Almásy's arrangements made it necessary for him now to return to Cairo. I was in no hurry to return, having still some of my leave left, and so we decided to divide the expedition. I, with two cars and three natives, went on to try and get to Merga by a new and more direct route than that previously traversed by Prince Kemal el Din. Almásy, with the rest of the expedition and the remaining two cars returned to Cairo via Terfawi and Kharga.

I found a new route to Merga, but not without many difficulties, including a broken car, which we had to repair. We were five days on the road. The hard work we had to do during the day in the heat of the Sudan sun (it was then May) led to a very heavy over-consumption of water, the daily ration imperative being three to four times the normal. Before I left 'Uweinat the Italian party told me they had information that the Guran robber named Gongoi was at Merga with his band. This was the same band that had attacked a Dongalese caravan some time previously and murdered its members. On reaching Merga and dropping down into the depression I went forward on foot to reconnoitre, and to find out if the robbers were in residence. I discovered a camp and found that I also was being reconnoitred by two scouts. It was then approaching dusk and was too late to try to establish contact with any safety. It was impossible to remain there open to attack during the night, so, making a detour to avoid any possible ambush, I picked up my outward tracks and went back along them out of camel range.

My water supply was now dangerously low, and a review of the position and a check of the petrol remaining that night made it obvious that there was no alternative to a return to 'Uweinat. The return journey was made without incident. From 'Uweinat I returned to Cairo via Kharga.

HISTORIC PROBLEMS OF THE LIBYAN DESERT: A paper read with the preceding at the Evening Meeting of the Society on 8 January 1934, by

DR. RICHARD A. BERMANN

My interest in the Libyan Desert was first excited by my Hungarian friend Ladislaus Edward de Almásy. For a number of years he used to spend his winters in Egypt and the Sudan; he had become one of the pioneers of motoring in the desert. When he came back he used to tell me about his latest exploits and his further plans. Soon he had become fascinated by the old Zerzura problem, and he would discuss it with me. Since the times of the ancient Egyptians, he explained, there had been a vague but persistent rumour about fertile lands lying in the desert west of the Nile. The famous expedition of King Cambyses's army against the oasis of Jupiter Ammon could hardly have been planned if the existence of water somewhere in the middle of the desert had not been known. All through the Middle Ages Arab writers had told about a hidden oasis; the name of Zerzura—meaning probably "Oasis of Little Birds"—had been mentioned for the first time in the thirteenth century.

Almásy would quote to me the Arab legends of the "Book of Hidden
Treasures” (Kitab el Kanuz), where the fabled Zerzura is described as “a white city, white as a dove. Above the closed door you will see a bird, carved in stone. Open the door and enter. You will find much riches. In the palace the King is sleeping with his Queen; they sleep the sleep of the enchanted. Don’t go near them, only take the treasure.” But Zerzura, I understood, was not only supposed to be a place of hidden treasures, but also a danger spot of the desert, wherefrom black giants would emerge to attack the Egyptian oases. The anonymous ‘History of Siwa Oasis’ mentioned a southern “land of unbelievers.”

After having alluded to those tales Almásy would explain to me that his own belief in the existence of some unknown oasis was largely based upon the relation of I. G. Wilkinson, the first European who ever heard the name of Zerzura. He mentions in his book published in the year 1838 that natives of Dakhla had told him about an oasis lying west of the caravan route Farafra–Bahariya and called Wadi Zerzura. This oasis was said to contain many palm trees, springs, and ruins of an uncertain age. According to another story, Wilkinson said there are three wadis forming Zerzura. They were used for grazing. Beyond them followed the oases of Kebabo, Taizerbo, and finally Wadi Ribiana. These oases, part of the Kufara Group and entirely unknown in Wilkinson’s times, had been duly discovered later on, but the three wadis of Zerzura were, Almásy pointed out, still believed to be a mere fable. But why should the Dakhla people, who informed Wilkinson, have known and told the truth about the oases lying farther west and have lied about a place supposed to be so much nearer to their home?

Almásy had come to the conclusion that Wilkinson’s three mysterious wadis—wadis containing water and vegetation—must lie somewhere in the interior of the Gilf Kebir, whose heights were likely to attract the tropical rain clouds. If one or several rain oases with at least intermittent springs existed in the Gilf Kebir many dark problems of African history could easily be explained, from the campaign of King Cambyses down to the Senussi raids during the world war. Black raiders coming from the West had attacked the civilized oases of Egypt many times during the centuries; if they came from Kufara or from Tibesti how could they have crossed the desert if there was no water nor pasture in the middle of this enormous distance?

Believing that the solution of the riddle lay in the Gilf Kebir, L. E. de Almásy organized, together with the late Sir Robert Clayton-East-Clayton, Mr. Patrick A. Clayton, and Wing-Commander (then Squadron-Leader) H. Penderel, their memorable expedition of 1932, in the course of which they explored great parts of the Gilf Plateau, and finally saw and photographed, flying over the northern Gilf, a long wadi with many trees in it. Unfortunately they were not able to land there or to find the entrance from the desert plains; but Almásy felt sure they had found one of Wilkinson’s three wadis, and that the other ones existed nearby. Therefore a new expedition had become necessary. The late Prince Kemal el Din had generously offered to outfit this expedition. After this great explorer’s premature death our plans were disarranged; finally we somehow contrived to make possible our expedition, which started on 14 March 1933 from Cairo. Contemporaneously, Mr. Patrick Clayton, Almásy’s late companion, led another expedition into the
Gilf region; he was joined by Lady Clayton, Sir Robert’s widow, and by Lieut.-Commander Roundell.

Wing-Commander Penderel, who was with Almásy the joint leader of our expedition, has outlined in his paper the main geographical features of our expedition; I am now only concerned with the historic and archaeological problems we tried to elucidate. Starting from Kharga with four Ford motor cars our expedition, composed of five Europeans and three natives, first visited the curious Pottery Hill, situated about 300 miles west of Kharga. The site had been discovered by Dr. John Ball on his motor patrol during the War in the year 1917 and explored later on by Prince Kemal el Din, who gave it its Arab name, Abu Ballas—“Father of Jars.” Both names of the place are explained by the fact that at the foot of this desert hill there lies a deposit of large earthen jars. Kemal el Din (who wrote a learned paper about the place) counted about three hundred such jars; he took some of them with him to Cairo. We still found and took with us some relatively intact ones; all of them are broken and many entirely destroyed. Some of these jars have a shape still used by the desert people, but many show the unmistakable shape of the classic Greek amphora.

Prince Kemal el Din had heard in Dakhla old natives say that this deposit of water-pots in the desert had first been found in the middle of the nineteenth century by a party of Dakhla people who had repelled an attack of desert raiders on their oasis and then followed the flying razzou into the desert. When they found the deposit of the robbers the Dakhla warriors carefully broke all the jars—a thing to be deplored from the archaeological standpoint but otherwise easy to be understood; undoubtedly this hidden place in the desert had been a point of support to the robber caravans who had used to raid the Egyptian oases through so many centuries.

When we rested in Abu Ballas, Almásy showed me the map. Tracing a rough line from Dakhla to Kufara he explained that Abu Ballas was situated at the end of the first third of the distance. Was it not likely that at the end of the second third the raiding caravans must have had another point of support containing water and food for their camels? Was this second point another deposit of jars, or was it the wadi of Zerzura in the Gilf Kebir?

Prince Kemal el Din had discovered on the rocks of Abu Ballas some pre-historic rock engravings showing figures of men and animals. So this place had been known to mankind long before the time when Greek amphorae were in use. But how could these amphorae have come into the desert?

As the expedition’s official chronicler I was in charge of our travelling library, which, I am sorry to state, mainly consisted of one book: of the ‘Histories’ of old Herodotus, the best Baedeker of the Libyan Desert still existing. Having this book only I had come to know it rather well, and so, in the sight of the jars of Abu Ballas, I read to my companions the following passage from the sixth and seventh chapters of the Third Book of Herodotus:

I shall now mention a thing of which few of those who sail to Egypt are aware. Twice a year wine is brought into Egypt from every part of Greece as well from Phoenicia in earthen jars; and yet in the whole country you will nowhere see, as I may say, a single jar. What then, every one will ask, becomes of the jars? This, too, I will clear up. The burgomaster of each town has to
Aerial photograph of the southern cliffs of 'Uweinat: the well 'Ain Daua at the foot of the cliffs

Aerial photograph of the above from lesser distance, showing site of 'Ain Daua and the rock paintings
The rock paintings: warrior with bow and decorative anklet (top left) and man and woman in supposed cave opening (bottom right)

The rock paintings: typical examples from one of the other caves
collect the wine jars within his district, and to carry them to Memphis, where they are filled with water by the Memphians, who then convey them to this desert tract of Syria. And so it comes to pass that all the jars which enter Egypt year by year, and are there put up to sale find their way into Syria, whither all the old jars have gone before them. This way of keeping the passage into Egypt fit for use by storing water there was begun by the Persians so soon as they became masters of that country.

Looking at the amphora-shaped vessels of Abu Ballas we remembered that army of the Persian king which had perished in the desert on its march to Siwa. Even a crazy oriental despot could not have sent an army into the desert if he had not known of some deposits of water there. Could not Abu Ballas, we dreamed, have been one of the water deposits of the Persian army on its way to Siwa—if this way had led, somewhat circuitously, but avoiding most of the Sand Sea, to the wadis of Gilf Kebir and from there to the oasis of Jupiter Ammon?

After leaving Abu Ballas our expedition travelled to the east side of the Gilf Kebir and started exploring and mapping the outline of this little known mountain region. We had hoped to discover the entrance to one of the three wadis there, but did not find any traces of vegetation. Finally, having discovered a broad gap dividing the Gilf into two distinct parts and found that it could be negotiated by motor cars, we crossed the Gilf, arrived at its west side, and finally went to Kufara for water, petrol, and victuals.

We were most hospitably received by the Italian garrison of Kufara, and spent a week there. A few hours before we arrived in Kufara, Lady Clayton and Lieut.-Commander Roundell had left the oasis, and we learned that the Clayton expedition had successfully entered the wadi which had been sighted from the air a year ago. Almásy at once decided to visit this wadi too, in order to get better bearings for the discovery of the two other fertile wadis he was sure he would find—Wilkinson’s wadis. We had reasons to expect that the natives of Kufara, especially the Tebus, had always known of the existence of these wadis, and so we tried to make them speak.

I shall always remember a conference we had in the old Senussi fortress of Djof, in the hall which once had been the library of the Great Senussi Sheikh. Almásy was asking questions of Ibrahim, an old Tebu who was by profession a caravan guide: a snake-like, mysterious old man, quite black. He spoke Arabic with a strong accent, which made us nickname him Nyiki-Nyiki. For the first time I heard that language “like the screeching of bats” which Herodotus mentions.

The influence of the Senussi creed is still strong in Kufara, and not to reveal the secrets of the desert to the stranger had been one of the foremost doctrines of the Senussiya. But knowing of the existence of at least one of the wadis, Almásy could persuade old Ibrahim to tell us a little more. He called the wadi entered by Mr. Clayton Wadi Abd el Melik, and said that another valley with trees, Wadi Talh, was situated near it, describing its whereabouts so that we could hope to locate it. He would not confess then the existence of a third wadi.

Wadi Talh means the Wadi of Acacias. Abd el Melik (Servant of the King) is, of course, a common Arab name, meaning a servant of Allah, but I could not help being thrilled by it, thinking of King Cambyses.
We left Kufara on April 26 and proceeded to a place near the west side of the Gilf, called Chianti Camp by the Almásy-Clayton Expedition of 1932. From there my companions—I being sick in camp—tried to discover Ibrahim's Wadi Talh by climbing the stone wall of the Gilf Plateau. They found old camel tracks leading to the Gilf; then a distinct path, evidently man-made, and near it not only camel bones but also the skeleton of a cow; also the sleeping places of the Tebu herdsmen. It became quite evident that this path had been used only a few years ago to drive camels and even cattle up to the mountain pastures. But when my friends had climbed the plateau they were not able to reach the supposed Wadi of the Acacias. They returned to Chianti Camp and we decided to divide the expedition: Wing-Commander Penderel and our geographer, Dr. Ladislas Kádár (of the Budapest University), motoring through the Gap to the north-eastern Gilf, in order to continue the map-making there, while the rest of the expedition was to try again to find that elusive wadi.

From Chianti Camp we visited a place in the outliers of Gilf Kebir where Mr. Clayton in 1931 had discovered a cave with many Stone Age engravings, showing cattle and wild animals, mostly giraffe. We were fortunate enough to find a second cave with many giraffe and lion pictures engraved in the rock, and near it many Stone Age implements, especially grinding stones. Looking at the landscape I imagined that this settlement must once have been situated on the shores of a prehistoric lake, possibly amongst tropical vegetation. This guess, rather hazardous at the time, seems to have been confirmed by later discoveries.

Proceeding from Chianti Camp farther north we penetrated on May 3, following the car tracks of the Clayton Expedition, into Wadi Abd el Melik, which we found a rather dreary, long valley, where hundreds of acacia trees of different species were growing. We found the trees still green, but the rest of the vegetation withered; in the two rock springs we found only a few drops of moisture. The sites of several Tebu camps could easily be recognized; we found remains of their grass huts, baskets, etc., and much camel dung. There were many fresh tracks of Barbary sheep (waddan) to be seen; birds of a species unknown to us were very conspicuous, justifying the name of the Oasis of Little Birds; otherwise the valley seemed empty. It was evident that in these rain oases of the Gilf life can only persist a few years after a big rain period, and that sometimes the wadis will die out—which perhaps explains the sporadic disappearance and reappearance of the Zerzura legend through the centuries.

After visiting Wadi Abd el Melik we tried once more to find Wadi Talh. Following some old camel tracks we drove into the bed of a dry mountain torrent and camped there. On May 5 Almásy, accompanied only by one of our native drivers, climbed the almost insurmountable stone wall of the Gilf, found on the plateau the marked path again, and finally saw a broad wadi filled with green acacia trees. He had found Wadi Talh, the second of the three Wilkinson wadis. Our expedition did not find the third of Wilkinson's three wadis. But when a few days after having discovered Wadi Talh we visited the spring of 'Ain Daua in the 'Uweinat Mountains, we found there an Italian military mission, occupied with map-making, and as their guide our old friend Ibrahim.
This time again he showed great reserve, but he unbent when we told him about the dead cow we had found on the path leading to the wadis. Grinning, he confessed that he had himself lost this cow only a few years ago, when driving the herds of a certain Abdallah into the wadis. It came out that in the years after a rain the people of Kufara (where grazing lands do not abound) used to send their camels and cattle into the Gilf Kebir, where the three wadis provide pasture and water for a long time. Yes, there are three of them. Ibrahim named and described the third and smallest of them, Wadi Hamra—the Red Wadi. (This wadi has actually been found and entered by Mr. Patrick Clayton during his expedition. He was gratified in learning from us its native name.)

So Wilkinson's old tale was true. There are three verdant wadis in the Gilf Kebir—verdant after a big rain and sometimes quite desiccated, it seems. Are they Zerzura? Old Wilkinson said so!

In 'Uweinat we had to wait for Wing-Commander Penderel, who had gone to Kharga with two of our cars. We lived with the members of the Italian mission in the narrow circle of granite boulders that surround the spring of 'Ain Daua. It was May, and the heat was terrific amongst the stones. The only refuge we found was in certain caves, or rather holes, with which the granite walls of 'Uweinat are honeycombed. These grottoes, which offered some protection against the heat, had been used during this winter by Major Bagnold's expedition, by the Italians, and by a party of British airmen—yet nobody had discovered that a little higher up similar little caves contained the most wonderful documents of an old civilization.

It was Almasy who found the first of these caves and showed it to Professor Ludovico di Caporiacco, of the Italian mission, and to me. Two hours later about a dozen more of these caves were located, all covered with beautiful rock paintings in four colours, showing cattle and other animals, mostly tame ones, and human beings: dark-skinned warriors with bows in their hands, with many ornaments and with plumes in their hair. The most interesting picture represented the cave itself, surrounded by a circle of granite boulders, and in it an interesting pair: a slender man and an enormous lady—evidently Monsieur and Madame, the owners of this cave, who had decorated their home with their portraits. Near the caves Dr. Kádár collected many Stone Age implements. Our photographer, Mr. Hans Casparius, photographed the cave paintings and Almásy made some colour sketches.

When, ten years ago, A. M. Hassanein Bey had discovered 'Uweinat, the natives had told him that the djinn had lived around these wells in the olden times, and that they had left upon the rocks "writings and drawings of all the animals living." When Hassanein explored the karkurs (valleys) of 'Uweinat he indeed discovered drawings of animals deeply engraved in the rocks; and Prince Kemal el Din even found in Karkur Talh a very few painted pictures; but nobody had known of the enormous masses of rock-paintings hidden in the caves—the first elaborate coloured paintings ever discovered in this part of Africa. The Tebu and Goran guides of Hassanein must have thought of these caves when they told Hassanein about the pictures made by the djinn. For we found evidence that modern Tebu or Goran had inhabited the very caves only a few years ago.
Again a passage in Herodotus seemed to me to explain the history of these painted caves. In his fourth book (Chapter 183) the Father of History speaks of a nation of Libyan cave dwellers:

Ten days' journey from Augila there is again a salt hill and a spring; palms of the fruitful kind grow here abundantly. . . . This region is inhabited by a nation called the Garamantians, a very powerful people. . . . In the Garamantian country are found the oxen which, as they graze, walk backwards. This they do because their horns curve outwards in front of their heads so that it is not possible for them when grazing to move forwards, since in that case their horns would become fixed in the ground. . . . The Garamantians have four-horse chariots, in which they chase the Trogloodyte Ethiopians, who of all nations whereof any account has reached our ears are by far the swiftest of foot. The Trogloodytes feed on serpents, lizards, and other similar reptiles. Their language is unlike that of any other people—it sounds like the screeching of bats.

More than one explorer has observed how much this description of the black cave dwellers of Herodotus fits the Tebus of to-day; their swiftness of foot is a well-known fact, and whoever heard a Tebu talk knows what old Herodotus means by the screeching of bats—our friend Ibrahim-Nyiki-Nyiki certainly sounded like that. But why should Tebus be called Trogloodytes—cave dwellers? And now we had found south of Kufara (which might quite well have been a part of the Garamantian country) caves certainly inhabited in the olden times by black people whose portraits seem to me to show quite the very characteristic type of the Tebus of to-day; modern Tebus had lived in the caves only a very few years ago. The conclusion that they were the lineal descendants of Herodotus's black cave dwellers does not seem so fantastic to me. By the way, one of the pictures we copied shows an ox or cow with horns distinctly curved outward.

The discovery of the painted caves of 'Uweinat was the last our expedition made. We knew at once that we had only searched a small part of the caves, and felt that another expedition, led by archaeological experts, was desirable. We did not doubt that it would make many more important discoveries in the 'Uweinat area, and also near our Giraffe Caves.

While Wing-Commander Penderel undertook another interesting excursion to Merga, Almásy, Dr. Kádár, Casparius, and myself followed the Darb el Arba'in to Kharga and arrived safely in Cairo on May 24.

The new expedition to explore the caves of 'Uweinat was undertaken a few months later—in October—by Professor Leo Frobenius, of Frankfurt, who persuaded L. E. de Almázy to guide him to 'Uweinat, Kufara, and the "Giraffe Cave" we had found near the Gilf, and to point out to him the pictured caves. Following the tracks of our expedition and guided by Almázy, Professor Frobenius's expedition found a wealth of highly interesting rock paintings, especially in the karkurs of 'Uweinat, and many stone implements. It cannot be within the scope of this present paper to describe them. But it seems very important that not only 'Uweinat turned out to have been an important centre of Stone Age civilization, but also the western slopes of Gilf Kebir—near our three wadis. When the Frobenius expedition had arrived at the place where Clayton and ourselves had found the giraffe engravings, Almázy, exploring the rugged valley towards the Gilf, was fortunate enough to find many wonderful
coloured cave paintings showing amongst other things people in the unmistakable posture of swimmers—so there had been a lake after all! The three newly found wadis of the Gilf—Wilkinson’s Zerzura—have not yet been searched for rock paintings; I think they must contain many of them. But already the discoveries near the Giraffe Caves (Almásy called the place Wadi Sura—Valley of Pictures) prove that the Gilf Kebir had been in the olden days a fertile region, inhabited by mankind; in consequence there is some foundation in the old legends, which always told of “cities” and verdant lands in the middle of the Libyan Desert.

But Zerzura? I dare not pretend that we really found the fabled “Oasis of Little Birds.” Who knows what the Great Sand Sea still hides? Almost contemporaneously with our expedition Lieut. Orde Wingate, r.a., undertook his plucky march into the Sand Sea around ‘Ain Dalla. He did not discover any oasis, but he found many interesting artefacts. It does not seem impossible that some unknown depression in the Sand Sea may still hide wells, palm trees, and, for all we know, the ruins of “the white city” of Zerzura. Personally I almost hope the beautiful old legend will never quite be cleared up by a mere discovery.

DISCUSSION

Before the papers the President (Major-General Sir Percy Cox) said: The title of the lecture advertised for this evening is “Historic Problems of the Libyan Desert,” but as you see two lecturers on the platform I think perhaps I had better give the meeting a little explanation of the circumstances attending this lecture. We were going to hear a lecture on the expedition to the Cameroons by Mr. Ivan Sanderson, but, unfortunately, he fell ill, and the doctor would not allow him to give his lecture. But Wing-Commander Penderel and Dr. Bermann, whom we were asking to lecture a little later, very kindly agreed to put their date forward and give their papers this evening. Unfortunately Wing-Commander Penderel was abroad at the moment, and we could not be quite sure whether he would arrive in England in time to be with us, in which event Dr. Bermann very kindly undertook to take the whole duty upon himself, and we are grateful for his co-operation in the matter, for you will, I know, realize how difficult it is to fill a date at short notice. I am glad to say the Wing-Commander arrived in time to participate in the lecture to-night.

Dr. Bermann and Wing-Commander Penderel went on this expedition to the Libyan Desert together. Wing-Commander Penderel, as you may assume, is a squadron officer of our own Air Force who was stationed at Cairo and on two occasions was able to obtain leave from his duties to go on expeditions in the Libyan Desert.

Dr. Bermann is a man of letters and the author of several works; among them, his well-known book, ‘The Mahdi of Allah,’ which has been translated into English. In writing that book Dr. Bermann came into close touch with Slatin Pasha, whose death we so much regretted, and also with Sir Reginald Wingate, the then Governor-General of the Sudan, with whom he is on close terms of friendship.

The expedition from the start met with extraordinary ill-luck. Most of you, I am sure, remember the tragic circumstances of the death of Sir Robert Clayton-East-Clayton, followed later by the death of Lady Clayton-East-Clayton. Sir Robert Clayton was just about to join Wing-Commander Penderel, but, alas, he died in England of some strange malady, blood or ptomaine poisoning, a
Count de Almásy copying the rock paintings: Dr. Bermann in the foreground
The first view of Wadi Talh