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The ‘English’ patient, fools, foxes and rats: exploration, mapping and war in the Libyan Desert

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ABSTRACT

The character of ‘Count Almásy’ in the film ‘The English Patient’ was based on the real László Almásy (1895-1951) who explored the Libyan Desert in the 1930s. The search for Zerzura, the legendary lost oasis, resulted in different cartographic hypotheses about the desert. The mental maps of Europeans were substituted by expedition maps, published in geographical journals. The maps of the inner desert were actually based on route surveys. The featureless terrain made cartographic representation difficult: instead of conventional signs, textual information regarding desert conditions, events, observations, old caravan tracks and the routes of expeditions, were represented. From the 1930s onwards the explorers' expedition route maps became important sources for cartographic and military intelligence. The topographical map series of the inner desert, constructed by British and Italian colonial authorities, were based on expedition maps and not on actual surveys. The paper investigates the context of a group of contemporary Italian manuscript military maps in order to reveal their sources. The process of compilation and cartographic masking made the public information, the content of the expedition maps, secret military information displayed on topographic sheets. In WW II Almásy served as desert adviser to Rommel's army, while fellow British explorers (e.g. Ralph Bagnold, Patrick Clayton) founded the famous Long Range Desert Group. On a secret military mission in 1942, instead of empty and incorrect military maps, Almásy used his personal geographical knowledge.

INTRODUCTION

The English Patient is a fictional story of love and war based on the life of the real Hungarian explorer László Almásy (Török 1998). Michael Ondaatje's 1992 novel and the film made by Anthony Minghella in 1996 portrayed the mysterious "English" patient as a haunted man devastated by war and by the death of his lover. Of the nine Academy Awards the movie received, at least some should have gone to the people who explored, surveyed and mapped the desert after World War I. Although considered fools by the majority of people who never dared venturing into the desert, these adventurers were all remarkable and extraordinary people. However, within a decade the same desert explorers experienced what they could never imagine: the remotest and most perilous part of the world would become a battlefield in World War II. The ‘English’ patient would guide Rommel's “desert foxes”, and his former companions, the surveyor Patrick Clayton and Kennedy Shaw, would command the so-called “desert rats”, a patrol of the Long Range Group which was founded by Ralph Bagnold, another British explorer before the war (Shaw 1945, Kelly 2002).

The history of the exploration and mapping of the Libyan Desert in the 20th century is a fascinating and final chapter in the book on the geographical exploration of the world. However, the focus of this paper is not the story which we know has been written from different points of view by various authors. Instead, we investigate a field closely related to exploration and explore the historical, social and technical contexts of the mapping process. The case of the Libyan Desert in the Eastern Sahara offers the opportunity to observe different modes of mapping, from traveller reports and expedition maps to triangulation and topographical surveys, during a relatively short period. The extreme geography and the changing political conditions in the region resulted in remarkable interconnections between scientific research expeditions and colonial surveying and mapping institutions, as well as intelligence and military cartography.

After the award-winning film generated a massive public interest in the life and work of the real László Almásy, a series of articles and books was published on the subject. The much less rewarding scholarly research also produced some results, although the resulting documentary evidence that has been collected is rather poor. Although this situation may somewhat improve in the future, I suggest that the fragmentary nature of the material is the conclusion of the historical conditions. However, in the case of the surveying and mapping work of Almásy and his companies, it is the research which is almost non-existent, despite the abundance of by now accessible cartographic material and other related documents in public archives and private collections.

GROUP OF ITALIAN MANUSCRIPT MAPS

One of the places where one would hardly expect to find anything regarding Almásy’s desert explorations is the map collection of the Military Historical Institute and Museum in Budapest, Hungary. Surprisingly enough, after the film was released in Hungary, the map librarian, Dr. János Suba (now Head of the Map Collection) checked their holdings and found many cartographic works depicting the desert scenes. Today these maps are still kept in two large folders, containing

| Number | Inventor y number | Title | Sheet size (map size) in mm | Scale |
|--------|-------------------------|--|-----------------------------------|--|
| 1 | Cc 168 | IL DESERTO LIBICO ... by Dr. John Ball | 487 x 337 (390 x 310) | 1: 4 000 000 |
| 2 | Cc 175 | SPEDIZIONE DEL 1925 DI S.A.S. IL PRINCIPE KEMAL EL-DIN HUSSEIN | 645 x 685 (602 x 615) | 1: 500 000 |
| 3 | Cc 176 | DESERTO LIBICO - SUD OUEST DELL’ OASI DI DAKLA | 591 x 768 (512 x 701) | 1: 500 000 |
| 4 | Cc 177 | CARTA GEOGRAFICA MOSTRANTE LA STRADA ADOPERATO DELLA SPEDIZIONE DI S.A.S. IL PRINCIPE KEMAL EL DIN HUSEIN NEL 1925 | 812 x 715 (785 x 705) | 1 : 500 000 (two sheets joined) |
| 5 | Cc 184 | EXPEDITION DE S.A.S. LE PRINCE KEMAL EL DINE HUSSEIN 1925-1926 | 750 x 668 (639 x 258) | 1: 500 000 |
| (I) | Cc 185 | Territorio di Cufra – dati forniti dal Cap. Medico Dott. Brezzi | Note: printed | c. 1: 200 000 |
| 6 | Cc 187 | CUFRA (El-Cafra) Itinerari dei viaggiatori attraverso il Deserto Libico | 750 x 308 (639 x 258) | 1: 2 000 000 |
| 7 | Cc 196 | ESPLORAZIONE DELL’OVEST DEL GILF KEBIR | 385 x 310 (315 x 288) | 1: 1 000 000 |
| 8 | Cc 197 | KUFRA AUENAT GILF EL NEBIR | 885 x 551 (471 x 818) | 1: 1 000 000 (two sheets joined) |

Table 1: The group of manuscript maps
(Map Collection, Military Historical Institute and Museum, Budapest, Hungary)

mainly printed material from small scale to topographical map sheets. The coverage as well as the publishers' names (Istituto Militare in Florence and the Italian colonial government in Bengasi, Cyrenaica), suggest that the cartographic material which was collected reflects Italian colonial interest in Africa, in particular Libya and Ethiopia. After their discovery it was suggested that the maps are directly connected to Almásy's activity, or are perhaps even from his hand. However, as soon as I checked the book of inventory, this appealing hypothesis failed. The notes revealed that the Italian material was a relatively recent acquisition of the library and that the maps were purchased as a collection from a private person in Budapest in 1985. This information was somehow disappointing; but, as I would argue, the small group of maps I selected and separated from the rest of the material has not lost its significance.

While the majority of the set is not uncommon printed material, I could separate a smaller group of maps that requires special attention. All but one of the sheets of various sizes (see Table 1) are reproductions of manuscript sketches and maps which, in my opinion, were drawn around the same time by the same hand or by a group of draughtsmen. The language of the maps was Italian and some spelling mistakes suggest that the map makers were also Italians, presumably working in a colonial military office in Cirenaica (later Libya).

The method of reproduction is unknown and there is no trace of printing ink. Presumably it was photography, available everywhere, or a version of a Diazo printing process (Ozolid?), both which allowed for the making of positive monochrome copies on paper. The paper of the existing documents is brownish-yellowish and the text on the darker parts are hardly legible. The paper is somehow creased, but is in a relatively good condition. The maps were kept folded and there are minor faults along the folds (some losses of paper on Map 6). The lines and letters are brownish; and due to fading the colour is presumably lighter than it was originally. The overall good condition of these thirty to seventy-year old reproductions is remarkable, especially because similar reproduction processes usually result in a much shorter life span. Based on the method of reproduction used, only a limited number of copies, perhaps a few dozen, were originally printed. This fact makes each surviving copy very rare, and the group as a whole perhaps unique.

The maps are uncoloured reproductions, although two of them were coloured, presumably shortly after the copies were made. On Map 6 the expedition routes are traced in ink in seven different colours. Map 1 includes wash colours: light blue for the sea and a darker shade for the Nile valley, and the quantitative information is represented by different shades of yellow and brown, as well as blue, green and red line symbols.

There is no information on the maps revealing their makers or the date when they were compiled. On some maps' verso side I could find handwritten notes in pencil which originally served to show the subject of the maps when they were kept folded. On two maps (Map 6, Map I) the note in the upper left corner, possibly by the same hand, reads 'Proprieta Cap(itano). Fabbri (?)'. These are most probably the owner's signature. The name and military rank of the owner supports the suggested connection of the material with the Italian army. There is even a possibility that we can identify the owner and learn more about the context of the material in future. These manuscript notes, which do not appear on other maps in the folders, are evidence that the entire group was originally part of the same material/collection.

There is a single printed map (Map I) which I included in the group for the inscription regarding its provenance. In the left bottom corner, outside the neat line, an inscription 'G. Ferrero dis.(egno)' reveals the name of the draughtsman. His name also appears on some other maps which were printed in the lithographic office of the colonial government, 'Tipo-litografia della Governo della Cirenaica', in Bengazi. The name 'Ferrero' can be found e.g. on the 1: 2 million map sheet, entitled 'Cirenaica, Sirtica e loro Retroterro', published by the 'Ufficio Studi' of the colonial government in October 1932. The 1929 edition of the same map, drawn by 'G.Ferrero, R. Bonati' is approved by the signature of the officer, Colonel Agostini. A comparison of the lettering and the titles of the

maps show two different styles, e.g. one maker used simple letters, while the other made use of capital letters with serifs in the titles. It seems as if the manuscript maps had been drawn by different persons, Ferrero possibly being one of them.

The present order of the material in the collection is more or less geographical. However, the inventory numbers of the items in my group may also reflect their original arrangement. This, I assume, was based on a chronological order, namely the exploration history of the territory. Beyond their appearance and cartographic style, these manuscript maps are all, in some way or another, related to the region of Kufra oasis, in southern Libya, Egypt and Sudan.

In this research paper I would like to demonstrate why and how these manuscript military maps and sketches are related to the exploration and mapping of the Libyan Desert, in particular to the still mysterious activity and work of László Almásy, the real 'English' patient. Instead of describing and analyzing each map in the group separately, I include all of them in a narrative and provide an historical overview of the exploration and mapping of the region. I would like to explain how different stages of the same history are documented on individual maps, and how the related collection of material, the group itself, documents a crucial historical period during the 1930s. In the concluding part of my paper I show some of the consequences of the cartographic work the group of maps represents, namely the compilation of Italian topographic maps in the 1930s. The Libyan Desert became a huge battlefield in World War II, but the war in the inner desert was perhaps the scene of the most unusual operations, executed by special military forces. The activities of these forces highly depended on the reliability of maps. The 1942 German military operation Salaam, commanded by Almásy, is a special case documenting how the most excellent expedition cartography can result in poor topography and useless map sheets.

THE LIBYAN DESERT'S LOST OASES

László Ede Almásy (1895-1951) came from a noble but untitled Hungarian family. His father explored inner Asia during the early twentieth century, collecting birds and wildlife specimens. László expressed an early interest in modern technology, especially motorcars and airplanes. He drove his father's Oldsmobile at the age of ten and built a glider some years later. He attended a private boarding school in England, where, at seventeen, 'Teddy' obtained a pilot's license. As a representative of an Austrian company (Steyr Automobilwerke in Graz, Styria), Almásy test-drove a car along the Nile from Alexandria to Sudan. Later, he led expeditions that were part test-drives and part safaris. In 1929 he journeyed across east Africa, the Sudan, and Egypt, using two Steyr

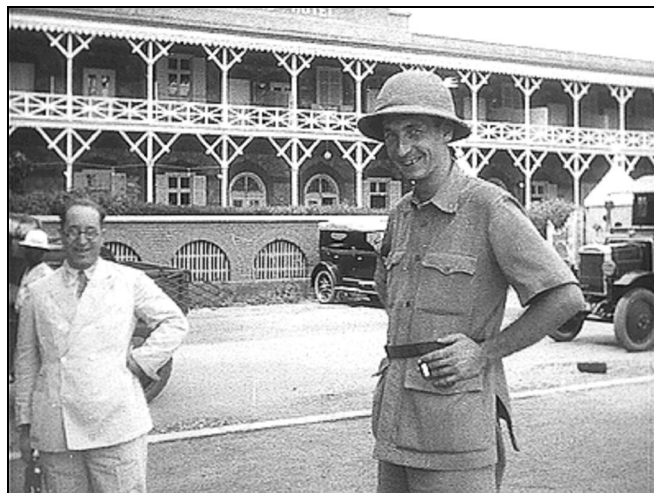


Figure 1: Almásy in front of the Grand Hotel in Khartoum, Sudan in 1929 (Photo courtesy of Kurt Mayer)

motorcars. This 12,000-kilometer trip was a turning point in his life, because he rediscovered an old caravan path - the Darb el Arbain, or Road of Forty - the ancient trade route connecting Egypt and inner Africa (Almásy 1935).

During this expedition Almásy fell in love with the immense wasteland of the Sahara. Crossing the sands of Libya, he heard old-timers tell legends of the desert around the campfire. The story about the lost oasis of Zerzura particularly lured Almásy. Kitab al Kanuz, or Book of Hidden Pearls, a medieval Arabic manuscript written for treasure hunters, explicitly mentions Zerzura (Johnson 1930). It was said to be situated in the heart of the desert, guarded by a white bird. Only a brave man could enter the secret village, full of gold and treasures. In the palace he would find a sleeping queen, who could be awakened by a kiss.

Almásy's successful venture into Libya encouraged him to attempt longer expeditions in search of more undiscovered mysteries, namely the three lost wadis (valleys) of Zerzura. Sir John Gardner Wilkinson (1797-1875), an English explorer, in 1818 heard about Zerzura from the inhabitants of the Dakhla Oasis in Egypt and mentioned it in his writings (Wilkinson 1835). At this time the maps of the Libyan Desert offered enormous empty spaces for fantasy. In the period of the scientific cartography of the Enlightenment, the critical method of the eminent French geographer D'Anville resulted in huge blank spaces on his 1747 map of Africa. These empty spaces were to be filled by route surveys of new expeditions which were practically the only source of information. The Napoleonic topographical survey of Egypt by the French colonial army did not extend to desert areas, which meant that vast areas remained unmapped during the ensuing century (Godlewski 1988).

Nineteenth-century explorers of the Libyan Desert such as the German Gerhard Rohlfs, also wrote of the lost oasis. In 1873-74 his large and well equipped expedition visited and surveyed the westernmost Egyptian oasis, Dakhla. A novel method, terrestrial photogrammetry, was used here for first time by a scientific expedition (Jordan 1875). Starting from Egypt, Rohlfs planned to traverse the unknown central part of the Libyan Desert to the more or less mysterious Libyan oasis, Kufra. His large caravan was the first to cross the unexplored Great Sand Sea, but he could not accomplish the project (Rohlfs 1875). At some point on the way towards the target he suddenly headed north, and marched to Siwa. His turning point, Regenfeld (Rainfield), marked the remotest outpost of scientific exploration in the following decades. Although Rohlfs also heard of the lost oasis 'Sersura', he could only reach the Libyan oasis, Kufra, from Tripoli in 1879.

In the early 20th century, the romantic English explorer, Harding King, with the support of the Royal Geographical Society in London, decided to start searching for the legendary oasis. In Dakhla, the westernmost oasis in Egypt, he observed the migrating birds coming from the southwest with freshly eaten olives in their stomachs. Based on his experiments, he calculated the distance of his 'olive' oasis from Dakhla, and made three attempts to locate the Zerzura of the ancient desert tale. In 1911 he reached a point approximately 250 kilometers south-west from the oasis, but his camel caravan had to return because his native guide tampered with his water supplies. However, before his forced turning point, Harding King noticed on the horizon something similar to a remote mountain range. Harding King published his reports in the *Geographical Journal* and, in 1925, wrote a fascinating, even mysterious, book (Harding-King 1925). The map he enclosed was based on native information he had collected, assessed and organized into one coherent picture. It was a remarkable amalgam of geographical information of highly different reliability as it was distilled mainly from lies. In modern terms, it can be considered a mental map, constructed by a talented and experienced explorer. On the whole it is interesting to note that the scale of the map was wrongly given as the actual scale was approximately (!) 1: 8 million.

Harding-King's book makes the anti-colonial and anti-British atmosphere in the Egyptian oasis almost tangible, an hostility which was strongly influenced by the Senussia. This powerful Muslim



Figure 2: Detail of Harding-King's 'mental map' of the Libyan Desert (1925).

religious-political order was founded in Mecca in 1837, but because of religious reasons its leader moved to Libya in 1843. In 1894 the Senussi sheikh moved his headquarters to the remote Kufra oasis in the southwest of the Libyan Desert. From 1911 the Senussi order, encouraged by the Turks, fought a guerrilla war against the British and Italians in Libya and Egypt.

MOTORIZED EXPEDITIONS

The military operations in the desert against the Senussia included the first motorcar experiments organized in 1915-16 by the British colonial military in Egypt. The Light Car Patrols, using light Ford Model T vehicles, became ideal for both reconnaissance, intelligence and combat groups. Using the cars' speedometers and compasses, they succeeded in mapping large areas in northern Egypt. The effect of the motorcar on desert exploration and warfare was huge.

In the preface to his 1919 secret, military Report on the Western Desert, Captain Claud H. Williams stressed that his purpose was to facilitate the use of cars: '...the whole subject is dealt with from a car point of view, and with the underlying idea of using cars as a military weapon' (Harold 2005). Williams acknowledged the contribution by Dr. John Ball for devising methods of measurements and calculations for use of the motorcar patrols. The geologist Dr. John Ball (1872-1941) was appointed director of the Geological Survey of Egypt in 1897. The 'Little Doctor' joined Light Car Patrols on several surveying trips and wrote the 'Military Notes on Western Egypt' in 1916. In 1917, south west of Dakhla oasis, they discovered Pottery Hill, an old water depot, in the desert.

In the 1920s Colonel De Lancey-Forth's camel expeditions explored the Great Sand Sea south of oasis Siwa, a hard terrain that even today remains practically inaccessible by car. In 1923, after the 1920 visit with Rosita Forbes, the camel caravan of the Egyptian Ahmed Hassanein, an Oxford graduate and excellent sportsman, could enter Kufra again. South-east of the oasis Hassanein discovered and mapped two other 'lost' oases in the unknown desert, the mountains Uweinat and Arkenu (Hassanein 1930).

Prince Kemal el Din Hussein declined the throne of Egypt in favour of living his own life. He pioneered the use of special motor vehicles for desert exploration. With his Citroen half-tracks he traversed the vast unknown expanses, first in pursuit of new hunting grounds, but eventually for exploration. His expeditions, including Dr. Ball, re-discovered Rohlf's tracks south of Dakhla. In 1924-25 Kemal el Din led an expedition and could reach Uveinat from the east. He explored the southern edge of a huge sandstone plateau he named Gilf Kebir, the Great Wall. In 1926, while on his journey to the north of the Uweinat Mountain, he explored the vast plateau that he named 'Gilf Kebir', the Great Wall.

The reports on Kemal el Din's expedition were published in French in internationally-acknowledged publications shortly after the explorations (Kemal el Din 1928). The accounts included detailed maps showing the expeditions' routes in the unknown areas. The majority of the maps in our group reproduce these. Maps 2, 3, 4 and 5 are all 1: 500 000 route maps, constructed on the basis of the coordinates of expedition camps and other important features en route. These geographical coordinates were calculated from the results of astronomical observations. The almost empty map sheets with the plotted tracks look almost like sea charts as desert navigation and mapping in those days were quite similar to oceanic voyages and maritime exploration. It is highly likely that the map sheets in the group were copied from French originals. While the notes were translated into Italian, on some sheets French inscription (e.g. 'Echelles') remained. On Map 4 the inset map showing the arrangement of the sheets suggests that they were all reproduced by Italian copyists. However, not all of them survived in the collection. As the maps are all undated, it is difficult to tell when these copies were made but, based on additional map content, one can make an estimated guess. On Map 3 we find 'Bir Messaha', an artificial well that did not exist before 1928. Given the related content and the uniform style of the maps mentioned above, it is highly probable that all these copies were made later than 1928.

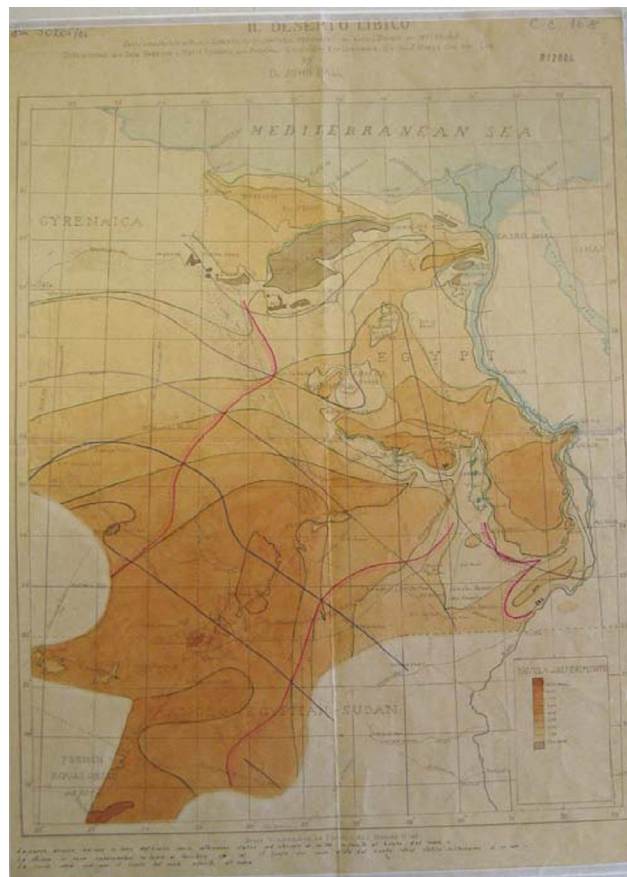


Figure 3: Italian manuscript copy of Ball's 1928 map of the artesian water (Map 1).

John Ball published his influential paper, 'Problems of the Libyan Desert', in the June 1927 issue of the *Geographical Journal* (Ball 1927). For the next decade his theory would inspire explorers with the quest for the legendary 'Zarzura' oasis. According to Ball's theory, based on his observations and measurements of artesian water levels, an oasis could be found only in those unknown parts of the desert, where the water level is close to the surface. After analyzing the possibilities, he proposed the Selima Sand Sheet, west of Bir Terfauwi. His theory was confirmed in 1927-1928 by Llewellyn Beadnell, from the Desert Survey, who triangulated and mapped large tracts west of Kharga Oasis in southern Egypt. In 1928 Beadnell dug the new well of Bir Missaha (the Surveyors' Well, mentioned above) and found the depth of the water level according to Ball's groundwater theory. The hand colored Map 1 in the group is a copy of Ball's map.

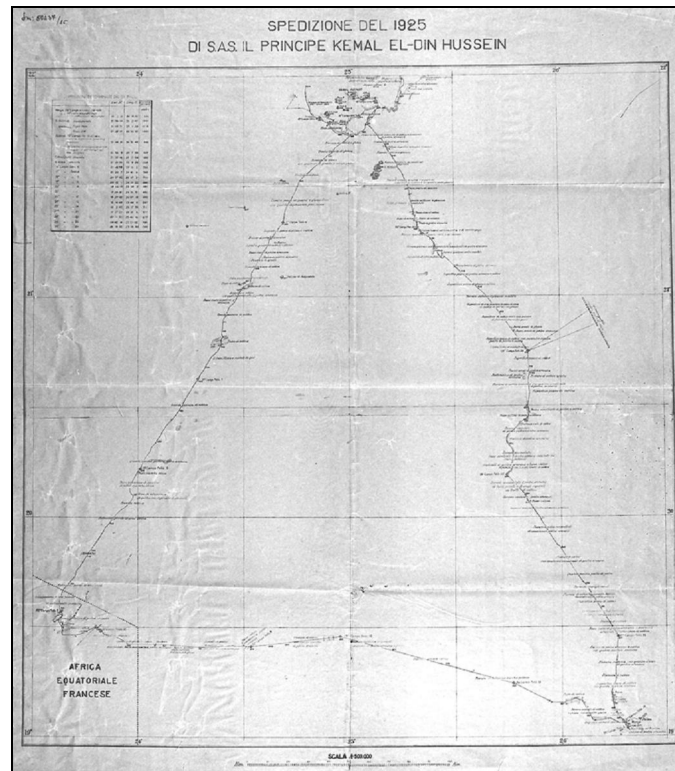


Figure 4, Map 2: The route of Kemal el Din's 1925 expedition. In the upper left corner the list of coordinates of expedition camps, calculated by Ball and Menchikoff.

In 1928 an Italian medical mission was invited to Kufra to attend to members of the Senussi family. The small group led by Dr. Giovanni Brezzi reached Kufra from Jalo. Despite the orders of the Senussi, the Italians were imprisoned, but released after the payment whereupon they returned by way of Siwa. However, in the mean time Dr. Brezzi succeeded in making geographical notes and sketches of the oasis which were, apparently, considered as important for military intelligence. In the group of manuscript maps, Map I is the only printed work, a small lithographic sheet. Considering that the track of the Brezzi expedition is indicated on Map 6, this manuscript was made after the mission's return from Kufra.

BRITISH ZERZURA SEEKERS

By the time Almásy entered the world of Zerzura seekers in the early 1930s, only the innermost section of the Libyan Desert had remained unmapped. Automobiles made it possible to explore those unknown territories, which were earlier out of camel range. In 1929 a group of intrepid desert explorers, mostly British colonial and military officers, founded the Zerzura Club in a pub in Wadi

Halfa, Sudan. This was a very special gentlemen club, the members of which were all hunters for the lost oasis. It is remarkable how much importance was attributed to the question of Zerzura in the *Geographical Journal*, and to what extent the romantic spirit of exploration influenced expedition and intelligence work in the region.

In those years, using specially equipped Fords, the English officer Major Ralph Bagnold, and his companion explored enormous tracts of the Libyan Desert. Despite special efforts he could not find the lost oasis. The map showing the routes of Bagnold's 1929 and 1930 expedition routes, published in the *Geographical Journal* in 1931, is the best expedition map of the region. It is filled with detail, but these minor remarks and notes would certainly be ignored by any compiler of a geographical map on a scale of 1: 1 million. Cartographers would not depict objects such as a 'dead camel' on a normal map. Instead of conventional signs, the map includes notes as the graphic language of European geography apparently became insufficient to represent the 'flat featureless sand plain', in other words the 'nothingness'. The map makers, in order to avoid the blank spaces syndrome, created a scientific illusion. They still represented blank spaces but suggested that the whole territory had been surveyed, and some spaces were intentionally left blank. What to represent when nothing was found, was indeed a serious cartographic problem.

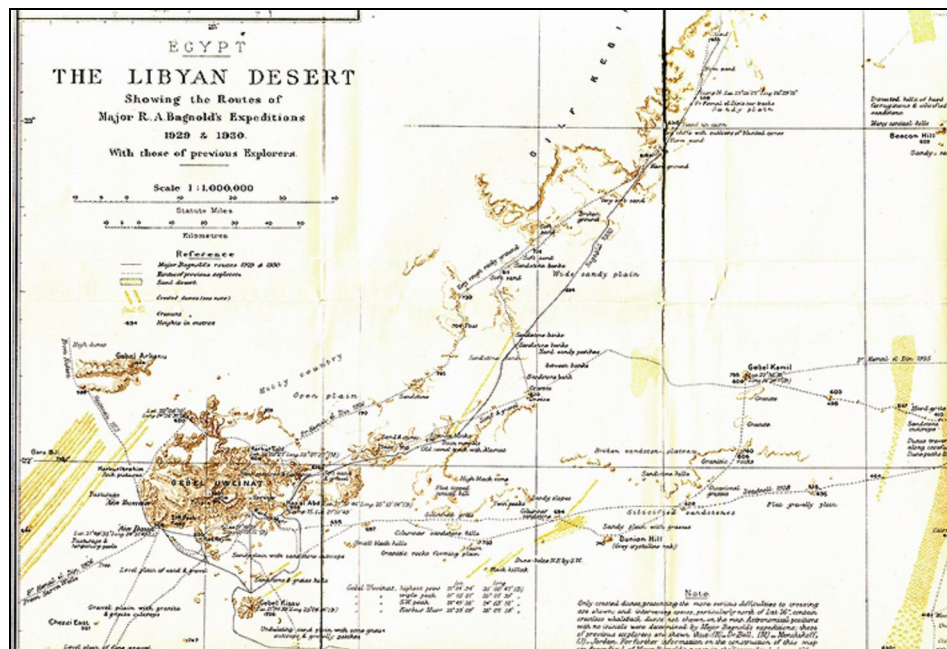


Figure 5: Detail of Bagnold's expedition map in *The Geographical Journal* (1931)

The systematic exploration and mapping of Egypt started with the establishment of the Geological Survey in 1896. The survey of the desert had become important for military reasons and the Egyptian great oases were mapped first. A separate Desert Survey department was founded in 1920. In 1926 a member of the department, Patrick Clayton, was sent to the Western Frontier Demarcation Commission to demarcate the international boundary line together with the Italian commission. He used light cars and a radio receiver for fixing the astronomical points. The expedition reached a point some 350 kilometers due south from the coast of the Mediterranean on the 25th meridian which represented the international boundary in the Great Sand Sea. At about the same time, the southern border between Egypt and Sudan was surveyed by Beadnell.

ITALIAN KUFRA RE-VISITED (1932-1933)

Almásy's first successful venture into the southern Libyan desert encouraged him to attempt longer expeditions in search of the three lost wadis (valleys) of Zerzura. Almásy, who spoke six

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languages, including Arabic, was welcome in the Egyptian court where Prince Kemal el Din acted as his patron. After consulting scientific reports, maps, and historical documents, and conducting interviews with native Bedouins, Almásy concluded that Zerzura should be somewhere in the unexplored Gifl Kebir region, near the end of the route from the Dachla Oasis to the Kufra Oasis. In 1931 he attempted to use his light aircraft to do reconnaissance, but unfortunately crashed in Syria on the way.

In 1932 a young English baron, Sir Robert Clayton East-Clayton, joined Almásy's quest. His plane, a Havilland Gipsy Moth I, called Rupert (the name of the plane in the novel and the film), figured prominently in the expedition. Wing-Commander Penderel of the Royal Air Force and Patrick Clayton of the Desert Survey, were the other British members.

On April 27, 1932 Almásy undertook a dangerous trip across unknown territory to fetch water and petrol from the nearest oasis, Kufra. His arrival surprised the Italians who had captured the oasis and occupied the territory the year before, in 1931. The officers of the colony kept a sharp eye on the Egyptian border after Almásy's unexpected visit proved that the desert was no longer impassable. It is interesting to note that in later accounts the British participants of the expedition, who would not take the risk to enter Italian territory, remembered that Almásy was the only one who had been in possession of a passport. From Almásy's own report, however, we learn that he had no document with him. As a Hungarian aristocrat with Italian ancestry he relied on his excellent communication skills, including his fair command of Italian. He was warmly welcomed by the Italian officers, and guided round the colony by the commander, Major Ottavio Rolle. He left Kufra on the following day with his cars loaded with water, petrol, food and some bottles of Italian wine. In the camp he learnt that his companions' April 28 reconnaissance flight was successful in that they saw a huge valley with green vegetation, which meant that they had found 'Zerzura'. On May 1 they also located another wadi, east of this large valley. However, despite Almásy's efforts, they could not find the entrance to the great valley. The expedition eventually ran out of petrol and water and had to return to Cairo, where they announced the discovery of the lost oasis.

Unfortunately, Almásy lost his supporters just as the desert race was heating up. Both Prince Kemal el Din and Sir Clayton died in 1932. After this his rival, Patrick Clayton, persuaded the Desert Survey to send a surveying expedition into the Great Sand Sea. Clayton could make a detour, reaching the Gifl Kebir from the north to look for the valleys they had seen from the air the previous year. He found the entrance to the main valley, Wadi Abd el Malik, and explored it. He then proceeded to the Kufra Oasis, where he met Lady Clayton, Sir Clayton's young widow, who joined his expedition. Meanwhile, Almásy was having difficulty raising money. His international



Figure 6: Almásy (in the middle) with Italian officers in oasis Kufra (1932).

expedition did not set out until March 1933, along with Wing-Commander Penderel (RAF), Arnold Hoellriegel (penname, actually Richard Bermann, an Austrian journalist), Hans Casparius (a German photographer), and László Kádár (a Hungarian geographer). As they mapped the southern and eastern sides of the Gilf Kebir, they jokingly called their camp "The Great Sand Hotel." They discovered the Aqaba Pass, the Gap, notched between two sides of the plateau.

On April 17 Almásy's expedition arrived at Kufra again, just missing the expedition of Patrick Clayton and Lady Clayton which had left on the same morning. The Clayton expedition left a note reporting that together they explored and surveyed a second valley, Wadi Hamra. Despite all the problems and this disappointing news, Almásy did not give it up. He managed to get information from a native Tebu guide that convinced him there was a third, undiscovered wadi in the Gilf Kebir. In his paper, published in the *Geographical Journal* a year later, the journalist Bermann wrote: 'I shall always remember a conference we had in the old Senussi fortress at 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 screeching of bats' which Herodotus mentions.' (Bermann 1934, p.459)

From Kufra, Almásy led his expedition to the western side of the Gilf, where he discovered Wadi Talh - the third valley of Zerzura. The ancient legend had turned into a reality. With the three valleys discovered, Almásy could finally draw Zerzura on the map. After this success, the party visited a famous well in the Uweinat Mountains, south of the Gilf Kebir, near the present-day intersection of Egypt, Libya, and Sudan. There Almásy discovered prehistoric rock paintings in a small cave above a well, known as Ain Dua. The pictures showed antelopes, giraffes, and even swimmers, which convinced Almásy that the Sahara had not always been a desert. The rock paintings were a scientific sensation and perhaps the most important result of Almásy's work.

On 22 April 1933 the intelligence officer sent a most confidential report from Kufra to the Italian Head Quarters. The long and detailed account described the members of the Almásy-Penderel expedition and detailed the background of the expedition. By that time the military importance of the region explored by the Zerzura seekers had been clearly realized. The expedition maps became primary sources for military and cartographic intelligence. There are paragraphs in the secret report which mention Almásy's maps and demonstrate his rather odd attitude regarding intelligence. In the final part of the document there is a reference to the map of the 1932 expedition: 'As soon as he reached Kufra Almasy gave me the map, the only one from which I could clearly establish the connection between the wadis. He was very annoyed, because last year he had promised the map to major Rolle and left it with our legation in Cairo, but this year he realized they had still got it, and decided to bring me another one.' A little below appears another note on cartography: 'Almasy promised to give me, before he left, a map of the waters (oases) of Egypt: of those of Cyrenaica and other reserved maps.' This map could quite probably be Dr. Ball's map on the Egyptian subsurface water reserves, work of which a version appears on Map 1 in our group.

ZERZURA MAPPED?

The 1932 expedition map, showing the valleys discovered in the Gilf Kebir, was certainly very similar to our Map No. 7, entitled 'Esplorazione dell'ouest del Gilf Kebir'. The plateau is well represented at the scale of 1:1 million, and the routes of the 1926 Kemal el Din, the 1931 Clayton and the 1932 Almásy-Clayton expeditions are prominently shown. The significance of Almásy's work is apparent: his name appears five times on different tracks, including the one to Kufra. In the western Gilf the large valley is represented, but not yet named, even the exact date of its airplane discovery is given. The importance of this part of the desert is clearly emphasized by this map. The explorers' tracks run close, and sometimes cross the 25th meridian, the border between Egypt,

under British protectorate, and Cyrenaica, an Italian colony. Almásy's venture to Kufra is represented here to show possible future visits by other motorized expeditions.

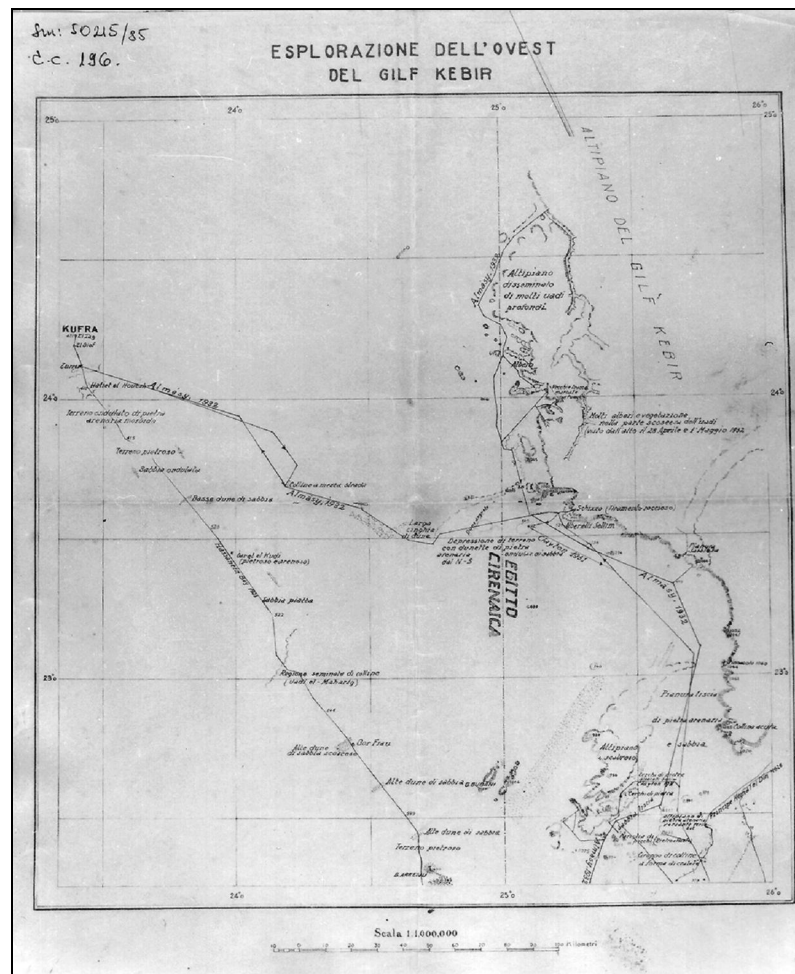


Figure 7: Explorations in the western Gilf Kebir (after 1932) (Map 7).

Is it possible that Map 7 is a copy of the 1932 expedition map which is the secret document mentioned? Although it may be tempting to draw this conclusion, our answer is negative. There are no secrets or espionage behind this map. It is actually a reproduction of the expedition map of the Almásy-Clayton expedition, published by Patrick Clayton in the *Geographical Journal* in 1933 (Clayton 1933). The maker of the copy reproduced that map, with the English notes translated into Italian. Actually the geographical name 'Kufra' is most telling evidence for the procedure: Kufra is the geographical name used in English (or German) publications, while the Italians called it 'Cufra' (see the title 'Cúfra' on Map I, or 'Cufra, El-Cafra' on Map 6). To include the strategically important oasis, not represented on Clayton's sketch, the map was extended, a little more than half a degree, to the west. In the additional strip another important map element could be plotted, namely Hassanein's 1923 track, leading to Uweinat.

The expedition map above was, in my opinion, an important piece of source material for making the last, and perhaps most remarkable, map in the group. At first sight, the large sheet, titled 'Kufra, Auenat, Gilf el Nebir' (Map 8) seems original work, but closer inspection reveals that it is in fact a compilation. The analysis of this work gives us an insight into the methods of the colonial map-maker. The map is actually on two sheets, which were pasted together. The upper and the lower parts do not match perfectly, as if they were put together from two different parts. This is indeed the case as the map we have is actually a copy of Bagnold's expedition route map mentioned above. While the original in the *Geographical Journal* was published in two sections, these parts

were rearranged and put together in the manuscript to form a 1: 1 million scale map sheet. The original work included a smaller scale general map, which showed expedition routes and proper coverage of the sections. The inset map is placed in the left bottom corner, proving that Bagnold's map was used as basis for this work. The compiler carefully translated the English notes into Italian, which were considered important elements of the contents. It should be noted that the title of the map includes a typo, at the same time the name 'Kufra' is wrongly written, although the Italian form 'Cufra' appears on the map. These anomalies may be explained if we suppose that the title of the map was added later, most probably by a careless draughtsman who did not know the region.

The compilation of the map, on the other hand, was done by a person who was familiar with map-making. Apart from Bagnold's map, he used additional sources as well; one of them was certainly the map of the Gilf Kebir, Map 7. The representation of the plateau is directly taken from the map of the 1932 Almásy-Clayton expedition. This addition extended the coverage of the base map; consequently the compilation could include not only the Italian oasis Kufra, but also the territory south of the oasis. The importance of the Uweinat is emphasized by the Egyptian-Libyan border dividing the mountain. The only well in the region, Ain Dua, was a key strategic point from military point of view. The geographical position of the well made it Italian territory, and as soon the situation afforded the Italian colonial government to act, military operations started.

THE UWEINAT BORDER PROBLEM (1933-1934)

The political-military issue was not created, but certainly made apparent, by Almásy's visit to Kufra in 1932. Later in that year, at Sarra well, Ralph Bagnold and his British expedition met and dined on a friendly footing with an Italian party, led by Major Lorenzini. In April 1933, first Patrick Clayton, and shortly after the Almásy-Penderel expedition, visited Kufra. Almásy's second visit to the oasis convinced the Italians that he was an English spy. At the same time, for the same reason, he became even more suspicious to the English military intelligence in Egypt, despite the fact that he also cooperated with the British. As an expert on desert motoring and flight, he could not avoid the attention of military intelligence. During this period the military use of airplanes resulting in flights in the desert which involved air control, was an important part of modern warfare. It should be mentioned here that the Italian army used airplanes for the Kufra campaign in 1931. The result of the Zarzura expeditions foreshadowed the possibility of enemy operations. This explains why special surveying parties were sent by the Italian army to Uweinat and the Gilf in 1933. When Almásy visited Ain Dua he found there an Italian military patrol. Among the officers were Captain Marchesi and his staff who, in 1933, surveyed and mapped the important Uweinat region (Almásy 1935, 1939, 1997).

By 1934 the political issue had escalated. In November 1933 Almásy's archeological expedition returned from the desert to Wadi Halfa and reported a permanent Italian military post at Ain Dua, Uweinat. Air reconnaissance during the year ascertained the Italian occupation at Sarra well, and airfields were marked on both locations. The British reaction was a similar: in January 1934 the RAF and Sudan Defense Force were ordered to occupy oasis Merga and Karkur Murr at Uweinat. According to the photos the commander of the Uweinat party, Colonel Francis Arkwright, preserved in his private album (published on the website of András Zboray (Zboray 2007)), the relation between the military officers remained friendly. Both Italian and British officers met Almásy's, whose expedition camped at Karkur Talh at Uweinat in March. In July 1934 the Sarra triangle was eventually ceded to Italy, and the new border between Libya and Sudan established by the border demarcation committee, led by Colonel Agostini and Colonel Wyatt.

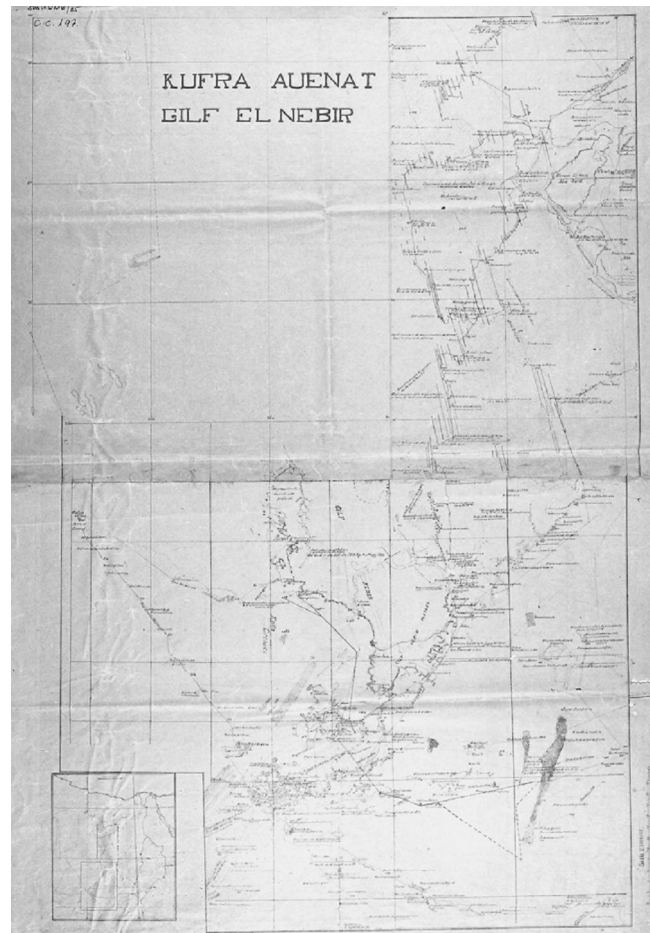


Figure 8, Map 8: The compilation 'Kufra Auenat Gilf el Nebir' (sic).

MILITARY AND CARTOGRAPHIC OPERATIONS

After these precedents one would have expected the topographical survey of the whole Kufra region, but unfortunately this did not take place. (Török 2004). Contemporary topographical maps of the Italian colony were based on existing expedition maps and remained compilations. The marginal references on the map of the Italian series 'Carta dimostrativa della Libia', actually a sheet of the military topographical map series make it clear, that the *Geographical Journal* acted as the map makers' source. The account on the 1933 Almásy-Penderel expedition was published there and illustrated with maps (Penderel 1934). The 1: 400 000 Italian map was a version of the map enclosed; Capitano Marchesi added his own itinerary to Uweinat instead of Hassanein's earlier route. This Italian map is a good example of how expedition route maps could be transformed into topographical sheets. The dashed lines depicting the expedition tracks, e.g. the 1933 Almásy-Penderel expedition, are clear indicators of this source. The Italian interest in the results of the expedition is shown by the short list of expedition material used for the compilation of the sheet. The cartographical mask is, however, already superimposed on the map as it no longer reads as an expedition map. The grid, scale and the list of conventional symbols, most of them not on the map, serve as agents of the transformation. Based on some astronomical points and route surveys, the topographical map suggests that it is an accurate survey of the entire area which is represented. The large white spaces on the map were not explored, neither surveyed, nor mapped, but simply left blank. The cartographic context is misleading, and the reader is in fact told: 'we have surveyed it all, but found nothing important here to show you!' The problems created by bad topographical mapping became apparent in the North African campaigns of World War II.

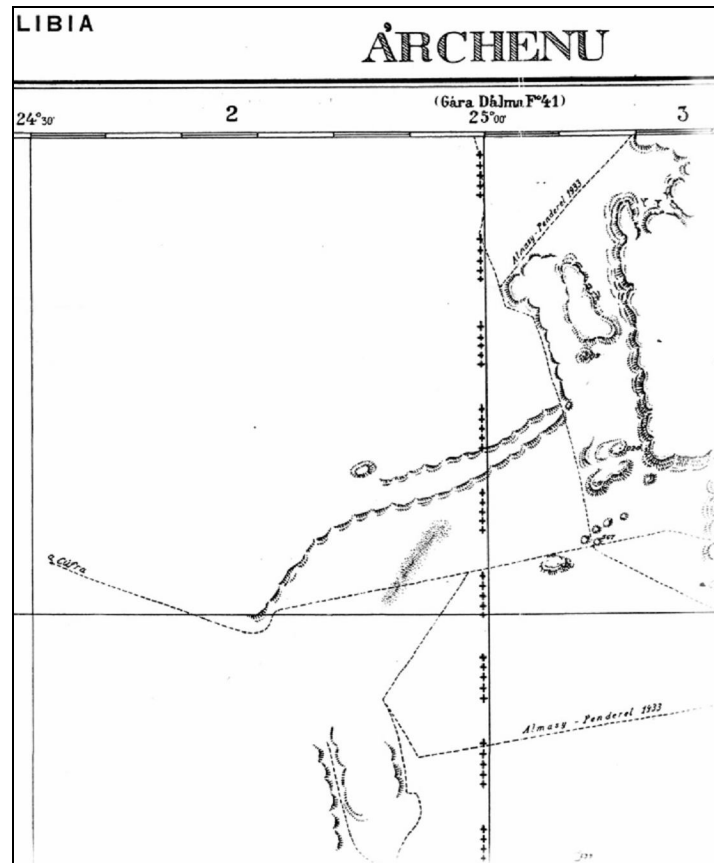


Figure 8, Map 7: Detail of Carta dimostrativa della Libia, Foglio 49, Archenu, 1: 400 000 (after 1932)

The political and military situation was changing quickly, and in 1939 Almásy was not allowed to work in Egypt any longer. He had to return to Hungary, where his services were required by the German Abwehr when Rommel's army needed desert experts. In 1941 Almásy was in the Libyan Desert again. He made maps, wrote desert manuals, and set up ventures with his reconnaissance patrol. On the other side Bagnold formed the light car patrols of the Long Range Desert Group, including the former English explorers: Clayton, Prendergast and Shaw. Almásy's most famous mission was a secret operation, Operation Salaam, in which he took two German spies from Libya through Allied lines to Egypt in 1942. Despite the Allies' efforts, Almásy always seemed to know the terrain better than they did. Almásy's war diary of 'Operation Salaam' is kept in the Imperial War Museum in London, among the Long Range Desert Group papers (Almásy 1997). The description of the route of the special unit includes many references to desert navigation and maps.

The entry taken on 17 May 1942 in the Camp at Depot II remains a remarkable reference to the poor quality of the Italian maps: 'Start 0640 course 122 with the intention of getting onto my old Gifl-Kufra route. To the east a large group of high black hills NOT on the Italian map. No mapping done here outside the Depression and the Gebel Kufra. What were they doing between 1931 and 1939 then?' A little below Almásy complains about his assistant, who is not capable to give bearings and distances with the result that he is continually forced to stop and check his course on the 'useless Italian map'. In the course of the whole journey Almásy's navigation heavily relied on the tracks of former expeditions in the Gifl Kebir region. He mentions his own pre-war tracks, as well as those left by Clayton and Bagnold. On 27 May, on their return journey, already in Libya, but still behind Allied lines, there is another, rather ironic note on the 'blank Italian map' and a personal remark is added: 'It would have been a profitable task to triangulate these mountain groups'.

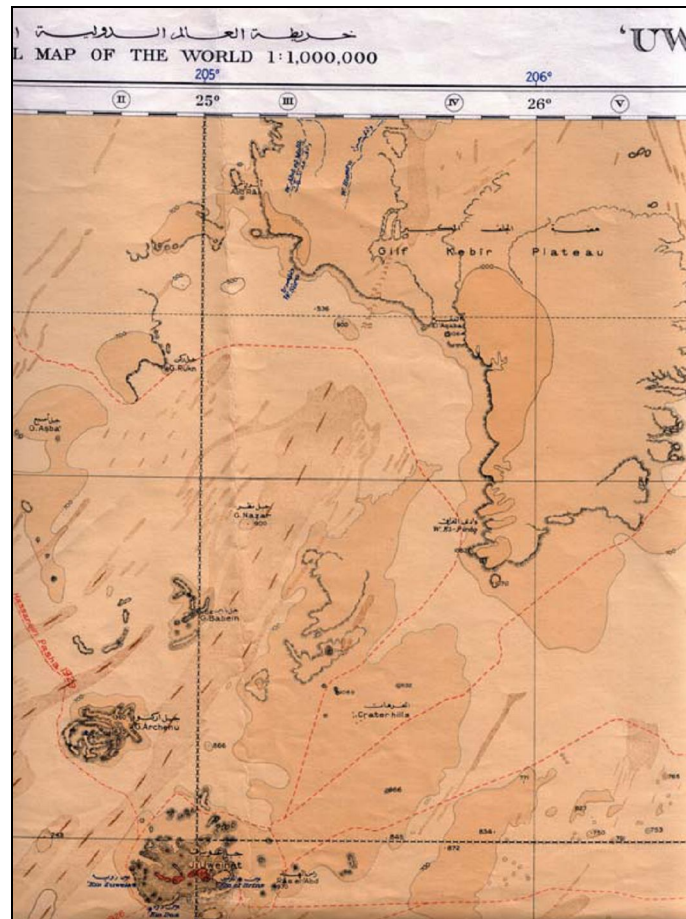


Figure 9: Detail of Sheet ‘Uweinat of the 1: 1 million International Map of the World (1942).

Around the same time the sheet ‘Uweinat was published in 1942 by the Survey of Egypt in the 1:1 million International World Map series (see Figure 6 above). This sheet shows the southern Libyan Desert with hypsometrical relief coloring. According to the legend below the map, dashed red lines are paths or tracks with the names of Hassanein’s pasha, Prince Kemal el-Din, Bagnold, Newbold and Shaw. The names of the explorers of Zerkura, the lost oasis, do not appear on the map and are, perhaps deliberately, missing. The tracks of their expedition cars, however, remain forever in the endless sands of Libyan Desert, divided by political borders.

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