalus antiquus*). Around 7000 BC, there was a great cultural movement in the Sahara, which was dubbed the “herding phase” and relates to the onset of an arid phase. During this time, cattle raising was dominant. It is estimated that the period of “herding art” lasted more than 3000 years.

Towards the end of the second century BC, people of Mediterranean origin with horses and chariots moved from the Libyan Mediterranean coast towards the central Sahara. They expelled the Negroid population who had settled there. The Garamantes, who were first described as such by Herodotus in the fifth century BC, are also referred to by rock drawings, which show horses and chariots. For the Garamantes, who built sophisticated irrigation systems, the Wadi al Ajal, with the capital of Garama (Jarmah), the remains of which can still be visited today (Fig. 5.67), became a political and economic centre. They were described as farmers and cattle raisers, but were known as traders, too. As such, they controlled the trade routes between the Mediterranean and the sub-Saharan districts of Africa.

The last phase of the rock drawing art, which in some areas lasts until today, marked the so-called camel phase. This art is commonly associated with the Tuareg.
Fig. 5.62  Old grave in Wadi Telsaren (Masak Mastafet)

Fig. 5.63  Water hole et al. Giltha (Masak Mastafet)
drawings are testament to the activity of people in an extremely arid living environment.\textsuperscript{57}

The route along the Wadi al Ajal is also lined with the so-called *qsur* (desert castles) whose structures are built with walls and towers. Similar to the constructions along the Zawilah–Murzuq–Barjuj depression and along the Bornu Road in the area between al Qatrun and Tajarihi, the conception and the facilities are reminiscent of antique limes period forts.

More information on history and architecture of these desert castles is given in the following chapter (see *From Murzuq to al Qatrun*).
Fig. 5.66 Malika (Queen)—rock drawing in Wadi In Habeter (Masak Mastafet/see map 9)

Fig. 5.67 Remains of Garama (Jarmah), the ancient capital of the lost civilisation of the Garamantes
5.9 Excursus

5.9.1 The Garamantes of Garama—Early Masters of Trade

The Garamantes were Saharan people, who founded a prosperous kingdom in the Fezzan area of modern-day Libya. They were a local power in the Sahara between 500 BC and 700 AD. The British archaeologist David Mattingly argues that the Garamantes are not just a vanished civilisation. In his opinion, they are a much maligned, misunderstood African people. To strengthen their own sense of importance, the Romans depicted other people as barbarians. It is not uncommon that ancient writers depicted the Garamantes as barbarians who threatened the Mediterranean world from their desert strongholds. The first-century AD Roman historian Tacitus, for instance, described them as an “ungovernable tribe ... always engaged in practicing brigandage on their neighbours”. Herodotus, writing in the fifth pre-Christian century, had a different picture of the Garamantes in mind. He records they were “a very great nation” who herded cattle, farmed dates and hunted the “Ethiopian Troglodytes” or “cave dwellers” who lived in the desert, from four-horse chariots. According to Pliny the Elder, the Romans seem to have grown weary of Garamantian raiding. In 19 BC Lucius Cornelius Balbus marched against the Saharan people and captured 15 of their settlements. The Garamantes, who used an elaborate underground irrigation system, controlled chains of wadis and oases on the desert caravan routes in Fezzan. Much of their wealth came from the control of the caravan trade. They brought the products of Saharan and sub-Saharan Africa to the Roman cities of the Mediterranean —salt, gold, semi-precious stones, ivory, wild animals for the arena and natron (a naturally occurring alkali used in embalming and glassmaking).

5.9.2 Garama—Heart of Ancient Fezzan

Archaeologists excavated parts of the Garamantes’ capital Garama (Jarmah), about 150 km west of modern-day Sabha. The ruins have been found beneath a medieval caravan city. Current research indicates that the Garamantes had a large
number of other settlements. Four thousand people may have lived in Garama itself, with another 6000 in suburban satellite villages close by, and perhaps as many as 50,000 in the Wadi al Ajal area. The full extent of the Garamantian territory is still unclear. Scientists believe that Garama and the Wadi al Ajal were at the centre of a wider Garamantian Empire.

The Garamantes were farmers and merchants. Their diet consisted of grapes, figs, barley and wheat. They traded wheat, salt and slaves in exchange for imported wine and olive oil, oil lamps and Roman tableware. According to the Roman historians Strabo and Pliny, the Garamantes quarried amazonite in the Tibesti Mountains.63

In 2011, more than 100 fortified farms and villages with castle-like structures and several towns were discovered by British archaeologists, most of them dating back to the years between AD 1 and 500. These “lost cities” were built by the Garamantes, whose lifestyle and culture were far more advanced and historically significant than the ancient sources suggested.64 The British archaeologist Mattingly states: “In fact, they were highly civilised, living in large-scale fortified settlements, predominantly as oasis farmers. It was an organised state with towns and villages, a written language and state of the art technologies. The Garamantes were pioneers in establishing oases and opening up Trans-Saharan trade” (Fig. 5.68).65

5.10 From Murzuq to al Qatrun

Jacqueline Passon

The map “Murzuq–al Qatrun” shows the route of the famous Bornu Road, which led from Murzuq into the African interior. In the map excerpt, the southern continuation of the caravan routes from Tripoli to Murzuq is also shown, as well as a part of the course of the trade route from Zillah to Murzuq and the pilgrimage road from Cairo to Timbuktu.

Fig. 5.69 A modern caravan from Nigeria heading north to Funqul, Libya
Murzuq served as a hub of the caravan trade in the Fezzan since the first half of the sixteenth century. In particular, the slave trade flourished here until the late nineteenth century. Thousands of caravans must have come through the oasis during the course of history. So it is no surprise that even today there is evidence of numerous one-lane paths in the immediate surroundings. A few kilometres to the south-east of the town, one will find such tracks: in the satellite image...
a series of paths can be recognised, which may be identified on-site as the tracks of caravans. The tracks are part of the connecting route that led from Murzuq to al Qatrun. Due to the more adverse natural conditions in this section, the route went across the north-eastern extension of the dune landscape Idhan Murzuq, a dune landscape which is part of

**Fig. 5.71** Kuka, the nineteenth-century capital of Bornu, was an important market. The residence of the sultan as seen by Barth (1977, 205)

**Fig. 5.72** Traces along the Bornu Road
Fig. 5.73 Bornu Road: The Quickbird image from July 2004 covers a small part of the connection route between Libya and Bornu in the South. The so-called Bornu Road (see map ①) is known to be one of the most important and most famous caravan routes in the past. The section taken in the image is located between Majdul and Tajahri. It shows a variety of one-lane camel tracks running alongside one another where the photograph at the bottom depicts a subset of those traces in the sand. An early photograph of a caravan from an unknown author may help to imagine how a caravan might have looked like when crossing a similar terrain.

**Data Sources**

Quickbird (2004, ©) Digital Globe Inc.
Archive CLAR-HS
Own Photographs

**Location Indicators**

- Extent Indicator
- Currently used pistes
- Camel tracks along the currently used pistes
- Rock Outlier
- Numbers indicate locations on the maps
Fig. 5.74 South of Murzuq: The Quickbird satellite image from April 2006 shows a number of tracks in the south-east of Murzuq. On-site, those paths can be identified as caravan tracks (see map). Since the sixteenth-century Murzuq had become the most important trading centre within the Fezzan
the greater Sahara desert region. However, this part would have been difficult to traverse by the caravans.

The littoral region of North Africa was linked with the different sub-Saharan territories, known as the Sudan, by a network of caravan routes. The shortest route ran from Tripoli to the Jabal Nefusah via the Fezzan oases into the Chad Basin. This ancient and highly frequented route was called the Bornu Road (Fig. 5.72). Ancient tradition leaves no doubt that this route had been in use since Roman times (and doubtless even earlier), it continued to be used probably by the Byzantines and Muslims. Since Zawilah had lost its rank as a trading centre, the route started off in Murzuq and led first along an almost continuous strip of oases in an easterly direction as far as Umm al Aranib. About 10 kilometres to the east of the town, the path forked to the south. On the way to Majdul, the caravans had to overcome the eastern extension of the dune landscape Idhan Murzuq. To the south of Majdul traces of this famous road can be encountered. The satellite image shows a large number of one-lane paths running alongside one another. They appear to be very impressive in the area and can be interpreted as caravan trails (Fig. 5.73). The way further into the African interior continued via a chain of wells, desert castles (Figs. 5.78 and 5.79) and the oases al Qatrun, Bachi, Madrusah and Tajari.

The rise of several Western Sudanese kingdoms, like Songhay or Kanem in the period between the ninth and eleventh centuries, is connected with an increased scale in trade activities. A consequence of this development was a dense network of connections between the Mediterranean world and the Sudan by the end of the eleventh century. Although communications had been disrupted by the Muslim invasions of North Africa in the seventh century, it was not long before that the Berbers continued their traditional trading activities. Traffic along the Bornu Road continued then over the centuries. Until the end of the medieval period, trade was under the control of the Kanem Empire and then switched to the Bornu Empire, of which Kanem became a province. The new power of Western Sudan continued its trading contacts via the Kuwar–Fezzan route. It had been in touch with the different occupiers of Tripoli between 1475
and 1530. After the invasion of the Ottoman Turks in 1551, the contacts continued as they had before. According to several diplomatic documents, the Bornu trade continued in the seventeenth, eighteenth and nineteenth centuries under the rule of the Karamanlis (1711–1833) and during the second Ottoman period in Tripoli (1833–1911). It seems that until the early 1820s, this route was the most active of all. The British explorers Dixon Denham and Hugh Clapperton found Kuka (Fig. 5.71), the new capital of Bornu, in 1823 in a state of prosperity. In various parts of Kuka, which was inhabited by probably about 60,000 people during its heyday, daily markets were held. The main market took place on Mondays outside the westernmost gate. Among the goods offered for sale were livestock, cloth and clothing of all kinds, foodstuffs, cooking and eating utensils, leather goods, basketware, carpentry and metalwork, weapons, even boats, firewood, fodder, charcoal, building materials, rope and other commodities. Slaves formed an important element in market transactions. Special slaves, such as eunuchs, dwarfs, deaf mutes and concubines, were generally sold privately, as were the best-quality horses, and not on the open market. As already pointed out, since the eighth century, the most commonly traded goods were slaves. Lyon estimates for the transit trade through Murzuq in 1819 that 5000–5500 slaves passed through on the route from Bornu. Denham and Clapperton give a strong insight into what it meant to travel along the Bornu Road: “The horrid consequences of the slave trade were strongly brought to our mind; and, although its horrors are not equal to those of the European trade, still they are sufficient to call up every sympathy, and rouse up every spark of humanity. They are dragged over deserts, water often fails, and provisions scarcely provided for the long and dreary journey. The Moors [The term “Moors” has been used in Europe in a broader sense to refer to anyone of Arab or African descent.] ascribe the numbers to the cruelty of the Tibbo traders: there is, perhaps, too much truth in the accusation. Every few miles a skeleton was seen through the whole day; some were partially covered with sand, others with only a small mound, formed by the wind: one hand often lay under the head, and frequently both, as if in the act of compressing the head. The skin and membranous substance all shrivel up, and dry, from the state of the air: the thick muscular and internal parts only decay.”

When wars raged among the empires of Bornu and Wadai, many merchants were caused to shift their operations to other
routes across the Sahara. As a result, part of the traffic along the Bornu Road was diverted into the Wadai–Kufra–Benghazi route. Trade flowed also along the route between Kano and Ghadamis. Continued raids during the 1850s rendered the Bornu–Fezzan–Tripoli route increasingly unsafe. Shortly beforehand, in 1849, 1600 slaves were transported along this route. Finally, the route was completely blocked between April 1851 and June 1852. Despite greater dangers from insecure political conditions between Bornu and Murzuq, the caravan traffic revived, but could not maintain the former level. Consequently, the volume of northbound exports from Bornu by the 1860s may have been only about one-third of that during the peak periods in the first half of the century. According to Rohlfs and Nachtigal, 5000 to 8000 slaves had formerly passed through Fezzan each year, but by 1869 the trade had been cut to one-third of this figure. The large trade caravans, which could comprise from 1000 up to 2000 camels or even more, did not stop directly at the oases. Al Qatrun (see Al Qatrun-A Pearl in the Midst of Sand), which was surrounded by sand hills, and mounds of earth covered with a small tree, called athel as reported by Denham and Clapperton, accommodated about 1500 inhabitants in the nineteenth century. It was once significant as a caravan stopover point on the famous Bornu Road. The caravans stopped at wells that were about 20 km away from the oasis. To the north and to the south of al Qatrun, still today two wells (Fig. 5.75) can be identified that are each about 20 km away from the oasis. The merchandise, which the merchants were convinced they could offload, was brought to the market inside the oasis. It was mostly textiles and paper that came from Tripoli by caravan. Leather and wooden bowls were transported from the south. Interior caravans came to al Qatrun also until the 1950s. Usually in the twentieth century, cereals from the north of the country were exchanged for dates. Money was used as a method of payment only by the wealthy people in the area.

As well as the caravan trade the property relationships at the oasis were organised too. As documents from the
nineteenth century attest, the land of the palm groves, that was grouped around the oasis, belonged to a number of families. However, it could occur that a family other than the landowner owned the trees that were standing on it (see Traders, Nomads and Slaves: Al Qatrun—Trading Post on the Bornu Route). The fields that the inhabitants of al Qatrun, the so-called Qatruni, planted with barley, vegetables and forage plants were to be found in the wider surroundings of the oasis. For this reason, from February to the beginning of the summer, the men lived outside of town and only returned with the harvest.73

For a long time, al Qatrun resisted against a takeover by other powers. It was only in the nineteenth century that the Ottomans managed to penetrate into this region. The Ottoman governor lived in a fort located in the old town. At the beginning of the 1930s, the Italians invaded the oasis and changed the existing settlement patterns. The old town, which incorporated 180 houses, was partially cleared away and used as a quarry in order to build the Italian castle which today is still located on one of the town’s hills. Finally, the medina was left behind in 1977 by the inhabitants in favour of convenient houses. However, they intended to maintain their oasis. With loving care they built a museum that presents written documents from the eighteenth and nineteenth centuries. The pieces of writing, that are displayed in the museum, provide local literature related to daily life. For example, some documents show guidelines for the decision of land or inheritance or the movements of constellations. Others provide information about traditional medicine. They describe curative medical knowledge passed down from generation to generation (Fig. 5.80) (see Traders, Nomads and Slaves: Al Qatrun—Trading Post on the Bornu Route) or suggest what one should eat on particular days.74 The old town also accommodates an exhibition of objects for daily use that have been produced and used in al Qatrun. The objects are made primarily from palm branches and leather (Figs. 5.76 and 5.77). There are also pots and bowls. All the traditional products were manufactured by the women of al Qatrun.
Qatrun. Before the revolution, it was hoped that al Qatrun may participate in the upcoming tourism industry in Libya. Thus, the Italian castle had already been adapted for tourism purposes by a private initiative.

As in all of the Fezzan oases, it was for a long time sufficient to supply water from the flatly stored groundwater horizons from depths of up to 80 m with the help of various traditional techniques such as lever wells and drawing wells. As a result of population growth in more recent times, motor pumps have replaced the old techniques. Today, the groundwater on the water-carrying layers is not formed quickly enough anymore or is completely used up, which makes it necessary to dig a deep well of a depth of up to 400 m. The inhabitants of the desert complain that in the past 15 years it has become increasingly difficult to obtain water.

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Similar to the Wadi al Ajal (see From Murzuq to Ghat), the so-called qsur (desert castles; singular qser), fortresses built from clay bricks, lie not only the way from al Qatrun to Tajarhi (Figs. 5.78 and 5.79), but can be also found along the Zawilah-Murzuq-Barjuj depression. The conception and the facilities are reminiscent of antique limes period forts. Facilities of a similar conception are known of in Egypt and the Near East (Fig. 5.80).
Fig. 5.81 Murzuq: The Quickbird image from April 2006 shows the remains of an Islamic fortified village ©, which is situated on the edge of a salina, and two desert castles ©, ©. The remains are located in the south-east of Murzuq (see map ©).
The earliest examples in the Fezzan date back to the Garamantian time, while others date from the Middle Ages or the Ottoman/Karamanli era. Systematic analysis conducted by the British archaeologists Mattingly and Sterry and their team has revealed the standing remains of hundreds of qsur, settlements, cemeteries and field systems along the Zawilah-Murzuq-Barjuj depression that date from the Garamantian to the early modern period. Imported Roman ceramics from the first few centuries AD were found on many of the sites.77

Along with the qsur, two nucleated Islamic fortified villages (medina) with citadels (qasbah) and mosques were identified south of Murzuq. One example can be seen in the Quickbird image (Fig. 5.81). The medina, which employs a mud brick construction (using salt-enriched mud lumps), is located adjacent to a dried-up lake (salina). According to the British archaeologists, it seems to date back to the sixteenth or seventeenth century and can be associated with the Banu Khurman and later on with the expansion of the Awlad Muhammad dynasty (see below), who tried to control Saharan trade in this area from the mid-sixteenth to the end of the eighteenth centuries. Two desert castles, which are situated north-west of the fortified village, can be detected in the Quickbird image, too (Fig. 5.81). The qser listed as 2 was dated to the early fourteenth or fifteenth century. For the other desert castle 2 there is no date as to how old this site is. The vast majority of the desert castles, situated in the Murzuq area, date to the late Garamantian period. It appears likely that the qser 2 seems to be constructed in a similar period to that of the medina nearby and it appears to have been in use to at least the Ottoman period. In addition, a Garamantian origin cannot be ruled out due to the presence of imported Roman ceramic. Once established as an architectural form, these castles had a long lifespan. The British archaeologists argue that the location of these Islamic fortified villages on the edges of salinas and away from the field systems of the Garamantian qsur is evidence, that by this point many earlier settlements and agricultural infrastructure had fallen into disuse.78

The castles (qsur) had already been noted by Leo Africanus in the sixteenth century, who commented on this “region, with great store of castles (...) inhabited by rich people”. He did not explain the function of these castles. For the moment, it appears that many of the desert castles seem to date back to Garamantian time. Later on, they were still in use. As suggested by Ayyub, the caravans paid passage tolls, for instance, at the numerous castles standing in the outskirts of Murzuq, in the district called Umm al-Hamam. The Libyan historian Ayyub also notes “according to current tradition, these castles were the property of the Banu Khurman”.79 When the domination of Fezzan by the Kaninimi kingdom ended, the sources mention a period of rule by the Banu Khurman. This was a dynasty who controlled parts of the Wadi al Ajal and the Murzuq region from around 1500 to 1550. Mattingly identified them as the descendants of the Garamantes, who had their principle centre at Jarmah. During a short period of time, they established their capital once again in Zawilah (see From Zillah to Murzuq). However, their attempt to consolidate their rule could have been marked by the construction of new fortified villages.80 Ayyub also noticed that the desert castles were constantly at loggerheads with each other. “The acumen of Muhammad al-Fasi [founder of the Awlad Muhammad] led him to use his goods and the armed guards of his caravan to help one of the Khurman amirs against another, until he made away with all of them in the district and ruled over it himself. He erected a new castle for himself at Murzuq (...). Then he extended his rule to Jarma, and united the entire Fezzan under his banner, setting himself up as Sultan of the Fezzan about 1550”. With the establishment of the new Awlad Muhammad dynasty at Murzuq, trade, the pilgrim traffic and the slave trade revived and expanded as never before.81

Along the route between al Qatrun and Tajarih, which is part of the so-called Bornu Road, desert castles line the way to the south. Thus far, the lead archaeologist has recorded 27 desert castles in the immediate vicinity of al Qatrun alone.

What becomes evident after even a brief initial field survey is that the desert castles are situated at transnational caravan routes and water sources; they show spatial relationships. The castles were built within sight of each other, which suggest a strategic placement of the qsur. In an arid landscape, water means power and to control water is to control movement on the landscape. The caravans stopped at oases or meeting points to take on water and food. However, they also seem to have stopped at the numerous desert castles to take on water and food and to pay tolls.

There are many unanswered questions, but what emerges from the archaeological evidence is that on the one hand, the history of the Garamantes has to be rewritten, and this ancient people will probably have a more prominent place in the history of Libya.82 On the other hand, it becomes evident that trans-Saharan trade and many of the oases settlements in Fezzan existed prior to Islam. Yet, there is much to suggest that intercontinental long-distance trade on these trans-Saharan trade routes went on from the fifth century BC until the end of the nineteenth century—with interruptions at different times. The qsur were carefully situated at water sources and in the landscape to monitor important trade routes.

Investigations of the contemporary and cultural environment are necessary in order to make more definitive statements.
5.11 From Benghazi to al Kufra via Jalu

Meike Meerpohl

The map “Benghazi-Jalu” and “Kufra Oases” show parts of the Eastern connection of the caravan routes from Benghazi to al Kufra as well as their further course to the south. The cross-link roads to Jalu are also shown.

Trade links between Wadai and Benghazi started at the beginning of the nineteenth century. Wadai was founded in the seventeenth century as a sultanate by Abd al-Karim ibn Djame. The Wadai sultan controlled a vast area but was positioned between the two more powerful kingdoms of Darfur and Kanem-Bornu, located east and west of Wadai, respectively. Through flourishing economic ties with the exchange of slaves, ivory, ostrich feathers and gold against goods like sugar, clothes, tea and weapons, the Wadai neighbours had gained influence and wealth and were able to expand their power and dominate trade in the wider region. Hence, the Wadai sultan Abdel Karim Sabun ibn Saleh (sultan from 1803 to 1813) tried to establish trade links with the north in order to compete with the neighbouring kingdoms. In 1809/1810, a trader called Schehaymah from the tribe of the Majabra who inhabited the oasis of Jalu, succeeded in finding a route to Warra, the capital of the Wadai, where he encountered the sultan, who was very interested in establishing new trade ties to the north. The contact between the sultan and the Majabra trader led to the formation of trade links between Wadai and Benghazi. Up to this time, trade between sub-Saharan regions and the Mediterranean Sea was carried out by gallaba, traders hailing from the Nile, who conducted trade mainly on the routes between Kuka, west of Lake Chad and Tripoli, between Kuka, Fezzan and Benghazi and between Benghazi, Murzuq and Warra. Wadai therefore only had indirect trade links to the north until this time. After trade agreements were reached between the northern trader and the sultan of Wadai, members of the Bideyat were appointed as leaders of the first caravans, because the trade route mainly led through their homeland. Later, many Majabra guides led various caravans through the desert. Between 1820 and 1835, several ethnic conflicts caused numerous trade interruptions, since raids on caravans were profitable (Figs. 5.82 and 5.83).

In 1835, the Wadai sultan Mohammed al-Sharif ibn Sabun went on pilgrimage to Mecca. There he met Mohammed ibn al-Sanuss, who later founded the brotherhood of the Sanussiya. This contact was of great importance for the trade links between Wadai and the Mediterranean region during the following years. From 1836, trans-Saharan trade re-emerged, and every two to three years, a caravan with about 200–300 camel loads of ivory, skins and slaves reached the port of Benghazi. Due to internal conflicts in the Wadai Sultanate, however, the revived trade links were again disrupted by raids on caravans. North of Wadai, the Zuwaya, who had occupied al Kufra since 1840, also raided caravans frequently and the Awlad Sulayman, a nomadic tribe from the Fezzan, disrupted trade activities on the southern parts of this route from time to time as well.

Fig. 5.82 A camel caravan on the way to al Kufrah. At the end of the day, hay is distributed among the camels. Where there is no pastureland, the camels need to be supplied by the herdsmen
In 1858, the Wadai sultan Mohammed al-Sharif died and his son Ali Mohammed was appointed to be the new sultan. During his rule, the Benghazi–Wadai route was revived as an important trade route, because the sultan invited several foreign traders to carry on trade in his country. His marriage to a *gallaba* woman strengthened his relations to influential *gallaba* traders. The security on the routes improved after the raids by the Tubu and Awlad Sulayman decreased.
Between 1893 and 1894, seventeen caravans left Benghazi heading to Wadai.

On the way from Benghazi to Wadai, caravans always rested in al Kufra for some weeks to one month to refill their water and food supplies or to change camels and guides in the oasis. Some of the traders exchanged their commodities in al Kufra and returned straightway to Benghazi. The Zuwaya in al Kufra became agents of the trans-regional trade, their camels and their expertise enabled them to control the profitable economy. The Majabra from Jalu and the Zuwaya from al Kufra controlled the routes in the second half of the nineteenth century. As guides, they led many caravans to Wadai, worked as carriers and rented their camels to merchants. From al Kufra, the caravans took about 40–70 days for the way to reach Warra or Nimro, the economic centre of the Wadaian capital north of Warra, which was later moved to Abeche. Caravans took a route from Benghazi to al Kufra via the oases of Jalu and Zighan. They took a route via Bishara, Sarra, Tekro, Ounianga Kebir, the Bedadi-Bideyat well, Funun, Wayta Serir, Wayta Kebir, Um Chaluba, Arada to Abeche. After arrival in Abéché, the sultan received the travelling vendors first so as to offer them his commodities before they were allowed to negotiate with other merchants from the south. Goods from Wadai were usually sold at northern ports for the fourfold value. The goods which were traded on the trans-Saharan trade route between Wadai and Benghazi were similar to the commodities of other routes. The imports primarily comprised weapons, ammunition, cotton, Muslim clothes, silk, sugar loaves, tea, coffee, drugs, spices, perfume, jewellery and pearls. Exports from Wadai primarily consisted of slaves, ivory, ostrich feathers, pepper and animal skin. Ivory was a coveted item in the nineteenth century, and ostrich feathers became increasingly popular after they were discovered as a prestige object among the female population in Europe after 1870. However, the largest trading volume of exports was the slave trade. From 1890 onwards, the route from Kanem-Bornu to Tripoli, west of the Wadai–Benghazi route, started to become less important. Also, to the east, in Sudan, al-Mahdi closed the darb al-arbain from Darfur to Asyut in 1885, and trade was diverted to the Wadai–Benghazi route, which became the most important route of the region at the end of the nineteenth century. This region was far away from seaports, so that camels were still the cheapest means of transportation.

The participation of the Zuwaya in the trade business and the increasing importance of the trade route at the end of the nineteenth century were closely linked to the brotherhood of the Sanussiya, who had settled in this region and who had reached their climax of power during that time. The founder of the Sanussiya was Mohammed al-Sanussi al-Khattabi al-Hasani, later also called “Grand Sanussi” (al-Kebir). He was born in the region of Mostaganem in Algeria about 1787 and went on pilgrimage to Mecca at a young age. In Mecca, he met Ahmad Ben Idris, who became his teacher, a strong relationship was the result. Mohammed al-Sanussi left Mecca after Idris’ death and came to the Cyrenaica, where he founded his brotherhood in 1843. He established the first centre of his new order in al-Baida. In 1856, he moved to the centre to Jaghbub. Jaghbub was located along the pilgrims’ route to Mecca and was therefore an important religious centre for pilgrims at that time. From there, the Grand Sanussi was able to spread his influence and to pacify the quarrelling groups. The Sanussi doctrine was an Islamic reform movement, modelled after the glorified period of Mohammed and designed to reform Islamic religious doctrine. After the end of the Ottoman rule in 1911, the Sanussi brotherhood became the dominating religious confraternity in Libya. Due to the fact that the nomadic groups, which controlled the trade routes in the Cyrenaica, were affiliated with the brotherhood, the leaders of the Sanussiya were able to enter into trade. Because the Grand Sanussi as a student met the Wadai Prince Mohammed al-Sherif in Mecca, who had been appointed the sultan of Wadai in 1838, the relation to Wadai was close. The contacts between them revived because they shared the same religious belief. In order to strengthen their trade links, Sayyid Mohammed al-Mahdi moved his religious centre from Jaghbub to al Kufra in 1895. Al Kufra was strategically better located on the caravan route between Benghazi and Wadai, because trade was difficult to control from Jaghbub (Fig. 5.84). Before al Kufra became the centre of the Sanussiya, it was just a remote watering place that was visited by caravans on their way through the desert. With the institution of the Sanussiya, al Kufra became an important trading centre, where traders exchanged different goods and where several trade routes crossed. In order to facilitate travelling from al Kufra to the south, the Sanussi built wells in Sarra and in Bishara in 1898 to shorten the waterless treks for caravans. In 1902, the Sanussiya reached the climax of their influence, having established 147 zawiya. Zawiyas were religious centres installed as focal points for the converted members to join the Muslim fraternity and to spread religious ideas throughout the region of Cyrenaica and beyond. The different zawiya had been strategically established at crossroads and along the trade route to Wadai in order to serve as trade centres. For traders, it was advisable to affiliate with the Sanussiya to use their services, because they were as a result released from paying tolls and gave tea, sugar, soap, candles or fabrics in return for their defence and protection and the hospitality in a zawiya.

The brotherhood of the Sanussiya made an important contribution to the continuance of the trans-Saharan trade routes and to the security on the routes. With the spreading of Sanussiya’s doctrine, it was possible to solve problems
between different groups as well as to enable trade activities between them. The affiliation of the different groups into a brotherhood simplified trade activities. The Sanussiya further transported commodities between north and south. They built trust between traders and agents. Groups of traders as well as retail dealers used the route between Wadai and the northern regions and made use of the brotherhood’s current information regarding supply and demand. The
Sanussiya offered rules for loan systems, networks and business relations. The established zawiyas along the route were linked through postal systems in the late nineteenth century and enabled the flow of information and guaranteed the exchange of goods. Many traders also filled trade orders from the Sanussi and brought ivory, ostrich feathers and slaves back from Wadai, which were exchanged for other goods in Benghazi or Cairo. To sustain the relations with Wadai, the Sanussi sent the sultan different gifts, including fabrics, tea and sugar from the north. From that time onwards, the various sultans of Wadai also sent caravans to the Sanussi leaders. Even when the Sanussiya did not control the region of Wadai, they were very influential there.

From 1897, Mohammed al-Sunni was a representative of the Sanussi alongside the sultan in Abeche, who was installed to monitor trade and who was a Wadai political consultant. With the help of the Wadai sultan, the Sanussi representative tried to unite the Libyan traders in Abeche against foreign intruders. He further appointed the sultan in Wadai as head of the brotherhood (Fig. 5.85).

In order to improve their organisation and their control over the different groups and to counteract the French, who had started to invade southern regions, the Sanussi moved their religious centre further to the south, to Gouro (or Qiru, Quru, Gouro), located east of the Tibesti in 1899. However, al Kufra remained the main trade centre of the Trans-Saharan route. At al Kufra’s market, traders bargained on different commodities. In 1907, in the port of Benghazi, about 240,000 lb in import goods and about 304,000 lb in export goods were traded. Goods from southern regions covered about one-fifth to one-third of this trading volume.

Trans-Saharan trade between Wadai Sultanate and the Mediterranean coast had been very profitable for many years due to the extensive slave trade and the wide-ranging exchange of commodities. This changed in 1909 when the French took over Wadai and when the Italians extended their

Fig. 5.85 Once a remote watering place, al Kufra became the centre of the Sanussiya brotherhood. Today it is a modern settlement, where desert is made into fertile ground. Until 2011 a large demand for camel meat in Libya formed a stable foundation for new trade links.
invasion of Libya between 1912 and 1914. After the French had started to invade Wadai, the Sanussi leader redirected his trade route to al Fasher and to Khartoum.\textsuperscript{116} However, the era for caravans related to the Sanussiya and to the sultans of Wadai was over once the French occupied and finally controlled Wadai at the beginning of the twentieth century, and once the Italians invaded Libya and the Sanussiya reacted to Italy’s encroachment.\textsuperscript{117} This stopped all traffic on the trade route between Wadai and the Sanussi. In the following years, the colonial powers outlawed the slave trade, defeated and subjected the different ethnic groups, destroyed their traditional structures, drew borders and transformed the different autonomous sultanates into nation states. Years of instability followed that resulted in civil and tribal conflicts within the countries and between the states. Some of the tensions and hostilities exist to this day. The end of the trans-Saharan Wadai–Benghazi route was also signalled by a drought in Wadai between 1912 and 1914, which caused far-reaching migration from that region. That in return resulted in trade business becoming only locally focused.

With the establishment of Fort-Lamy (present-day Ndjamena) as the Chadian national capital by the French colonial power in 1900, the eastern economic centre lost its importance.\textsuperscript{118} In the west, trade fell into the hands of the colonial power, and in the north, Libyan traders established trade links between the oases of al Kufra and Faya, while local groups were unable to participate in trade interactions. When Chad gained its independence in 1960, many of the Libyan traders left the northern regions of Chad\textsuperscript{119} until the 1970s, when the commercial relations between the two countries broke down.\textsuperscript{120} The Chadian civil war (1966–1978) and the Chadian–Libyan war (1978–1987) cut off all trade links, and conflicts, wars, crises and instability in the region made commerce between Chad and Libya impossible for many years.

Only in the 1990s, trade links between Libya and Chad re-emerged, mainly between al Kufra and the sub-Saharan zones of Chad.\textsuperscript{121} As a result of adaptation to climate changes and ecological pressures, the semi-nomadic Zaghawa pastoralists managed to diversify their economic activities by entering the trade business and making use of family networks that resulted from broad migration across the region. The Zaghawa used remittances from migrated family members to restock their herds with camels. Consequently, a large camel population, a new focus on trade and a large demand for camel meat in Libya formed a stable foundation for new trade links. Additional technical innovations in the trans-Saharan endeavour, such as trucks functioning as mobile oases and the use of satellite communication, enabled a safer, faster and shorter desert crossing, leading to even more profitable trade in the last years,\textsuperscript{122} at least until the series of popular revolts sparked in the Arab world in December 2010. The outbreak of the revolt in Libya in February 2011, that ended with the fall of Gaddafi’s regime, reintroduced instability to the region and once more disrupted the trade links between the two countries.

**Notes**

1. Richardson (1848, 40).
2. Simon (2012).
3. McLachlan (2010), Roumani (2012), Simon (2012).
4. Richardson (1848, 77f).
5. Richardson (1848, 78f).
6. Rohlfs (1874).
7. Orhonlu (2010, 1955–2005), Rohlfs (1874).
8. Boahen (1961, 352).
9. Duveyrier (1864), Orhonlu (2012).
10. Richardson (1848, 395).
11. Richardson (1848, 404).
12. Richardson (1848, 386).
13. von Bary (1977), Duveyrier (1864), Krause (1882, 266–356), see mainly 328–335; Richardson (1848).
14. Duveyrier 1864.
15. Nachtigal (1879, 38–71), see mainly 47.
16. Barth (1857, 45).
17. Barth (1857, 55).
18. Barth (1857, 50f), Lyon (1821, 25f).
19. Passon (2009, 146).
20. Roumani (2012).
21. Barth (1857, 50).
22. Roumani (2012).
23. Lyon (1821, 25f)
24. Barth (1857, 134–140).
25. Barth (1857, 134).
26. Barth (1857, 135).
27. Barth (1857, 132f); see also Lyon (1821), Nachtigal (1879), Rohlfs (1871, 32), Rohlfs (1874, 21).
28. Barth (1857, 140).
29. Interviews with elders from al Fuqaha and al Qatrun conducted in November 2006.
30. Katz (2010).
31. Barth (1857, 148).
32. von Beumann (1862/63) in Petermanns Mitteilungen Vol. II, 68–78, Hornemann (1802).
33. Liverani (2000, 496–517).
34. Richardson (1848, 392).
35. al Idrisi in Hopkins and Levtzion (1981, 129).
36. von Beumann (1862/63, 68–78).
37. Richardson (1848, 392).
38. von Beumann (1862/63, 68–78).
39. Interviews with elders from al Fuqah, conducted in November 2006.
40. Richardson (1848, 396).
41. von Beurmann (1862/63, 68–78), Hornemann (1802, 66f).
42. Al Bakri (1913, 31).
43. von Beurmann (1862/63, 68–78), Hornemann (1802, 68–70).
44. Mattingly et al. (2015, 56–58).
45. Martin (1969, 15–27), Savage (1992, 351–368), Wright (1989, 35–54).
46. al Bakri in Hopkins and Levtzion (1981, 63f).
47. al Idrisi in Hopkins and Levtzion (1981, 130).
48. Despois (2010), Lewicki (1964, 296), Martin (1969, 15–27), Savage (1992, 351–368), Vikør (2010), Wright (1989, 35–54).
49. Hornemann (1802, 56), Mattingly et al. (2015, 36).
50. al Yaqubi in Hopkins & Levtzion 1981, 22.
51. al Istakhri in Hopkins & Levtzion 1981, 41.
52. Anonymous in Hopkins & Levtzion 1981, 138.
53. al Bakri in Hopkins & Levtzion 1981, 63f.
54. al Yaqubi in Hopkins and Levtzion (1981, 22).
55. Passon (2008, 145–152, 217f).
56. von Bary (1977), Krause (1882, 333), Nachtigal (1879), Westphal (2002).
57. Klenkler (2005, 110–127).
58. Mattingly (2000), Sterry et al. (2011).
59. Tacitus Histories 4.50.
60. Herodotus, Histories 1.183.
61. Pliny the Elder, Natural History 5.43–46.
62. Watts-Plumpkin (2005).
63. Watts-Plumpkin (2005), Mattingly (2011), Sterry et al. (2011).
64. Mattingly (2011).
65. Mattingly (2011).
66. Boahen (1962, 349–359), Liverani (2000, 496–517).
67. Martin (1969, 15–27).
68. Boahen (1962, 351), Denham et al. (1828, 249f), Fisher (2010).
69. Boahen (1962, 351–353), Lyon (1821, 188f), Lovejoy (1984, 85–116), Martin (1969, 15–27).
70. Denham et al. (1828, 124f).
71. Boahen (1962, 351–353), Lovejoy (1984, 85–116), see mainly 86–89; Martin (1969, 15–27).
72. Lovejoy 1984, 89-93; Nachtigal; Rohlfs.
73. Interviews with elders from al Qatrun conducted in November 2006 and documents from the museum of al Qatrun’s old town.
74. Interviews with elders from al Qatrun conducted in November 2006; Passon (2008, 225f).
75. Interviews with elders from al Qatrun, Tajarhi, and with responsibilities from Murzuq conducted in November 2006.
76. Alhasanat et al. (2012, 343–359), Ruprechtsberger (1997, 51–69 and 77–81), Franz (1984).
77. Sterry et al. (2011, 103–116).
78. Sterry et al. (2012, 137–147).
79. Ayyub (1993), Willis (2005, 62).
80. Sterry et al. (2012, 137–147).
81. Ayyub (1993), Willis (2005, 62).
82. Mattingly (2011).
83. For trade and trade routes in ancient times; see: Mattingly (2011, 49–60), Liverani (2001, 2003); Sommer (2011, 61–63).
84. Ciammaichella (1987, 43).
85. Ciammaichella (1987, 36).
86. Cordell (1977, 22).
87. Cordell (1977, 27).
88. Cordell (1977, 23).
89. Rahma (1999, 49).
90. Cordell (1977, 24).
91. Cordell (1977, 24).
92. Ciammaichella (1987, 36).
93. Harding King (1913, 277).
94. Cordell (1977, 27).
95. Ciammaichella (1987, 31).
96. Cordell (1977).
97. Cordell (1977, 28).
98. Vikør and O’Fahey (1987, 72), Ziadeh (1958, 45).
99. Jennings (1993, 18).
100. Hassanein Bey (1925, 61).
101. Mattes (2007, 14).
102. Allaghi (1981, 100).
103. Ziadeh (1958, 50).
104. Evans-Pritchard (1949, 21).
105. Evans-Pritchard (1949, 21).
106. Hassanein Bey (1925, 64), Bagnold (1933, 1936, 299).
107. Evans-Pritchard (1945, 183).
108. Vandewalle (2006, 19).
109. Cordell (1977, 33).
110. Cordell (1977, 31).
111. Cordell (1977, 31).
112. Djian (1991, 126).
113. Djian (1991, 136).
114. Ciammaichella (1987, 45).
115. Rahma (1999, 47).
116. Cordell (1977, 32).
117. Cordell (1977, 33).
118. Arditi (1993, 184).
119. Arditi (2005, 24).
120. Arditi (1995, 851).
121. Bennafa (2004, 91).
122. Meerpohl (2007).
5 On Major Trans-Saharan Trails

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