

Translated extract from

Rainer-K. Langner
Das Geheimnis der großen Wüste
Auf den Spuren des Saharaforschers Gerhard Rohlfs
S. Fischer Verlag
Frankfurt am Main 2004
ISBN 3-10-043930-9

pp. 11-27

Rainer-K. Langner
The Secret of the Great Desert
In the Footsteps of the Explorer of the Sahara
Gerhard Rohlfs

Translated by Martin Chalmers

Contents

From the Notebooks of an Adventurer

Three Times Across the Plateau of Terror

In the Nursery of Homo habilis

How the Occident Came to Africa

The House by the River

With a Donkey Through Morocco

A Brief Interlude

From the Diary of the Planet

The Mystery of Self-Awareness

Of the Origin of All Deserts

Five Months in Murzuk

Chaos and Order

Ocean Without Water

The Maina Clan

Survival Strategies I

Across the River and Through the Forests to the Atlantic

From the Documents of a Career

The African Battlefield

Buried Antiquity and Fraternity

Agent Provocateur and Villa With Lady

Across the Libyan Sandpit

Survival Strategies II

Return Ticket to America

From the Archives of Colonial Policy

European Collusion

Life and Death of a Geographer

The Long March

The Kaiser's Messenger

The Samoa Document and its Consequences

Rise and Fall in Zanzibar

Myth and Reality

Appendix

From the Notebooks of an Adventurer

The thrill of the new, the temptation of being able to travel through completely unknown regions, to become acquainted with strange peoples and customs, to learn their languages and traditions, a desire for adventures, a penchant for braving dangers:

All these things persuaded me to undertake the hazardous enterprise.

Gerhard Rohlfs

Three Times Across the Plateau of Terror

The caravan had struggled up the precipitous edge of the Hamada el Hamra, which rises steeply for more than 1200 feet, and had lost not a single camel on the pathless rock slides. The animals had been stubborn, often dangerously close to falling, and the camel drivers had to grab the bridles or reach for their sticks. Punishing work for both man and beast, including Gerhard Rohlfs, whom the men call Mustafa el Nemsî, Mustafa the German.

It's the 7th of June 1865 and the nineteenth day of a journey, which is intended to take him from Tripoli across the Sahara to Timbuktu, the fabled city on the River Niger. He will never reach Timbuktu, no matter how often he tries. But now he still believes in his goal, why else would he have undertaken this journey, which is not his first across the Great Desert, but the first with a large baggage train.

In Germany and France he had bought all kinds of equipment, scientific and otherwise - aneroid barometers, thermometers, hygrometers, hypsometers, compasses, weapons and ammunition, medicines: 500 grams of quinine, 50 grams of opium extract, 5 grams tartar emetic, lead acetate, potassium iodide, court-plaster, sticking plaster; 2000 grams citric acid to prepare lemonade, hartshorn, carpets, woollen blankets, cork belts, tea, biscuit, preserves. In Tripoli he acquired whatever was still lacking, his travelling companions first of all, paying them an advance. Europe's travellers never went into the desert alone, at least not in the 19th century. Rohlfs was no exception, however much he also described his journeys as dangerous individual enterprises.

The pleasant thing in North Africa and northern Central Africa is that one need not proceed with human means of transport, that is, bearers, and so is not in the highest degree dependent on the good will of an individual, but makes use of animals, which are entirely in one's charge. One starts, therefore, by buying camels and hiring the necessary number of camel drivers. One must take into consideration, that on such long journeys a camel can by no means carry large burdens, at most three hundredweight, together with the requisite water. One then takes for oneself, as leader of the caravan, a good horse, for the leader has to cut a good figure.

African journeys begin as an operation, as a logistical exercise par excellence, and if it is not to face destruction each and every caravan excursion is teamwork, is a complicated network of relations for the duration of the expedition. Servants, camels and camel drivers must be hired or bought, their number dependent on the distance to be covered and the time required to cover it. Goods and provisions have to be obtained, boxes made, so that the equipment can be transported. A whole warehouse has to be packed - kitchen utensils, food for the journey, ropes, axes and other tools, goods for presents and for barter, gaudy cloth burnouses, embroidered in gold, brightly coloured handkerchiefs, finer and coarser cotton things, turbans, caps, a few pieces of satin and silk, essences, genuine and fake corals, whole hundredweight of glass beads of the greatest variety, thousands of sewing needles, writing paper, hundreds of knives. Mustafa el Nemsî always solved such tasks with great energy.

On 20th May 1865 he had got everything together: three servants, three camel drivers, six pack camels and the saddle-camel for himself. But before the caravan started off Rohlfs made an example. A twenty franc coin had disappeared from his purse and the culprit was quickly found, Hammed Tandjani, one of his servants, to whom he had entrusted the supervision of the money. With a great deal of gesticulation Hammed protested his innocence, but the German beat him mercilessly. Only the arrival of the notables of Tripoli, some of the consuls and the Turkish provincial governor, who had come to escort the caravan for the first few miles, put an end to the draconian punishment. That same day Rohlfs found the gold coin in one of his saddle bags - and remembered putting it there himself. Later, in his account of the journey, Rohlfs will quote Hammed Tandjani - "I will never forget, that you doubted my honesty" - and add, that his servant must probably have forgotten the undeserved chastisement nevertheless; *he was and remained my most devoted servant, loyal and honest until his early death.*

It was just before eight in the morning, as the party moved off. The camel drivers shouted their "*E-o-a! E-o-a!*" and "*Salam ala rassul wa nebbina*" (Health and peace be with our messenger and prophet), interrupted by the piercing wails of Arab women. *Off to Timbuktu. Only I and my three servants were armed, each of us always had twelve rounds in readiness.*

The Mediterranean at their back, the route led southwards through a fertile landscape deeper into the African continent, from oasis to oasis, through Gharyan and Mizda, further southwestwards

along a wide, dried out river bed, the Wadi el Cheil, a channel 30 to 45 yards deep, its sides formed by honeycombed sandstone walls. In one of these natural caves he saw depictions of elephants, camels, antelopes and other animals carved in the rock, *fairly crudely executed, yet nevertheless testifying to a certain level of culture, also a female human figure with a pronounced Negro physiognomy in a very indecent posture*. His inspection of these caves was cursory, just as in his later account he only mentions the artefacts in passing; he had to keep going, wanted to pitch camp at sunset at the foot of the “Plateau of Terror”, grant the caravan some rest, gather strength for the difficult ascent.

Hamada el Hamra, the Red. Glowing with colour the high plateau stretches from one end of the horizon to the other as flat as a surveyor’s table, strewn with boulders, an endless desert of stone, polished by the wind, completely at the mercy of the sun, extending southwards for almost 150 miles without the least shade. At night the temperature falls below freezing, and there are days when it reaches more than 130 degrees. The colours are most intense in the morning, still rich in contrast, when the air is clear, the first rays of the sun dry the hoar from the rock and take the coolness of night from the plateau. But the morning light soon fades, and in the course of the morning the colours and contours blur, until everything is plunged in a glittering light, as if the plateau were burning up. Fata morganas flit in magnificent phantasmagorias over the Hamada, and silence echoes in the ears of those who cross it. Walking on the sharp edged stones becomes a torment. At midday the air seems to sweat, as if it wanted to change its state. Anyone who has to cross the Hamada el Hamra is reborn when he leaves it again and reaches the first well. Survival is a question of water.

He should pile up a mound of stones, say the camel drivers, a busfor, it will protect him from dangers. That was the price, which all have to pay, who cross Libya’s Hamada el Hamra for the first time, the busfor and a meal for each one of them.

In the desert a European must drink ten, twelve pints a day, if exerting himself physically at least eighteen. The sun squeezes all the juices out of the body, draws fluid from it. If it is not replaced, then first the saliva disappears, resulting in fissures in the throat and a hardening of the tongue. Through the open mouth hot air flows into the lungs, the breath rattles, the skin burns, muscles cramp, the faculty of perception dwindles. At the end almost all drink their own urine.

A human being feels thirsty, when he has lost one half of a per cent of his body weight in fluid. If he loses more the stomach begins to shrink. At two per cent it is already too small to absorb the necessary quantity of water all at once. At five per cent the loss of fluid becomes apparent though a slight fever and a looseness of the skin. At eight per cent all the mucous membranes dry out, the glands stop producing saliva, and the skin takes on a blueish tinge. At ten per cent the person dying of thirst can no longer walk, at twelve per cent his fate is sealed. Two days, that's all it takes, then death comes. Even camel caravans which carry a lot of water and have knowledgeable guides, are not safe from the consequences of dehydration. No one reckons on twelve per cent. Everyone thinks himself adequately provided with fluid, when he takes his carefully calculated ration of water with him. Survival as a logistical problem.

Rohlf's water skins are well filled and the best that could be found, made of Sudanese goat hide.

The head is struck off the goat, precise incisions detach the skin at fore and hind legs, the carcass is pulled out of the hide through the neck opening. A job for experts. Tared inside, so that the water doesn't turn putrid, the openings sealed, the neck gathered up for the opening, such skins hold more than 16 gallons of water. That can go quite a long way, as long as the water in the skins doesn't evaporate. In Morocco he had seen filled goat skins being placed on tripods, in order to avoid any contact with the ground. This time the caravan guides lay down mats, and no one wants to have his tripods, that he had bought in Tripoli. Once all the skins are lying on the base, they are covered with more mats. "Why don't you hang the skins up?" he asks the men. "Because then we can't cover them so easily." "Why do they have to be covered?" "Because otherwise the moon drinks the water." The thirty four year-old German can make little of this answer and yet he should know, that even the supple hide of a Sudanese goat cracks if a skin which has heated up is exposed to the cold night. The differences in temperature between day and night on the "Plateau of Terror" are considerable, over 100 degrees, sometimes over 120 degrees Fahrenheit.

At some point every Hamada falls away to the plain. It's high time the men come down from the plateau, even the camels are exhausted. Halfway down, in Dirdj, they find water, which the inhabitants of the oasis bring up out of the ground by draw wells, and hire fresh camels. At five in

the afternoon the caravan, which had been joined by several men with their camels, moves off. In the desert one is safer as part of a larger company, they say, between here and Ghadames there are all kinds of riff-raff around.

For a good half hour they walk slowly and at the even pace dictated by the camels, before the roaring of one of the animals disrupts every rhythm. Rohlfs' second servant, Cheir, had tried to use a stick to force his camel to adopt a faster pace, and in doing so had knocked out its right eye. It lies bloody in the sand, and the owner of the young, strong camel is furious, threatens to turn violent; they must turn around, lay the matter before the judge in Dirdj. Rohlfs has difficulty placating the man. Of course he will make compensation for the damage caused, even though the camel is no rare beast and the loss of an eye does not detract from its ability to carry loads, so that even a fifth part of his value was far too large an indemnification. The owner calms down, appears satisfied, perhaps because he does not for a moment doubt, that *the medicine, charpie spread with wax ointment, which I pressed into the animal's empty eye-socket to assuage the pain, will give it a new eye.*

They reach Ghadames on 17th June 1865, four weeks after leaving Tripoli, four days after Rohlfs noticed the first signs of a serious illness. *For a few days my life really was in danger. Constant violent evacuations of blood from the bowels weakened me so greatly, that I despaired of my recovery. I could no longer even think of eating, just as little as I dared quench my thirst.*

It is not the first time, that Rohlfs is afflicted by diarrhoea and intestinal bleeding; the gecko has nothing to do with it. It's two, perhaps three days ago, that he observed the camel drivers trap and kill a small lizard with a flat head, a species of gecko called a bu-bris. Bu-bris poisoned the food with its breath, they said, and could squirt a rash on the skin, pregnant women, whom bu-bris looked at, gave birth to mottled children. As "representative" of the enlightened Occident he picked up a bu-bris, set it on his foot, let it run over his plate; *they insisted on their superstitious prejudice and said, I was immune to the evil creature.* Better, if Mustafa el Nemsî had killed bu-bris, the camel drivers thought. Now he can hold in nothing any more.

In order to stop the intestinal bleeding, Rohlfs uses ever larger doses of opium, there's no longer any other way of dealing with the diarrhoea. Not for the first or last time he's in a critical

condition. Africa claims its price. About his sickness in Ghadames or Rhadames, as the name of the town is pronounced, he writes: *Although the climate cannot be called unpleasant, it is nevertheless difficult for Europeans to bear. Eye diseases, syphilis, fever and dysenteries are the most frequently occurring illnesses there. In the year 1865 I myself almost became the victim of a very acute bloody dysentery in Rhadames. These usually arise at the time the melons are harvested, the only fruit, which really prospers in Rhadames.*

It must have been the melons; the bu-bris is not to blame.

While he recovers only slowly, there's time enough to describe the oasis. His travel diary grows quickly and makes plain, what his century expects from an "explorer". The description of what he sees, augmented by conjectures, and confirmation, that there is no culture, no civilisation beyond the bounds of the Occident. Not everyone follows the prevailing cliché, this traveller, however, cannot free himself of it, at least not in the majority of his essays and contributions. *As far as their appearance is concerned, the inhabitants of Rhadames are generally ugly, since much crossbreeding with Negroes has hardly contributed to ennobling and beautifying body and facial features.*

Ghadames, for thousands of years the intersection of ancient trade routes from north to south, west to east, is built on a natural spring. Its silhouette of houses of several storeys built close together, their bare mud walls only occasionally pierced by tiny windows, resembles an irregularly built compact fortress thrown up against the heat. Rain falls rarely, perhaps once every twenty years. Inside the town, which in Rohlf's day is inhabited by more than five thousand people, there's a maze of narrow built-over alleys, almost all of which lead to the market place or to the 75 feet long, 45 feet wide reservoir made of massive stone blocks, which is supplied by a spring, coming out under artesian pressure at a temperature of 30 degrees. The reservoir, surmises the German, was already built by the Romans, about 2000 years earlier, when Rome's legions took possession of large areas of North Africa, and Ghadames was called Cydamus. After the Romans came the Arabs, later the Turks, who still hold the southern coast of the Mediterranean and collect a water tax in Ghadames of about 50,000 francs per annum. At any rate the Turkish government enters this sum in the books, and it is transferred to distant Constantinople by the governor in Tripoli. What amount the governor receives from the senior official of the town of Ghadames, the Kaimmakam, and how much the latter actually raises, remains a secret of

Ottoman bureaucracy. The spring water is drawn in a large iron pot, from which it runs out again through a small hole in the bottom, three minutes, then the simple water meter, which the people of Ghadames call “gaddus” has run dry. Seven “gaddus” make one “dermissa” and are just about enough for sixty palms on two hundred square yards of garden plot. A source of money bubbling up almost inexhaustibly for the Turkish governor, a kind of money machine designed by Roman engineers.

Already hundreds of years before the time of the Romans the town was an important trade centre in the tight network of caravan routes. Rohlf's can still guess at the architecture of that distant time in the ruins of round and square towers of roughly finished stone, the “esnames”, and images of idols. At ground level of these towers there is usually a well-preserved vaulted chamber tapering to a point, in some a second chamber above the first, reached by an external flight of stone steps. Joined by walls the whole complex was simultaneously a huge depot, place of refuge and fortress. It was no defence against Roman legions, which came to Ghadames with siege catapults and battering rams.

The larger doses of opium take effect. Rohlf's becomes restless. Ghadames is a place of transit, not the goal. He has so far been waiting in vain for the Tuareg sheik Si-Otman. It would be too dangerous to traverse the Ahaggar range alone to reach Timbuktu. Certainly he does not fear any robbers, also his weapons seem sufficient, but he cannot find any caravan guide to take him through the unfamiliar mountains, and in Ghadames the firman, the letter of protection issued by the Turkish Sultan on the recommendation of the Gotha geographer Petermann, is no longer worth the paper on which it was written: “The Embassy of His Majesty the King of Prussia at the Sublime Porte have informed Us by official note, that Mustafa Bey, a distinguished German subject, means to set out on a journey through Africa, and has entreated Us to make out an Imperial Firman for him. We therefore request you, Governor General of Tripolitania, to hospitably receive this Mustafa Bey, who in his homeland is called Gerhard Rohlf's, and to duly honour him. You should ensure, that he travels in safety and that he suffers no harm. For this purpose we have issued the present Imperial Firman. Obey in accordance with its exalted content and likewise, therefore, all those at your command. Written on the eighth day of the month of Silkade in the year 1270. Abd ul Asis. Turkish Sultan. Constantinople 1865.” Constantinople is far and the Ahaggar Mountains controlled by Tuareg clans.

Si-Otman doesn't come, instead a letter from Abd el-Kader, ruler of the Tidikelt region, whom Rohlfs had got to know a year earlier and whom he had promised to have a revolver repaired in Germany. On his arrival in Ghadames he had sent the repaired gun and a new pistol to the Tidikelt Oases, also in order to obtain information why Si-Otman had failed to appear. Abd el-Kader responded euphorically and promptly. "Allah be praised! There is only One God. And prayers and health be with his messengers and his family and his companions and his commanders and his army! We have received the old pistol and with the most profound gratitude the wonderful new revolver with 18 rounds, a tool of the Christian devils, may Allah curse and annihilate them, till none is left." A lot of blather, but no news of the Tuareg sheik.

At the end of August a courier from Tripoli brings a newspaper to Ghadames. "In the next few days the Tuareg chieftain Si-Otman ben Bikri is expected in Algiers. He is coming with a large retinue, to call on the Governor of Algeria." With that the die is cast; against Timbuktu. It would be months before Si-Otman arrived in Ghadames. *"My mind was quickly made up. The journey to the Hoggar Land (Ahaggar) was abandoned and instead the route by way of Fazzan taken into consideration. First of all, however, I had to return to Misda, in order to hire there camels as far as Mursuk."*

There is no way back, other than the one he had come, and again by way of Dirdj, where the owner of the camel, whose eye Rohlfs' servant Cheir knocked out, is waiting for him. The matter is brought before the cadı of Dirdj as a plea for damages. The judge finds in favour of the plaintiff and sentences Rohlfs to pay ten mahbub, half the price of a young camel, before then reducing it to five mahbub after the German objected that the animal was still fit for work. "I myself will contribute one sbili", a quarter mahbub, "your Negro should give one and you will pay the rest," says the judge, and really does put down a coin. After Cheir has also paid a sbili and Rohlfs has counted out the rest, the judge interrupts the plaintiff who is on the point of taking the money, and enquires as to the whereabouts of the one-eyed camel. At his reply, that it's en route with a caravan, the cadı takes the coins from the table and puts them in his own pocket. "If the animal is so capable of travel, that it can be constantly on the road, then you need no compensation, friend of my heart; at any rate I must first of all inspect the damage." For the plaintiff as for the guilty party the matter is now pending. Rohlfs leaves Dirdj Oasis for Mizda,

there to join a caravan, which is making for the Fossan territory, for Murzuk, and from which he hires six camels.

As soon as he's left Mizda, Rohlf's changes from traditional clothing into a light European summer suit. *Until this point I did not dare travel except in the guise of a Mussulman; now I was travelling south to lands, whose inhabitants do not, like the fanatical population of the Rharb, meet every man of a different faith with hostility or indeed threaten him with death.*

The caravan moves straight south, as best it can, because some deviations are necessary in order to avoid robbers. Once already they had observed a handful of men on racing camels riding parallel to the slow camel train but keeping their distance. The intention of the little band is obvious, yet they shy away from an open attack. Then the men disappear, and the danger seems to be averted. At night, as the caravan is encamped between two dunes, not even a sentry has been posted, they come over a dune down to the camp place. Sabres flash and rifle barrels. The attackers hadn't reckoned on "Mursuk", Rohlf's white spitz, which the Austrian consul in Tripoli had given him. Yapping, the dog bounds towards the bandits and tears a hole in the trousers of the first one he can get hold of. With that the robbers' attack has been repelled. *Mursuk was the hero of the hour and henceforth a personality highly esteemed by all. If he was tired, then he was lifted onto a camel, and in due course had learned quite well, standing on all fours, to withstand all the rocking motions of the ship of the desert.*

Again the route goes over the Hamada el Hamra, this time right across the middle of the plateau. The sun weakens the men's will and makes the camels lethargic. The thermometer stands at almost 140 degrees Fahrenheit, at least he will later note this temperature in the account of his journey. Perhaps it was not quite so hot, but what difference does it make. 120 degrees are unbearable, too, if there's no shade. Then suddenly the wind, which had given man and beast some relief in the heat, stops blowing as well, and the thermometer leaps another two, three degrees. The caravan leaders exchange glances, and Rohlf, too, knows what they can expect - the *gibli*, the feared hot sandstorm.

The sun mutates into a glowing red ball of fire; on the horizon there's a dirty black wall of fine sand and dust, rolling closer, towering up. The sun grows darker, the air ever more oppressive,

hotter, drier, breathing ever more difficult. The men tie their shesh, the headscarf, more tightly, leaving only a tiny slit for the eyes, then the hurricane with its whipped up grains of sand is upon them. Without a command the camels turn round, so that the storm doesn't drive the sand, which can cut skin, into their eyes, and without a command they kneel down. The sandstorm, hundreds of feet high, blots out the sun. In order to avoid the initial force of the gibli, the men lie down behind the camels, and yet ears, eyes and nose fill with fine sand and throats become unbearably dry. Sandstorms cause listlessness, can break the will if they rage seemingly without end; this one takes twenty minutes, before it abates. The animals straighten up, the men shake the sand out of their clothes and reach for the water skins. The Hamada el Hamra appears swept bare under the sun, glowing once more.

The caravan moves on, reaches the southern edge of the Hamada, and after the descent the well called Um-el-Cheil, "Mother of Horses". Here there is water enough for men and animals, as well as some steppe, which offers the camels a few blades of grass. Here they rest for two days, recovering from the "plateau of terror", from whose steeply dropping edges Rohlf's had always turned to look back, at the wadis, the rivers without water. *How could these mighty river valleys come into being, I asked myself in astonishment? What changes must have taken place here, and what periods of time of ten thousand or a hundred thousand years may lie between that epoch and ours?*

In the Nursery of Homo Habilis

Africa, ancient, pre-Cambrian rock from Gondwana's centre and birthplace of humanity.

In East Africa, about two to three million years ago, homo habilis, the descendant of australopithecus, learned to walk upright. And while australopithecus was still throwing roughly split stones and large bones to make a kill, homo habilis was chipping pebbles and boulders to produce sharp-edged hand axes. Eastern Africa is full of them and some areas of the Sahara are strewn with the artefacts of the genesis of man, for example, the mountainous Jebel Ben Ghemna to the north of the Hamada el Hamra.

Hand axes were knocked into shape for millennia and already seventy thousand years ago were used as hunting weapons and to work the soil. These "two-siders", the hand axes, and soon the stone spearheads as well, made homo habilis the victor, australopithecus in the long term having nothing he could respond with. Pre-Stone Age man disappeared in the dust of history. Homo habilis, however, the boulder-culture human being, developed into a skilful hunter and patient gatherer, into homo erectus, who one day set off to conquer the whole African continent, Asia and Europe, and later to rule the world as homo sapiens.

Archaeological finds in the Sahara demonstrate an eventful and diverse prehistory and early history in the various regions. The desert has surrendered a number of pieces of the puzzle of the origin of man, including the fossil of a front skull fragment together with a toothless upper jaw, misshapen and much weathered. A large, receding forehead with a slight constriction behind the eye-sockets, undivided brow ridges, wide cheekbones and a forcefully protruding upper jaw, the vertically foreshortened face of a homo habilis who could have lived more than one hundred thousand years ago. At that time the planet earth was in the grip of an ice age, and snow still lay on the peaks of the Sahara's central massif. Rivers flowed down to the plains, filled depressions to make lakes. At the foot of the mountains grew cedars and hackberries, cypresses, junipers, oaks and olives, occasionally also birches, beeches or lime trees. The lakes were surrounded by large areas of reed beds. In the eastern part of the Air the ground still shows traces of once thick tree cover, and in the Adrar Bonus, in the southwest of Tidikelt, the clay floor of the long dried

up lake of Sebkra Mekerrhane has preserved the impressions of huge papyrus reeds. Likewise regarded as witnesses to those fertile epochs are the gnarled, 3,000 year-old Tarut cypresses near Tamrit, whose roots reach deep down, to where there is still moisture. And in the dried up river beds, the wadis, the wind even today still uncovers small and large fishbones, and the observant desert walker can find broken shells and fragments of petrified reeds.

In the New Stone Age many parts of the Sahara were fertile. From Chad to Aoukar in Mauritania there was a zone of rich vegetation, hot and full of water, and an Eldorado for every kind of blood-sucking insect. From the Hoggar Mountains the Igharghar fed the lake of Ourgla in the north; the Tefassasset collected the waters of the southern slopes of the mountain range and filled Lake Chad; the Tamanrasset flowed westwards and seeped away into the Tilemsi Basin, while the Saoura from the Atlas flowed in a north-south direction, it likewise ending in a lake. Only the Draa, coming from the Anti-Atlas, drained into the Atlantic.

There were woods and scrub, extensive areas of savanna, rich vegetation and the African fauna that went with it. Not everywhere, only in the marshlands of the New Stone Age, for the Sahara remained, what it had always been: a great desert, in which life is accorded no more than a brief walk-on part. For homo erectus, however, a brief moment was enough to make of the grace of this infinitesimal period of time, geologically-speaking, a turning point in human history, to develop from a hunter-gatherer into a farmer and herdsman. He has bequeathed the history of this “neolithic revolution” to us in vivid picture stories.

On the Tassili Plateau, in the rock labyrinth of Tinterhert in the middle of the Sahara there was created 9,000 years ago the fifteen foot long engraving of a herd of cattle. Why the Stone Age artist carved cattle with his hand axe in the black metal oxide crust of the rock, which had first of all been polished, we do not know; perhaps as an act of magic, to ensure the hunter a good catch. The steep rock faces of the Wadi Mathendous in southwestern Libya are also covered in animal drawings - rhinoceroses, elephants, ostriches, giraffes, resting antelope, a crocodile. Scratched into the rock here was one of the oldest portraits of a human being, the almost one foot high figure of a crouching man.

Nine to ten thousand years ago cattle herders roamed the Sahara, who were also farmers. They came to the savanna from East Africa, but they came late, too late; the last cold phase of the Ice Age was waning, and there was no guarantee, that the climate change that was beginning would provide enough water for the seed sown in the earth. After lush years, which the first farmers and cattle herders enjoyed in the savanna, their descendants soon had to cope with the desertification of the soil they had been using. More and more often the rain failed to appear, springs evaporated and turned into dust holes, and the dry winds caused grass and foliage to wither. The humans retreated with their herds of livestock to the plateaus, where rain was still plentiful and into the mountains, the islands of life in the midst of bone dry plains.

One of these islands of life was the Tassili Plateau in today's Algeria, almost a 100 miles from the cattle herds of the Tinterhert. The persistence of the wind-blown sand has worn surreal cities of rock out of the sandstone of the plateau, cave systems with narrow alleys, broad streets, bridges, pillars, rock cathedrals and wide squares. An almost endless labyrinth about 4,500 to 6,000 feet up. The nomads have a name for each of these cities of the wind: Tin Tazarift, In Itinen, Tin Aboteka, Jabbaren and Auanrhet. Many generations of Stone Age man used the wind-polished sandstone as a ground, scratched drawings in the walls, until 6,000 years ago they discovered painting. North east of the oasis of Djanet the wanderer in the desert finds himself in the greatest open air museum of the Neolithic period, surrounded by thousands of rock paintings of the New Stone Age. No variation of artistic work is absent from this gallery of living, thinking and feeling, neither the small study and the portrait nor large mass scenes covering several square yards.

The frescoes are executed in yellow, brown and red, white and green ochre. The porous, absorbent sandstone provided a useful base for the natural earthy colours, which were mixed with lime, and which the now increasingly dry climate effectively preserved.

Human beings lived in the cities of the wind for three, four, perhaps even five millennia, and left their marks on the sandstone walls. Anyone able to read the overlapping older and later drawings, understands the fate of those, who had to withdraw from the Tassili Plateau. Later drawings show scenes of battle, disputes between tribes of herdsmen, triggered by the shrinking resources of

water and grazing places; the most recent, cursorily dashed off frescoes depict camel caravans and oases with date palms.

About 3,000 to 4,000 years ago the desert crept out of the plain and up the mountains and high plateaux. The rivers and lakes dried up, and flora and fauna retreated from the Sahara - only in a few enclaves could those plants and creatures survive, which were able to adapt to the changed climatic conditions, earthworms or those small Tassili crocodiles, the last specimen of which was killed a few decades ago.

As the desert reconquered territories it had only lost temporarily, the human beings migrated back to where they had once come from, to tropical Africa. The Sahara was abandoned except for those tribes, which either did not know, where they should go, since their original place of origin was already occupied by other tribes or which had become accustomed to following the few rain clouds with their animals. The places of fixed settlement were covered in sand, herding peoples became nomads, and only a few farmers got by in a couple of dozen oases, usually at the edge of large depressions, where rock layers containing water are close to the surface thanks to shifts in the earth's crust.

The nomads needed the products of the oasis farmers as much as the oasis inhabitants needed the nomads; there developed a system of social dependency which endured over millennia. The nomads offered the usually dark-skinned oasis farmers, for the greater part descendants of the ancient Negroid population of the Sahara, protection, and in return the farmers were obliged to pay their protectors tribute. Millet, dates and grain were the price of peace. The nomads, particularly their salt caravans, kept the communications routes of the Sahara open and organised the exchange of goods between the different economic areas.

Gerhard Rohlfs, the most popular and widely read of the German explorers of Africa of his day, knew nothing of these ancient nomad tracks, the caravan routes across the Sahara. His century knew of the Great Desert only what the historians of Antiquity had handed on, Herodotus above all: "There, too, people live, called Garamantes, a great and powerful nation; they put earth on salt and then they sow. In their country there are also backwards grazing cattle. Their horns are bent forward, which is why they go backwards when they are grazing; they cannot go forward,

for then they would butt the ground with their horns. These Garamantes hunt for the Ethiopian troglodytes on four horse chariots. For these Ethiopian troglodytes have the fastest legs of all humankind, that we have heard of. The cave dwellers feed on snakes and lizards and other such creeping animals. They practice a language, which is like no other, for they squeak like bats.”

(Translated by Martin Chalmers)