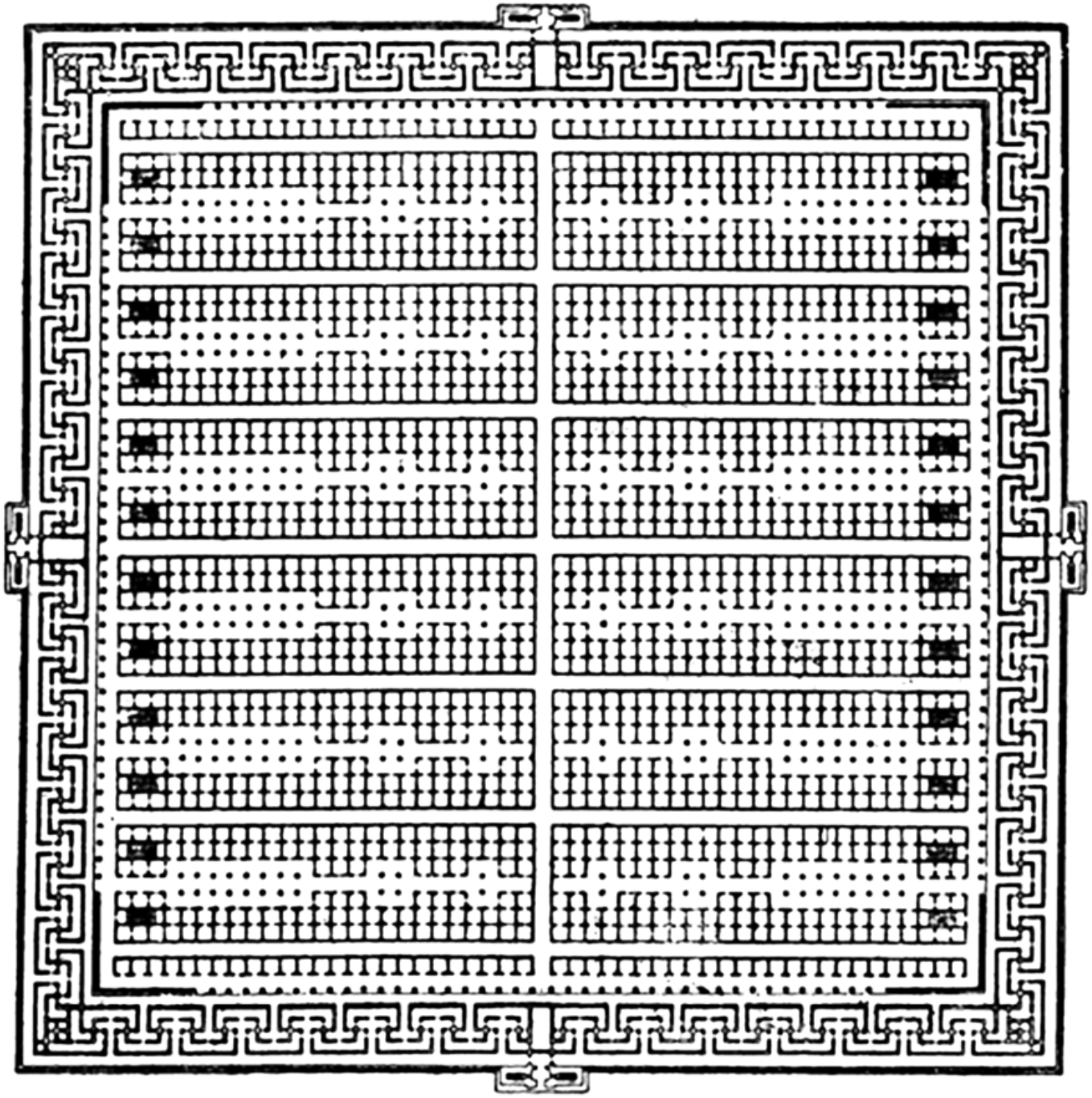
Mataha Expedition

Hawara 2008

NRIAG - Ghent University/Kunst-Zicht
A project funded by Louis De Cordier

Labyrinth of Egypt



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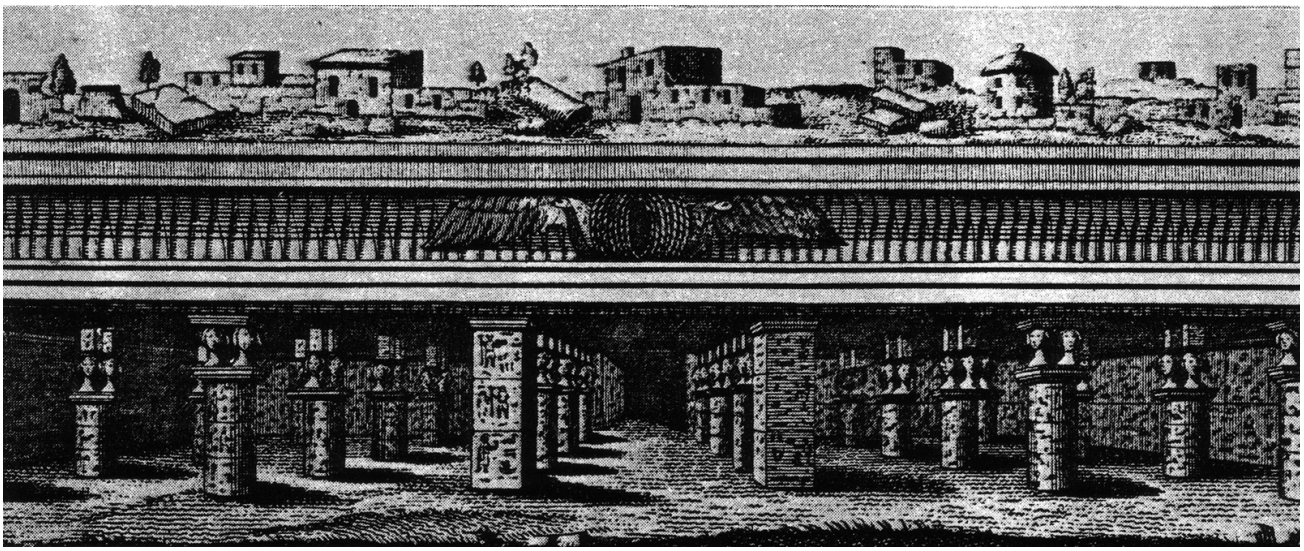
intro

The Mataha-expedition researched the lost labyrinth of Egypt at Hawara. A colossal temple described by many classic authors like Herodotus and Strabo, to contain 3000 rooms full of hieroglyphs and paintings. A legendary building lost for 2 millenia under the ancient sands of Egypt. Bringing the highest level of technology to unlock the secrets of the past. The sand of Hawara was scanned in 2008 by the Belgian Egyptian expedition team. Although ground penetrating techniques are used by archaeologists for years, the Mataha-expedition (Mataha = labyrinth in Arabic) was the first to apply this technology at Hawara, to solve the enigma born in the Renaissance for once.



Copperplate engraving, "Description de l'Egypte" Paris 1809

expedition

From the 18th of February until the 12th of March 2008 the geo-archaeological survey was conducted by the NRIAG (National Research Institute of Astronomy and Geophysics, Helwan, Egypt) on the archaeological site of Hawara (Faiyum oasis – Egypt). Archaeological geophysics is a means to non-destructively gain information, about what features are below the ground to great depths without archaeological excavation.

Mataha Expedition February 2008

Pyramid of Hawara February 2008

Mataha Expedition, Hawara 2008

Geophysic surveys are carried out to answer a specific question.
This question is usually as simple as 'What is there?'. Permission for this research was given by the Supreme Council of Antiquities of Egypt, to conduct the geophysic research of the Hawara Necropolis in order to map the underground to prepare for preservation works. Stating the integration of a huge drainage system, to protect the location against the environmental effects of salty groundwater. Caused by the site crossing water channel, agricultural irrigation, and the disappearance of the annual 9 month dry period since the construction of the Aswan dam. The conservation works will open the way to archaeological excavation, before the total destruction of the effected antiquities, also mapped by the geo-archaeological survey.

people

The Mataha Expediton is an art & science project by: NRIAG, Ghent University/ Kunst-Zicht, Louis De Cordier.

with the cooperation of The Supreme Council of Antiquities, Horus Foundation, Isel Foundation.

Special thanks to Dr. Zahi Hawass, Prof. Dr. Moustafa Kamel El-Ghamrawy, Dr. Abbas Mohamed Abbas, Prof. Dr. Morgan De Dapper, Guy Bovyn, Kaat Van de Velde, Andrée van de Kerckhove, Gino Ratinckx, Frank Clark, Mark Beaver, Seppe Slabbinck, Peter Cooreman, Patrick Geryl.

statement

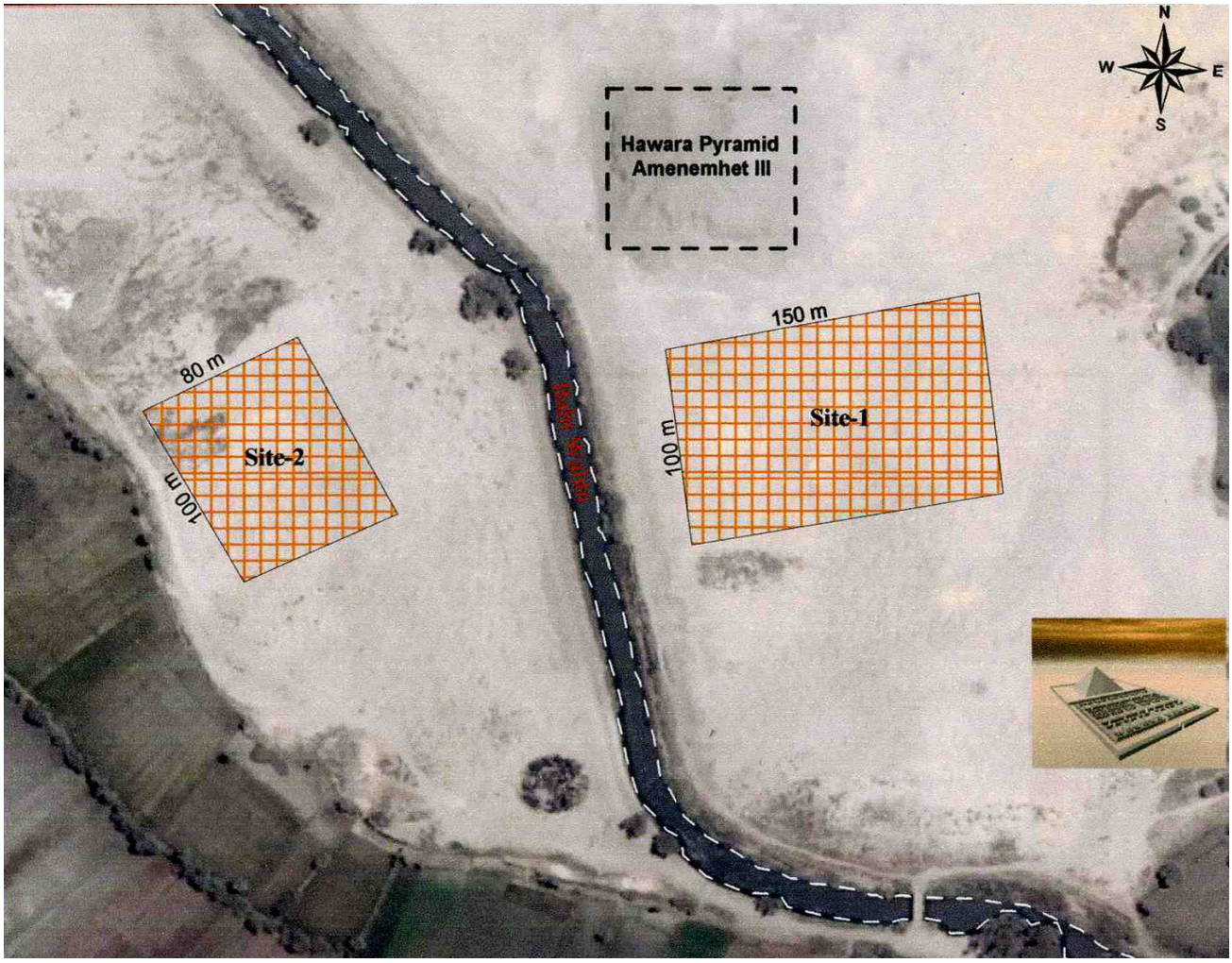
Since Herodotus visited the legendary labyrinth of Egypt 2500 years ago, the building dissapeared in the mist of time. After millennia of desert winds the tip of its remains was finally found back by the famous archaeologist Flinders Petrie in 1889.

Petrie interpreted the enormous artificial stone plateau he discovered at Hawara (304m by 244m), as the foundation of the labyrinth and concluded, that the building itself was totally demolished, as a stone quarry in the Ptolemaic period. The mission of the Mataha-expedition was, besides preservation, to question this theory. On account, the foundation impenetrated by early expeditions, could be the roof of the labyrinth, described by Strabo as a great plain of stone. If this should be the case, it would not only be a historic discovery, but also a huge challenge, because the whole area is seriously affected by corrosive salty groundwater. Agressively destructing stone on a great scale, making environmental protection directly the utmost necessity. To be, or not to be anymore. A big question that is now scientifically answered by the geophysic survey, ending all contextual assumptions. The Mataha-expedition made the statement to find this out with the realisation of a professional geo-archaeologic survey, and "watched" with a qualified scientific team under the "foundation" of Petrie. With the aim to unriddle the enigma of the lost labyrinth, full of hieroglyphs sculpted for enternity in its endless stone walls, as described by the classic authors, and believed today by many people to contain all knowledge of ancient Egypt. After all, the principal aim of the Mataha-expedition is the search to better understand the history of Mankind.

http://labyrinthofegypt.com/downloads/mataha-expedition_hawara-workshop.pdf

result

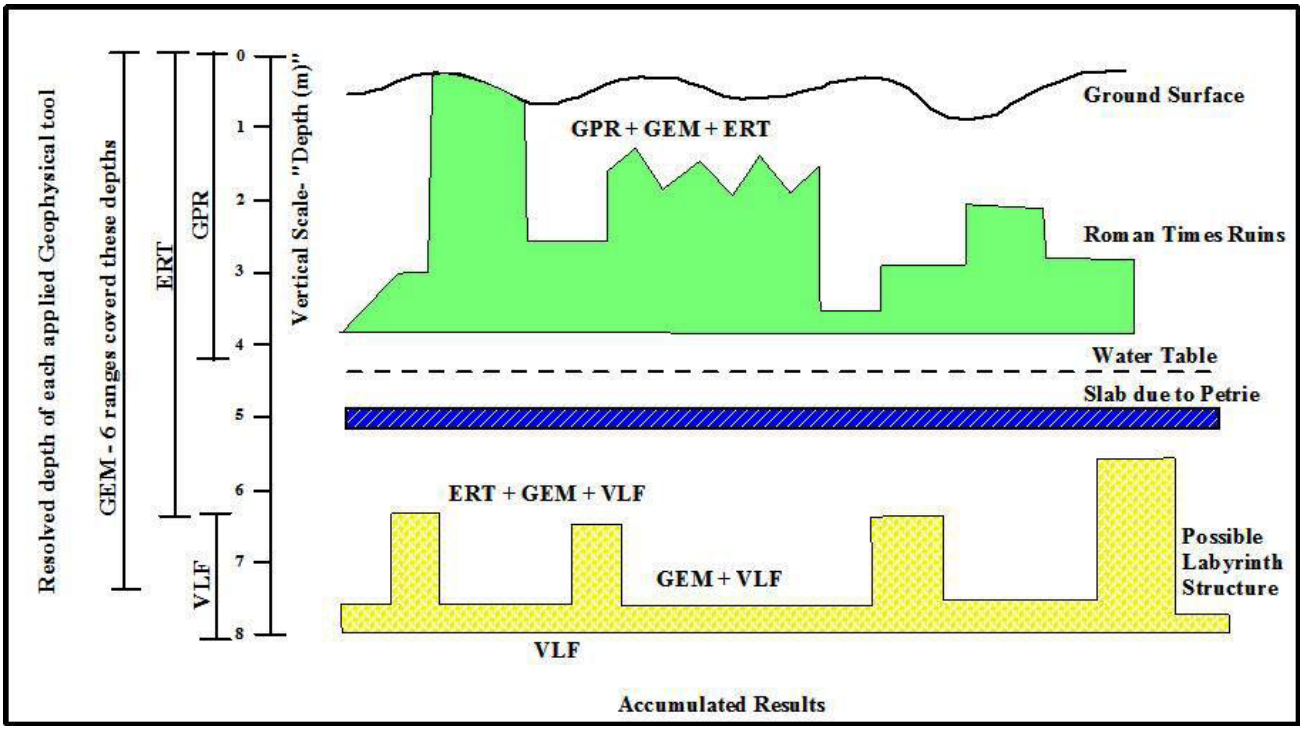
The results of the Hawara geophysic-survey are officially released for the first time in August 2008, by the National Research Institute of Astronomy and Geophysics (NRIAG, Cairo) at the Workshop in Cairo, to the persons directly related with the Hawara preservate masterplan of the Supreme Council of Antiquities. The Mataha Expedition results were secondly published in the scientific journal of the NRIAG in fall 2008. Thirdly, all Mataha-expedition research information was exchanged on the Public Lecture at Ghent University (October 2008) in the presence of the Belgian press. The conclusion of the Hawara geophysic-survey is, however, still waiting to be internationally released by Dr. Zahi Hawass, the Secretary General of the Supreme Council of Antiquities (Egypt). Since the release of the scan results at the Ghent University public lecture, Dr Zahi Hawass requested to stop communicating our results, intimidating the Mataha Expedition team members with Egyptian National Security sanctions.



Scan zones

After 2 years of patience we decided June 2010, to oppose all cunning and deceit by posting the conclusion on the labyrinthofegypt.com website:

The Mataha – expedition geophysic research confirms the presence of archaeological features at the labyrinth area south of the Hawara pyramid of Amenemhet III. These features covering an underground area of several hectares, have the prominent signature of vertical walls on the geophysical results. The vertical walls with an average thickness of several meters, are connected to shape nearly closed rooms, which are interpreted to be huge in number. Consequently, the geophysic survey initiated with the permission of Dr. Zahi Hawass the president of the Supreme Council of Antiquities, and conducted by the National Research Institute of Astronomy and Geophysics (Helwan, Cairo) with the support of Ghent University, can now officially verify the occurrence of big parts of the Labyrinth as described by the classic authors at the study area. The Labyrinth data are acquired mainly from 2 scanned surfaces at the labyrinth area south of the pyramid. One scan survey of 150m by 100m on the right site of the Bahr Wahbi canal, and one on the left site (80m by 100m). Two considerations regarding the conclusion. First, seen the survey provided only two big puzzles; the total size and shape of the labyrinth can not yet been concluded. Secondly, the data of the labyrinth are accurate, because of the exceptional dimensions of the structure, but groundwater affected the consistency of the survey. The partial defacement of the data is due to the high salinity of the shallow subsurface water and the seasonal fluctuation of this level. So, we recommend also another episode of geophysical survey after the dewatering project to enhance the outcome to great extent.



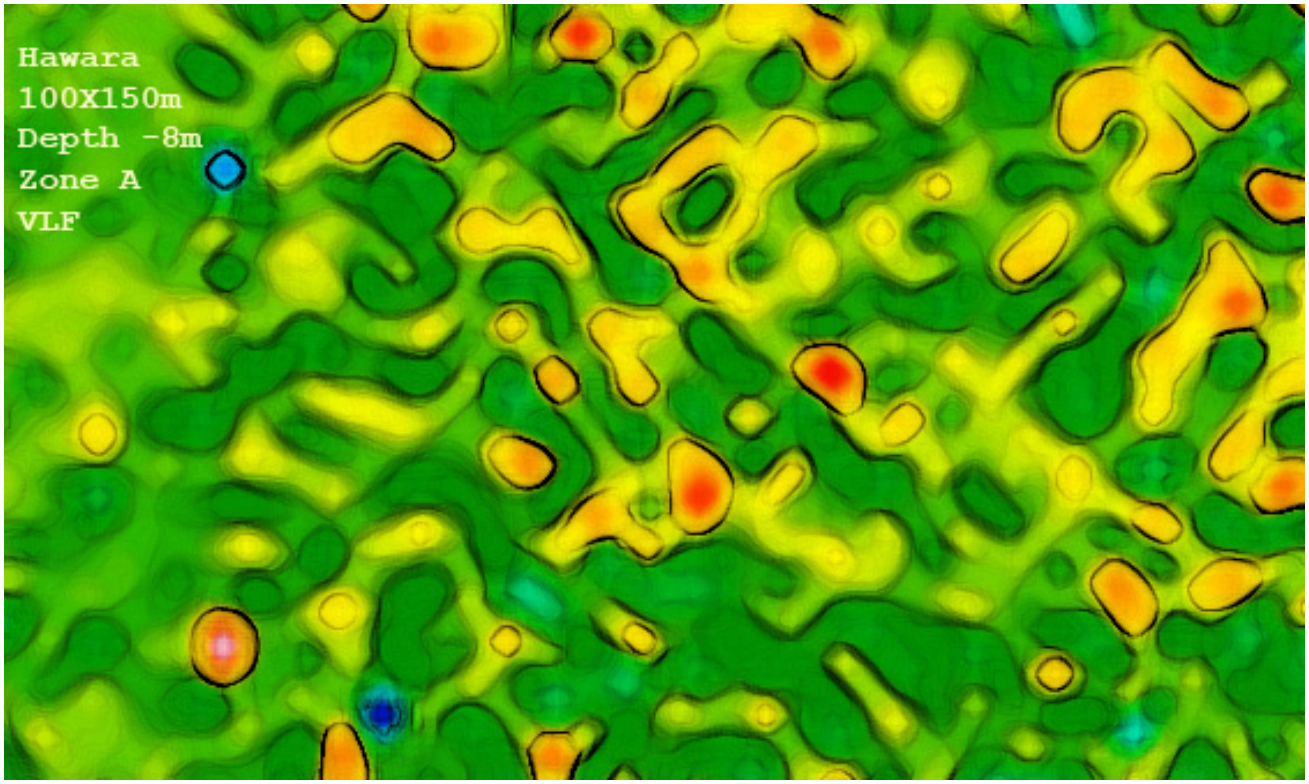
Scan zone A

In the upper ground zone above the water level, walls appear at the shallow depth ranging between 1,5 to 2,5 meters. These decayed mudbrick features are very chaotic and show no consistent grid structure and can be comfortably related with the historic period of the Ptolemaic and Roman times. A period in which is known, that the labyrinth area was used as a cemetery, and probably also changed to a living area in the Byzantine period. Underneath this upper zone, below the artificial stone surface appears (in spite of the turbid effect of the groundwater) at the depth of 8 to 12 meters a grid structure of gigantic size made of a very high resistivity material like granit stone. This states the presence of a colossal archaeological feature below the labyrinth "foundation" zone of Petrie, which has to be reconsidered as the roof of the still existing labyrinth. The conclusion of the geo-archaeological expedition counters in a scientific way the idea that the labyrinth was destructed as a stone quary in Ptolemaic times and validates the authenticity of the classical author reports. The massive grid structure of the labyrinth is also out of angle by 20° to 25° from the Hawara pyramid orientation.

NRIAG geophysicist Hawara 2008

Louis De Cordier, Hawara Faiyum

An analysis shifting the contemporary idea of the labyrinth as funerary temple and its supposed construction age, but on the other hand it hardens Herodotus accuracy, who described the nearby pyramid to be at the corner of the labyrinth. It might even be considered that the remains of the labyrinth run unaffectedly underneath the canal, which crosses the total Hawara area. Like the scanned Labyrinth sections on both sides of Bahr Wahbi canal have similar and parallel grids on the geophysical results.



NRIAG result graphic

preservation

From a preservative view on the Hawara archaeological site, humanity is facing a great challenge. The water level, which raised dramatically since the last decades, is detected at a depth of about 4-5 meters below the ground surface at the labyrinth area. Drowning the whole site completely in the corrosive salty water, which agressively destructs the stones of the labyrinth on a great scale. Making environmental protection directly the utmost necessity.

UNESCO committee members publicly considered after the official release of the research conclusion at the workshop in Cairo, to mark the total Hawara site “world heritage”, as the first UNESCO step towards the launch of an international safeguarding campaign. This should be a great honour and help, like Hawara not only contains important Middle Kingdom to late Roman antiquities, but maybe also the greatest wonder of the classical world. With the words of Herodotus “surpassing even the great pyramids of Giza”.

In contrast to many sites, which are vulnerable to illegal excavations and theft, the labyrinth is contradictory protected from illegal human activity by the saline water that destroys it. A situation we can not push towards a next generation without presenting an empty box, like all expected

hieroglyphic texts as described by the classic authors will be very soon lost forever, eaten out by salt crystals.

An archaeological rescue operation will therefore have to be organized, to raise the necessary media attention, experts, technology and funds to start the drainage, protection and the total excavation of the labyrinth of Egypt. The Egyptian Supreme Council of Antiquities expressed their great devotion and responsibility by announcing the start of the actual renovate master plan for the site, but as a the labyrinth affects the whole world, we are responsible to support this great country that bears already the heavy weight to preserve and protect the remains of a giant civilization. A fantastic country with great people, that is reaching a warm hand to the rest of the world to share this global human heritage.

The Mataha-expedition team therefore directs the need for any kind of support to all man. We believe that humanity reached the point of civilization to be able to work unconditional together at high efficiency with the honorary aim to protect and discover the colossal stone book that the ancients built with an unimaginable effort of love, to communicate with us from the deep black of time.

art & science

In the Mataha-expedition, contemporary archaeology met contemporary art. The cutting edge research featured the relations between art, science and archaeology. The Mataha-expedition was a total project mixing geophysicists, archaeologists, astronomers, geomorphologists, artists, egyptologists, communicators, art curators, authors, aerospace and civil engineers, to create an innovative way of research. Louis De Cordier felt that both the artist and scientist share the common believe in the impossible. Although these professions appear to be on the opposite side of the logic-creativity-spectrum, he recognized that they often use a similar language to communicate their ideas: they are both highly visual, comfortable with the abstract, and focused on the unknown. Fueled by the desire to express change, Louis De Cordier realized the cooperation between the Ghent University and the NRIAG, which found enormous value in incorporating contemporary art as a catalyst to their traditional scientific process, inciting the evolution of the archaeologic research field. On balance, the historic relation between art research and archaeology is very close. Archaeology as a discipline has always been a department of the Faculty of Arts and Philosophy. In the last decades archaeology evolved to a hard science by working together with departments like geology and geography. A great evolution bringing along technics as radio carbon dating and geophysics, but gradually loosing the factor of the artistic imagination.
So inherent to understand long lost civilizations, which left us mainly... Art. The realization of the Mataha-expedition founds its origin in the imagination of artists dating back to the Renaissance period. The Renaissance stimulated rising interest in Antiquity, and brought back into circulation classical authors such as Herodotus. As a result, once again authors and artists were the first to be interested in the Egyptian labyrinth. The scholar Athanasius Kircher (1601-1680 CE) produced one of the first pictorial reconstructions, based on the accounts in Herodotus.

In the centuries to follow, the legendary labyrinth of Egypt continued to inspire Romantic artists and artistic explorers to search in Egypt. Like Paul Lucas, artist and antiquary of king Louis XIV of France. Reaching its peak with the exploration of Egypt by Napoleon Bonaparte, who realized an expedition constituted of artists and scientists forming one team of "savants" which located the labyrinth in Hawara.

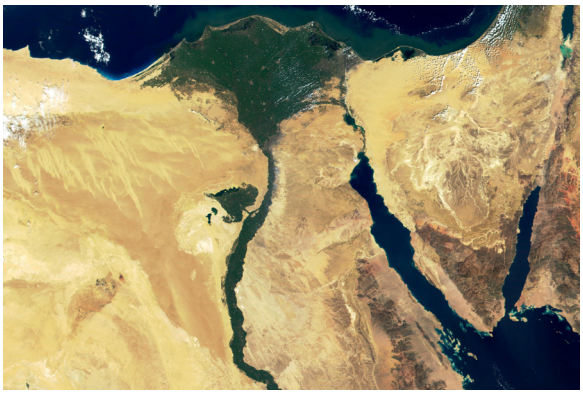
In this state of mind the artist Louis De Cordier continued the labyrinth story on a contemporary archaeological way. Devoted to the preservation and investigation of Egyptian antiquities, Louis De Cordier started the Mataha-expedition with a series of private lectures, funding the project with

golden sun disk

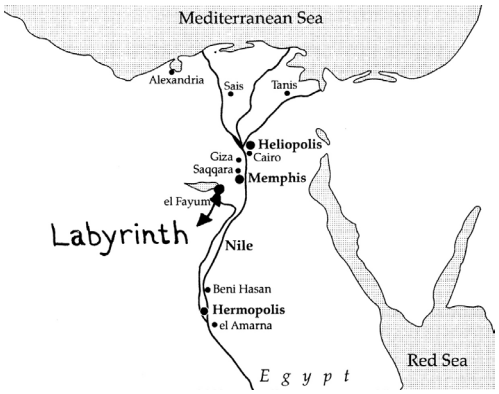
the sale profits of the Golden Sun Disk. A timepiece designed by Louis De Cordier to ignite the global fire of comprehensive awareness and awakening. The vision of the Mataha-expedition by Louis De Cordier is not a solitary experiment, but an early foray of a holistic movement to enable research and innovation through the cooperation of varied art & science disciplines.

location

The historic location of the labyrinth as described by the ancient authors has always been comfortably situated by most Egyptologists at Hawara in Egypt. There are several reasons for this. Like the described presence by Herodotus of the pyramid next to the water canal at the entrance of the nearby lake, called lake Moeris and the town Medinet el-Faiyum which was also known as Crocodilopolis, the ancient town of Arsinoë. Reasons which where later supported by the archaeologic research of Flinders Petrie, who stated that the labyrinth covered at Hawara an area of about 244m from east to west by 304m from north to south.



Egypt, satellite image NASA

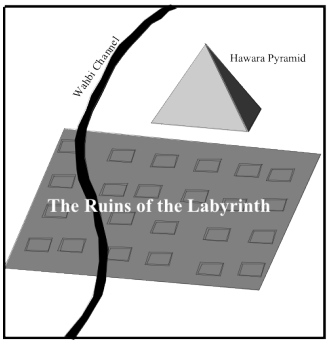


Labyrinth of Egypt, Faiyum, Egypt

Hawara is situated 90 km south of modern Cairo, at the entrance to the depression of the Faiyum oasis. The Egyptian name Hw.t-wr.t, "great temple", refers to the labyrinth. The location is marked with the pyramid of Amenemhet III, the last great king of the 12th dynasty (about 1855-1808 Before Common Era). The pyramid he built at Hawara is believed to post-date the so called "Black Pyramid" built by the same ruler at Dahshur. It is this pyramid that is believed to have been Amenemhet's final resting place. In common with the Middle Kingdom pyramids constructed after Amenemhet II, it was built of mudbrick round a core of limestone passages and burial chambers, and faced with limestone. Most of the facing stone was later pillaged for use in other buildings (a fate common to almost all of Egypt's pyramids) and today the pyramid is little more than an eroded, vaguely pyramidal mountain of mud brick.

The entrance to the pyramid is today flooded to a depth of 4-5 m by groundwater. Queen Sobekneferu of the twelfth dynasty also built at the complex. Her name meant "most beautiful of Sobek", the sacred crocodile.

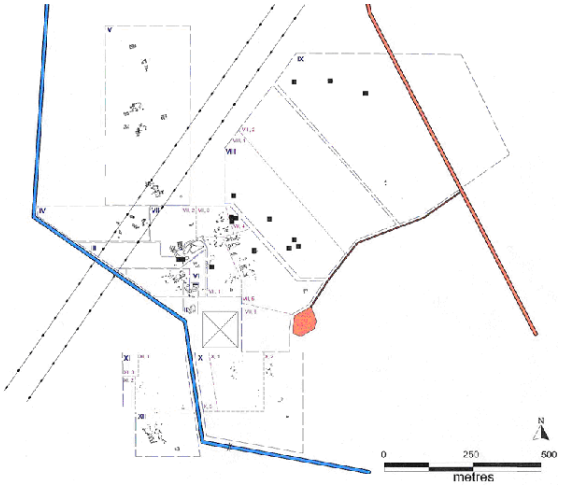
Pyramid of Amenemhet III, Hawara



Labyrinth sitemap

The archaeological site of Hawara, is situated on the border area between the cultivated land of the Faiyum oasis and the desert. The Bahr Yussuf, passing in the south, connected the site with the nearby metropolis Crocodilopolis (Arsinoë), once situated at the border of lake Moeris. The name "Moeris" is a Greek adaptation of ancient Egyptian Mer-Wer (= "The Great Lake"). In ancient Egypt, the lake was also variously called "the Lake", "the Pure Lake", and "the Lake of Osiris". During the Middle Kingdom, the whole area around the lake was often referred to as Mer-Wer as well. Similarly, the Late Egyptian word "Faiyum" (the Sea) came to be used as a reference for the entire region in later times. In the north a small part of the Hawara site is cut by the road to the governate capital Medinet el-Faiyum, while the east side is defined by the entrance road to the site. The southern and also partly the western border of the site is formed by the Bahr Wahbi, a 180 year old canal which continues towards the north of the Faiyum. During the

Hawara, satellite image NASA

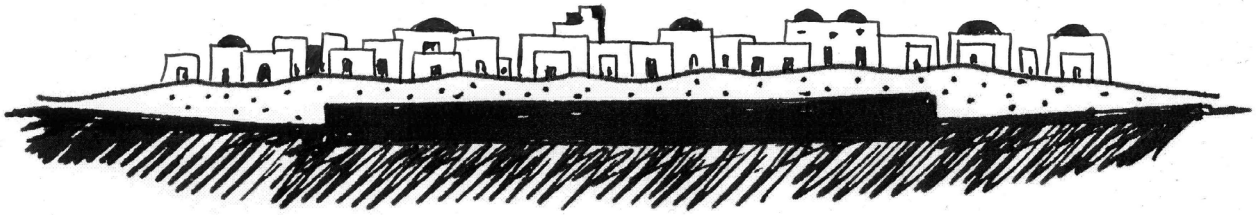


Hawara sitemap, K.U.L. Belgium

rule of Mohammed Ali (1805-1848), the French engineer Linant de Bellefonds supervised a major program of canal construction (Linant de Bellefonds, 1854). As part of these hydrological improvements, the Bahr Wahbi was constructed between 1830 and 1835, as a subsidiary canal to take water from the Bahr Yussef to the northeastern part of the Faiyum.

South of the pyramid, on both sides of the Bahr Wahbi canal, the remains are traced of the labyrinth, the assumed funerary temple of the pyramid complex.

North of the pyramid a huge cemetary is situated, recognizable by the mudbrick constructions, tombs, mummy wrappings and bones. On the north - eastern corner of the site an area with tomb shafts, which functioned as a cemetery for human and crocodile burials, can be defined. Although the extent of ancient Hawara remains problematic, (part of) the centre can be located on the archaeological site. In the Ptolemaic period living areas were located north-west and south of the pyramid. In the latter area part of the houses were built on top of the western aisle of the labyrinth, others in the area south and south-east, which bordered the 'temple area of Souchos' mentioned in the Demotic texts.



Reconstructive drawing of Roman Hawara by Louis De Cordier

The same areas were occupied during the early Roman period as shown by the surface ceramics. Strabo mentions a Roman village on (top) of the trapezium-shaped platform, where the labyrinth was located, i.e. in the area south-west of the pyramid. All tombs in this extended necropolis have the usual SW-NE lay-out in a strange contrast to the pyramid of King Amenemhat III, which is symmetrical with the NS meridian. The Roman houses were also constructed north-west of the pyramid. The north-west probably stayed in use for late gold faced mask mummies datable between ca. 30 Before Common Era and 50 CE and the gilded mask mummies of the early imperial period. Similar gold-faced mask mummies were found in the labyrinth area, south-east of the pyramid, where in an earlier phase crocodiles had been buried (Petrie 1889, pp.6 and 17). In the 5th century CE the village was centered around a small church. The mud brick buildings may have lost their funerary function in the Byzantine period (or even earlier) and have become a living area. During the Ptolemaic period three or four clearly defined burial areas were in use, though Ptolemaic tombs also spread to other places on the site.

According to Petrie the most recent burials were in the northern part of the area of his 'tomb chambers', although it is not clear how far Petrie's excavation reached. North-east of the pyramid Petrie discovered late burials with Coptic embroideries (Petrie 1889, p.8). The surface pottery in the rest of the area attests human occupation during the 6th-8th centuries CE, though it is unclear whether the activities were at this time still (exclusively) funerary.

historic accounts

The colossal Egyptian temple was named "Labyrinth" by the Greeks after their legendary complex of meandering halls designed by Daedalus for King Minos of Crete (wherein the Minotaur dwelt). Herodotus wrote of the labyrinth after his visit of the building in the fifth century Before Common Era. Herodotos describes the labyrinth as a grand monument for the twelve kings (dodecarchs), surpassing even the pyramids. According to Manetho's Aegyptiaca, preserved in an epitome of the early 3rd century CE, the Labyrinth was the tomb of king Lachares. For Diodorus Siculus (1st century BCE) the enormous collective tomb of the twelve kings was built by Mendes, alias Marros. Following a different tradition he reports that king Menas built a square pyramid and the labyrinth. Strabo, who visited Egypt in 25-24 BCE, gives an accurate topographical description, locating the labyrinth and the pyramid in a trapezium shaped area. He also mentions a nearby village. In Strabo's

view the labyrinth was a palace, a place for assembling, speaking justice and bringing offerings for the nomes of Egypt. Pliny's Natural History (ca. CE 70) ascribes the great labyrinth to king Petesouchos or Tithoes. His contemporary Pomponius Mela attributes it to Psammetichus. In Aelius Aristides (CE 117-181) book "Aigyptios" the labyrinth is a mere rhetorical topic illustrating the greatness of Egypt (Aigyptios 48, 1). According to the Historia Augusta (written early 4th century CE), the Roman Emperor Septimius Severus visited the labyrinth site during his journey in Egypt in 199-200 CE. The state of preservation of the building at that time is not clear, but its symbolic meaning and fame have remained (Historia Augusta 17, 4).

Herodotus (ca. 484-430 BCE): One passage in Histories, Book, II, 148.

In the second book of his History, the Greek writer Herodotus gave the following account of the Labyrinth:

148. Moreover they (the 12 kings) resolved to join all together and leave a memorial of themselves; and having so resolved they caused to be made a labyrinth, situated a little above the lake of Moiris and nearly opposite to that which is called the City of Crocodiles. This I saw myself, and I found it greater than words can say. For if one should put together and reckon up all the buildings and all the great works produced by the Hellenes, they would prove to be inferior in labour and expense to this labyrinth, though it is true that both the temple at Ephesos and that at Samos are works worthy of note. The pyramids also were greater than words can say, and each one of them is equal to many works of the Hellenes, great as they may be; but the labyrinth surpasses even the pyramids. It has twelve courts covered in, with gates facing one another, six upon the North side and six upon the South, joining on one to another, and the same wall surrounds them all outside; and there are in it two kinds of chambers, the one kind below the ground and the other above upon these, three thousand in number, of each kind fifteen hundred. The upper set of chambers we ourselves saw, going through them, and we tell of them having looked upon them with our own eyes; but the chambers under ground we heard about only; for the Egyptians who had charge of them were not willing on any account to show them, saying that here were the sepulchres of the kings who had first built this labyrinth and of the sacred crocodiles. Accordingly we speak of the chambers below by what we received from hearsay, while those above we saw ourselves and found them to be works of more than human greatness. For the passages through the chambers, and the goings this way and that way through the courts, which were admirably adorned, afforded endless matter for marvel, as we went through from a court to the chambers beyond it, and from the chambers to colonnades, and from the colonnades to other rooms, and then from the chambers again to other courts. Over the whole of these is a roof made of stone like the walls; and the walls are covered with figures carved upon them, each court being surrounded with pillars of white stone fitted together most perfectly; and at the end of the labyrinth, by the corner of it, there is a pyramid of forty fathoms, upon which large figures are carved, and to this there is a way made under ground.

149. Such is this labyrinth; but a cause for marvel even greater than this is afforded by the lake, which is called the lake of Moiris, along the side of which this labyrinth is built…

Manetho Aegyptiaca (2, frag. 34) (3rd century BCE):
Short fragment from his list of Egyptian kings.

"Fourth King. Lamares, eight years. He built the Labyrinth in the Arsinoite Nome as a tomb for himself."

Diodorus Siculus (1st century BCE): Two passages in his history, Book I 61.1-2 and 66.3-6.

"When the king died the government was recovered by Egyptians and they appointed a native king Mendes, whom some call Mares. Although he was responsible for no military achievements whatsoever, he did build himself what is called the Labyrinth as a tomb, an edifice which is wonderful not so much for its size as for the inimitable skill with which it was build; for once in, it is impossible to find one's way out again without difficulty, unless one lights upon a guide who is perfectly acquainted with it. It is even said by some that Daedalus crossed over to Egypt and, in wonder at the skill shown in the building, built for Minos, King of Crete, a labyrinth like that in Egypt, in which, so the tales goes, the creature called the Minotaur was kept. Be that as it may, the Cretan Labyrinth has completely disappeared, either through the destruction wrought by some ruler or through the ravages of time; but the Egyptian Labyrinth remains absolutely perfect in its entire construction down to my time.
And seized with enthusiasm for this enterprise they strove eagerly to surpass all their predecessors in the seize of their building. For they chose a site beside the channel leading into Lake Moeris in Libya and there constructed their tomb of the finest stone, laying down an oblong as the shape and a stade as the size of each side, while in respect of carving and other works of craftsmanship they left no room for their successors to surpass them. For, when one had entered the sacred enclosure, one found a temple surrounded by columns, 40 to each side, and this building had a roof made of a single stone, carved with panels and richly adorned with excellent paintings. It contained memorials of the homeland of each of the kings as well as of the temples and sacrifices carried out in it, all skillfully worked in paintings of the greatest beauty. Generally it is said that the king conceived their tomb on such an expensive and prodigious scale that if they had not been deposed before its completion, they would not have been able to give their successors any opportunity to surpass them in architectural feats."

Strabo (ca. 64 BCE - CE 19): Three passages in his geography, Book 17, I, 3 and 37 and 42.

"... the total number of nomes was equal to the number of the courts in the Labyrinth; these are fewer than 30. In addition to these things there is the edifice of the Labyrinth which is a building quite equal to the Pyramids and nearby the tomb of the king who built the Labyrinth. There is at the point where one first enters the channel, about 30 or 40 stades along the way, a flat trapezium-shaped site which contains both a village and a great palace made up of many palaces equal in number to that of the nomes in former times; for such is the number of peristyle courts which lie contiguous with one another, all in one row and backing on one wall, as though one had a long wall with the courts lying before it, and the passages into the courts lie opposite the wall. Before the entrances there lie what might be called hidden chambers which are long and many in number and have paths running

through one another which twist and turn, so that no one can enter or leave any court without a guide. And the wonder of it is the roofs of each chambers are made of single stones and the width of the hidden chambers is spanned in the same way by monolithic beams of outstanding size; for nowhere is wood or any other material included. And if one mounts onto the roof, at no great height because the building has only one storey, it is possible to get a view of a plain of masonry made of such stones, and, if one drops back down from there into the courts, it is possible to see them lying there in row each supported be 27 monolithic pillars; the walls too are made up in stones of no less a size.
At the end of this building, which occupies anarea of more than a stade, stands the tomb, a pyramid on a oblong base, each side about 4 "plethra" in length and the height about the same; the name of the man buried there was Imandes. The reason for making the courts so many is said to be the fact that it was customary for all nomes to gather there according to rank with their own priests and priestesses, for the purpose of sacrifice, divine-offering, and judgement on the most important matters. And each of the nomes was lodged in the court appointed to it. And above this city stands Abydos, in which there is the Memnonium, a palace wonderfully constructed of massive stonework in the same way as we have said the Labyrinth was built, though the Memnonium differs in being simple in structure."

Pliny the Elder (CE 23-79): One passage in his Natural History, Book 36, 84-89

"Let us speak also of labyrinths, quite the most extraordinary works on which men have spent their money, but not, as may be thought, figments of the imagination. There still exists even now in Egypt in the Heracleopolite Nome the one which was built first, according to tradition 3,600 years ago by king Petesuchis or Tithois, though Herodotus ascribes the whole work to Twelve Kings and Psammetichus, the latest of them. Various reasons are given for building it. Demoteles claims that it was the palace of Moteris, Lyceas the tomb of Moeris, but the majority of writers take the view that it was build as a temple to the Sun, and this is generally accepted. At any rate, that Daedalus used this as the model for the Labyrinth which he built in Crete is beyond doubt, but it is equally clear that he imitated only 100th part of it which contains twisting paths and passages which advance and retreat-all impossible to negotiate. The reason for this is not that within a small compass it involves one in mile upon of walking, as we see in tessellated floors or the displays given by boys on the Campus, but that frequently doors are buried in it to beguile the visitor into going forward and then force him to return into the same winding paths. This was the second to be built after the Egyptian Labyrinth, the third being in Lemnos and the fourth in Italy, all roofed with vaults of polished stone, though the Egyptian specimen, to my considerable astonishment, has its entrance and columns made of Parian marble, while the rest is of Aswan granite, such masses being put together as time itself cannot dissolve even with the help of the Heracleopolitans; for they have regarded the building with extraordinary hatred.

It would be impossible to describe in detail the layout of that building and its individual parts, since it is divided into regions and administrative districts which are called nomes, each of the 21 nomes giving its names to one of the houses. A further reason is the fact that it also contains temples of all the gods of Egypt while, in addition, Nemesis placed in the building's 40 chapels many pyramids of 40 ells each covering an area of 6

arourae with their base. Men are already weary with travelling when they reach that bewildering maze of paths; indeed, there are also lofty upper rooms reached by ramps and porticoes from which one descends on stairways which have 90 steps each; inside are columns of imperial porphyry, images of the gods, statues of kings and representations of monsters. Certain of the halls are arranged in such way that as one throws open the door there arises within a fearful noise of thunder; moreover one passes through most of them in darkness. There are again other massive buildings outside the wall of the Labyrinth; they call them "the Wing". Then there are other subterranean chambers made by excavating galleries in the soil. One person only has done any repairs there-and they were few in number. He was Chaermon, the eunoch of king Necthebis, 500 years before Alexander the Great. A tradition is also current that he supported the roofs with beams of acacia wood boiled in oil, until squared stones could be raised up into the vaults."

Pomponius Mela (1st century CE): One passage in his chorographia, Book I, 9, 56.

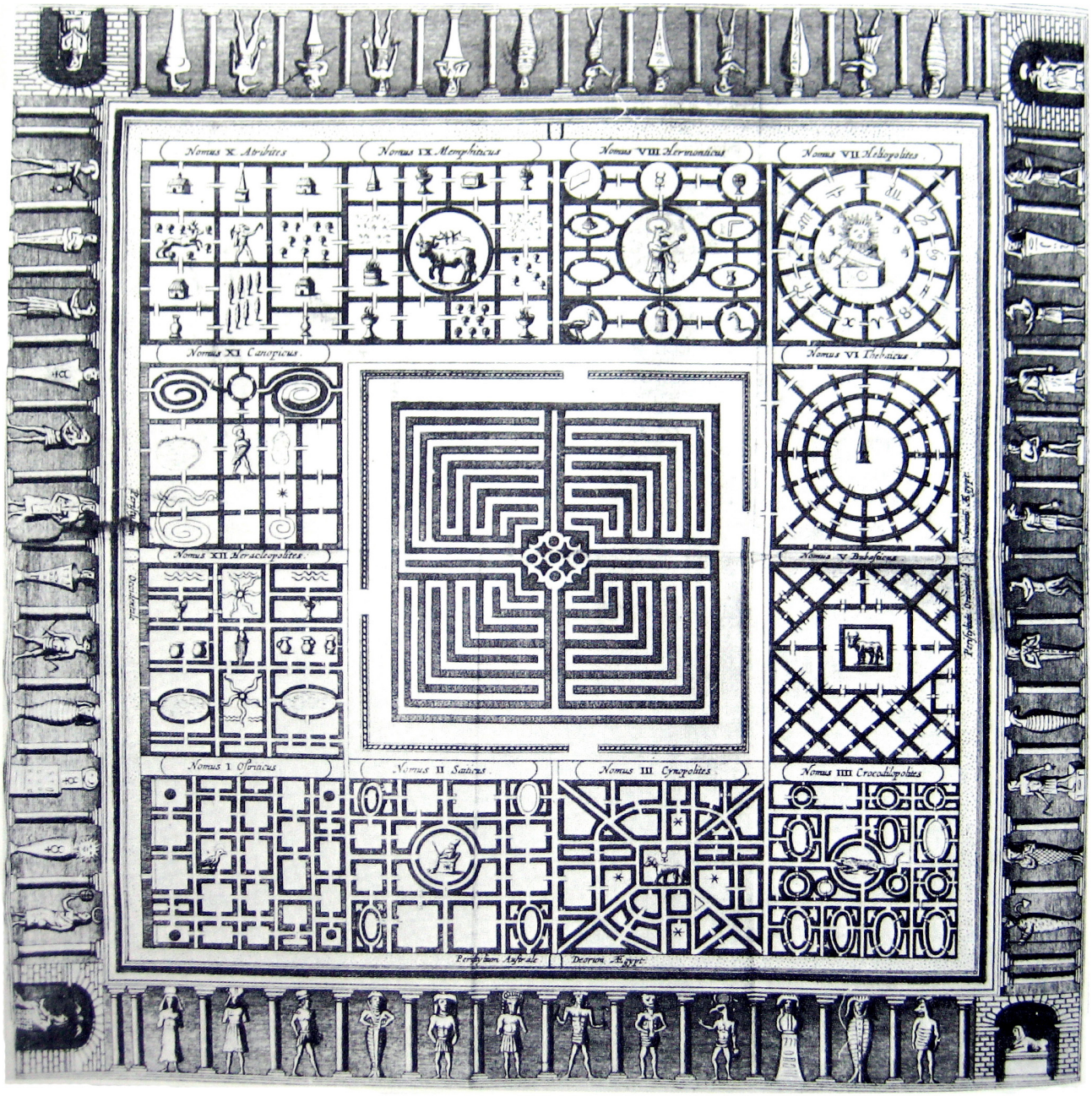
"The building of Psammetich, the Labyrinth, includes within the circuit of one unbroken wall 1000 houses and 12 palaces, and is built of marble as well as being roofed with the same material. It has one descending way into it, and contains within almost innumerable paths, which have many convolutions twisting hither and thither. These paths, however, cause great perplexity both because of their continual winding and because of their porticoes which often reverse their direction, continually running through one circle after another and continually turning and retracing their steps as far as they have gone forwards with the result that the Labyrinth is fraught with confusion by reason of its perpetual meandering, though it is possible to extricate oneself."

papyri

The village Hw.t-wr.t/Αὐῆρις (= great temple) is attested 119 times in 62 documents between 292 BC and 141 CE. The concentration of documents in the 1st century BCE is due to the Hawara undertakers archives. The Egyptian labyrinth (Λαβύρινθος) appears 18 times in 16 papyri between 258 BCE and the reign of Hadrian (117-138 CE). All texts but one are Ptolemaic. Though the names Hw.t-wr.t/Αὐῆρις and Λαβύρινθος disappear early from our records, archaeological finds show that the site was continuously occupied up to the 7th century CE. The Egyptian name Hw.t-wr.t corresponds to Greek Αὐῆριςin several bilingual documents, e.g. P.Hawara Lüdd. III (233 BCE), P.Ashm. I 14 and 15 (72/71 BCE) and P.Ashm. I 16 (69/68 BCE). The aspiration at the beginning of the word shows in the phi in ᾽Αγουήρεως τῆς ᾽Ηρακ[λείδου μερίδος] (where ᾽Αγουήρεως stands for Αὐῆρις) in SB XIV 11303. Greek ἀ for Egyptian hw.t is found in other toponyms as well (Clarysse-Quaegebeur 1982, p.78)

early explorers

A structure which evoked so much wonder and admiration in ancient times hardly failed arouse the curiosity of later generations, but no serious attempts to locate it seem to have been made by Europeans until several centuries later.



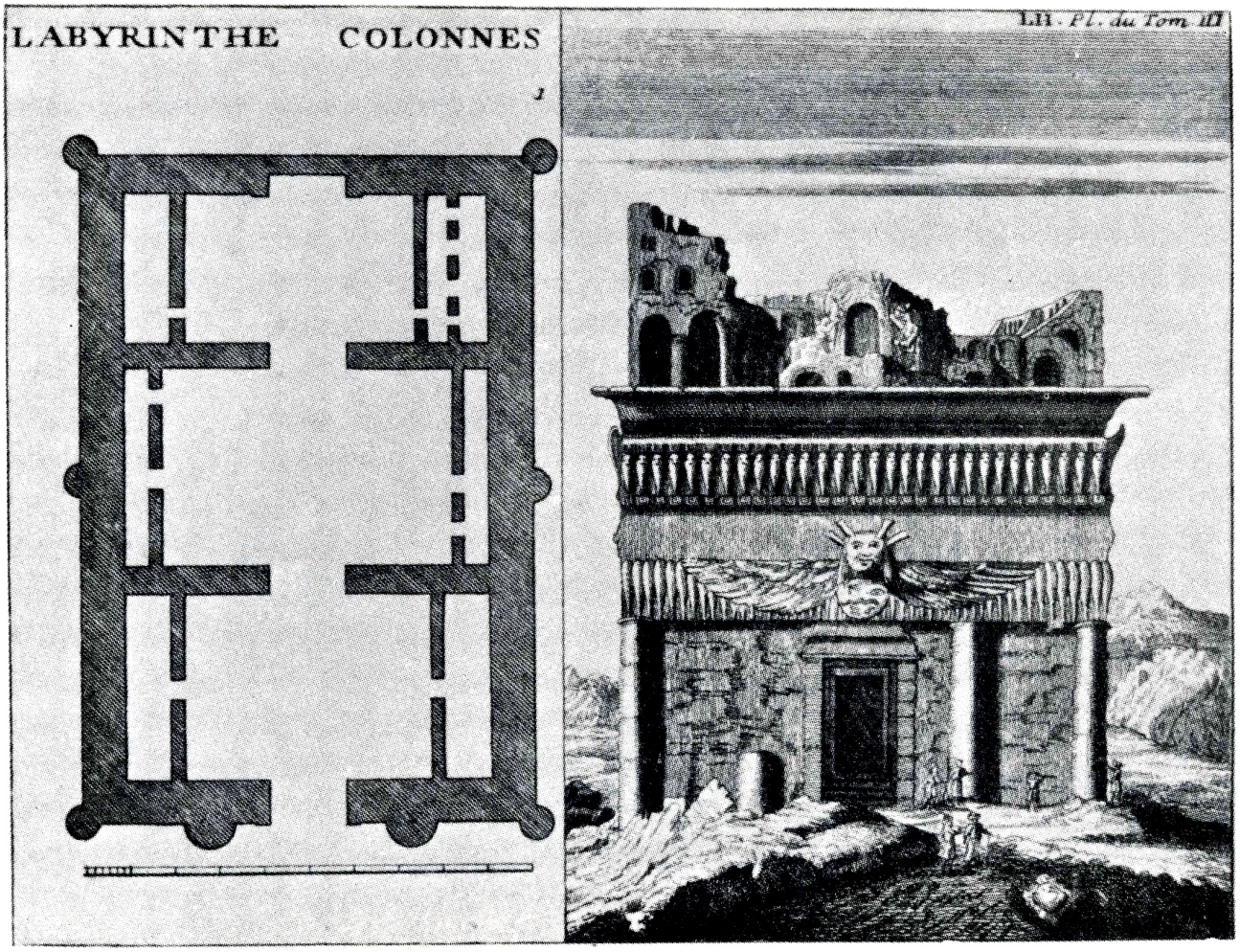
reconstruction of the Egyptian labyrinth by Athanasius Kircher. Copperplate engraving (50X 41 cm)
"Turris Babel Sive Archontologia", Amsterdam 1679

It was then far too late to observe any of its glories, for it disappeared in Roman times, and a village sprang up on its site, largely constructed from surrounding debris.

Paul Lucas (1664 -1737 CE)

The artist, Paul Lucas (1664 Rouen - 1737 Madrid), and antiquary to Louis XIV of France, is one of the earliest sources of information from Upper Egypt, visiting Thebes and the Nile up to the cataracts. In the book in which he subsequently published the account of his travels, he gives us some idea of the state of the remains in his time, but his account is very rambling and unreliable. His drawing is a partial view of the ruins of the alleged labyrinth. Remark the ruins on top of an intact and proportional colossal temple. Lucas states that an old Arab who accompanied his party professed to have explored the interior of the ruins many years before, and to have

penetrated into its subterranean passages to a large chamber surrounded by several niches, "like little shops," whence endless alleys and other rooms branched off. A statement that supports the probability that the labyrinth survived the Ptolemaic en Roman times unaffected. By the time of Lucas's visit, however, these passages could not be traced, and he concluded that they had become blocked up by debris.



The labyrinth of Egypt, Paul Lucas

Richard Pococke (1704 – 1765 CE)

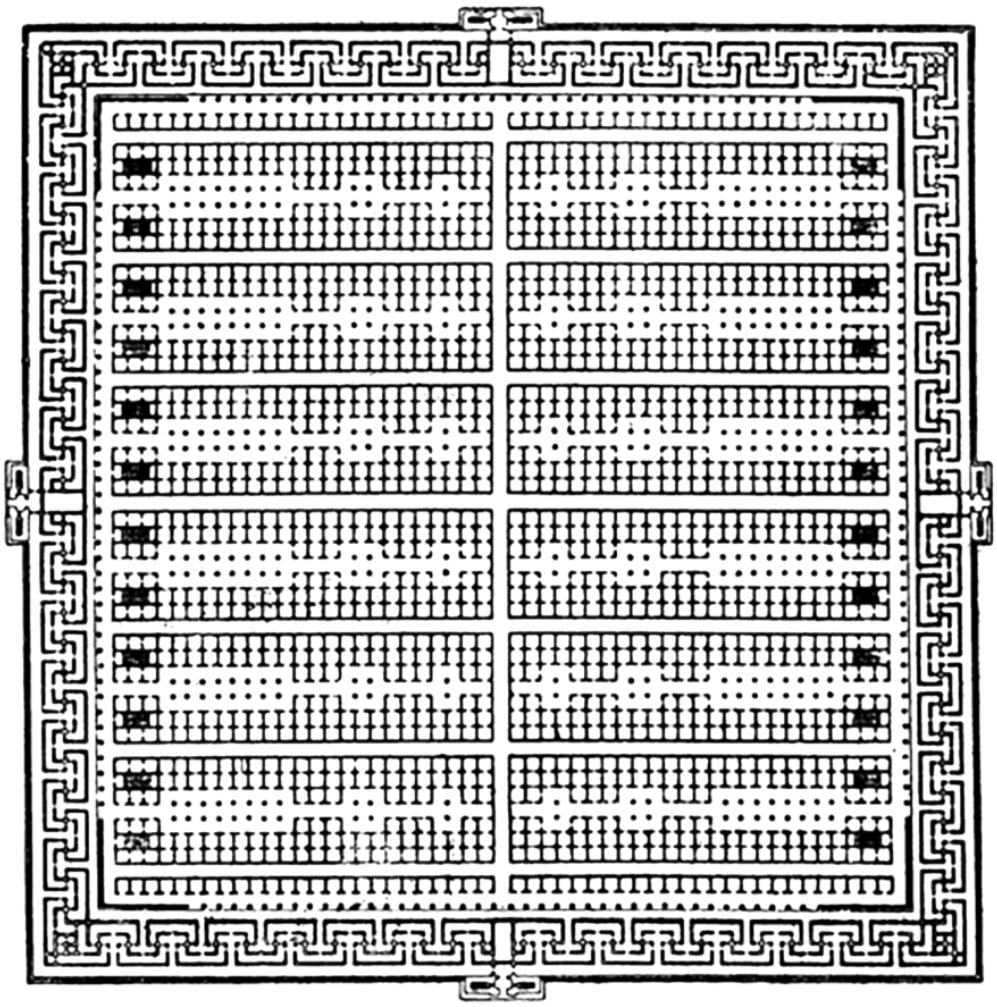
The next explorer to visit the spot seems to have been Dr. Richard Pococke. From 1737-40 CE he visited the Near East. Exploring Egypt, Jerusalem, Palestine and Greece. In his book "Description of the East" that appeared in 1743 he wrote; "We observed at a great distance, the temple of the Labyrinth, and being about a league from it, I observed several heaps as of ruins, covered with sand, and many stones all round as if there had been some great building there: they call it the town of Caroon (Bellet Caroon). It seemed to have been of a considerable breadth from east to west, and the buildings extended on each side towards the north to the Lake Moeris and the temple. This without doubt is the spot of the famous Labyrinth which Herodotus says was built by the twelve kings of Egypt." He describes what he takes to be the pyramid of the labyrinth as a building about 165 feet long by 80 broad, very much ruined, and says it is called the "Castle of Caroon"

Luigi Canina(1795-1856 CE)

Many attempts have been made to visualize the labyrinth as it existed in the time of Herodotus. The drawing of the Italian architect and archaeologist Luigi Canina(1795-1856) shows, in plan, one such reconstruction. Among Canina's his works are: some construction at the Villa Borghese and Casino Vagnuzzi outside of Porta del Popolo in Egyptian style. He was professor of architecture at Turin, and his most important works were the excavation of Tusculum in 1829 and of the Appian Way in 1848, the results of which he embodied in a number of works published in a costly form by his patroness, the queen of Sardinia. Canina is also noted for his studies of history and archeology: Ancient architecture described and represented in documents (1830-44).

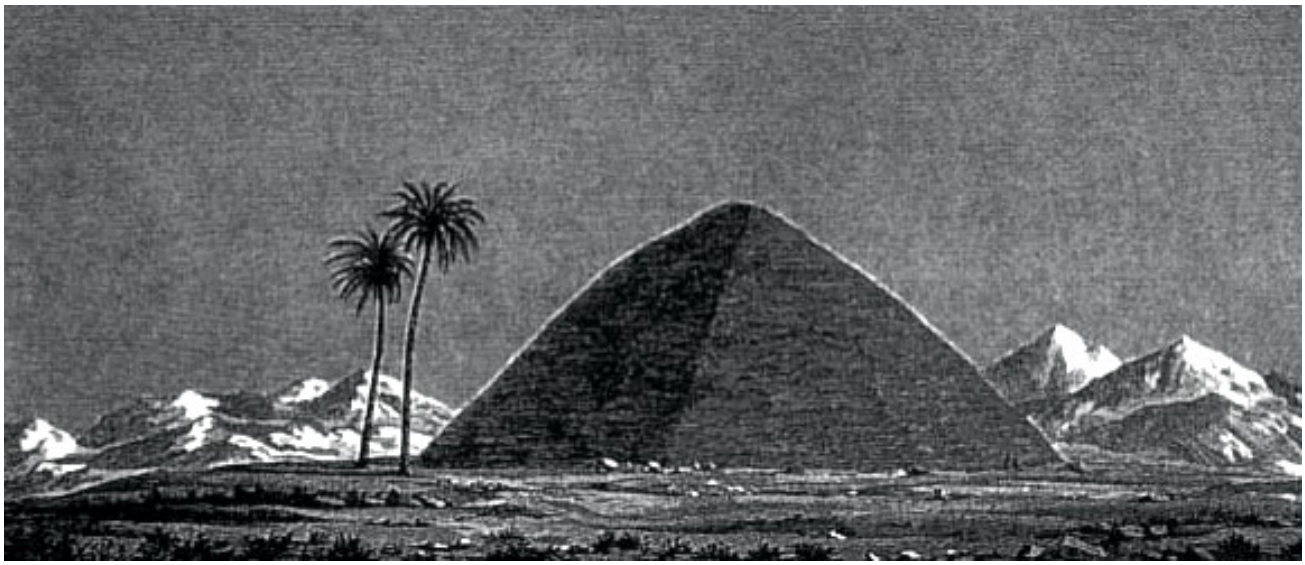
previous expeditions

At the beginning of the 19th century Hawara was studied by Napoleon Bonaparte's famous expedition in Egypt. The French expedition (1799-1801) described the Hawara pyramid, and the pharaonic temple south of it. The remains in the north and the west were wrongly identified as the labyrinth (Jomard-Caristie 31 December 1800) by Jomard who believed that he had discovered the ruins of the labyrinth.



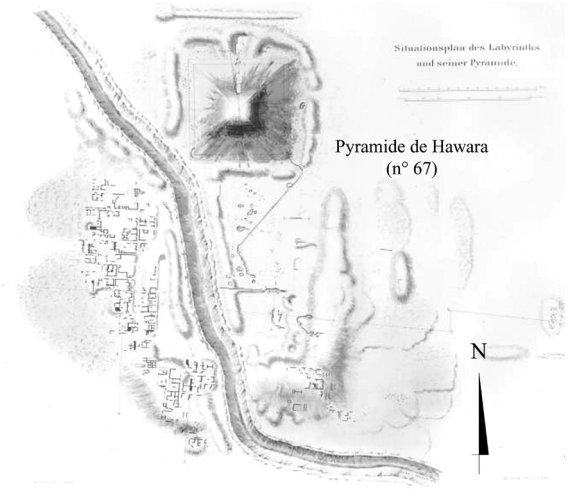
The Egyptian labyrinth restored plan, Luigi Canina

The first excavations at the site were made by Karl Lepsius, in 1843. Lepsius was commissioned by King Frederich Wilhelm IV of Prussia to lead an expedition to explore and record the remains of the ancient Egyptian civilization. The Prussian expedition was modeled after the earlier Napoléonic mission, and consisted of surveyors, draftsmen, and other specialists. In Hawara K. R. Lepsius, carried out considerable excavations in the cemetery to the north and on the northern and south-eastern sides of the pyramid and in the area of the labyrinth and claimed to have established the actual site of the



Expedition Napoleon Bonaparte, "Description de l'Egypte" book illustration

labyrinth (Lepsius 1849), attaching great importance to a series of brick chambers which they unearthed. The data furnished by this party, however, were not altogether of a convincing character, and it was felt that further evidence was required before their conclusions could be accepted. Lepsius thought that the structures excavated by his team were parts of the temple of King Amenemhat III, but later research showed that they belonged to Roman tombs. Since the expedition of Lepsius, the place came to be known as a findspot for some high quality royal statues.



Hawara sitemap by R.Lepsius

Hawara by expedition R.Lepsius

The pupil of Lepsius, G. M. Ebers, who did much to popularise the study of Egyptology by a series of novels, said that if one climbed the pyramid hard by, one could see that the ruins of the Labyrinth had a horseshoe shape, but that was all.
In 1882 the Italian Luigi Vassalli (1855-1899) started his excavations in the area near the pyramid of Hawara, after having surveyed the site. Vassalli searched in vain for the pyramid's entrance. He also excavated across the Bahr Wahbi, in the village east and south of the labyrinth and in the necropolis to the north of the pyramid (Vassalli 1867, pp.62-65; Vassali 1885).

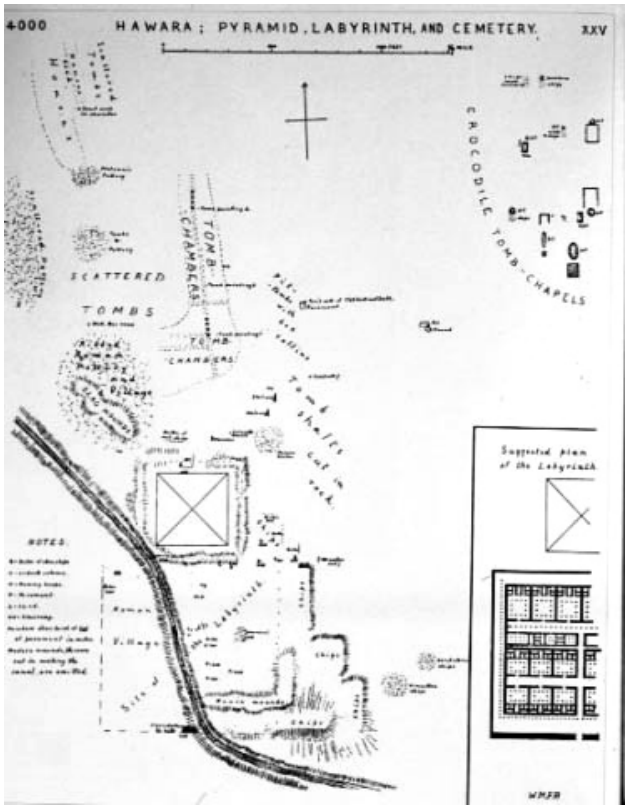
The pioneer of systematic methodology in archaeology, Sir William Matthew Flinders Petrie undertook the first large-scale excavations at Hawara in 1888-1889 and 1910-1911. He revealed attestations of human occupation and activity dating back from the Middle Kingdom to Coptic times. The first object of Petrie's archaeological work at Hawara was the study of the Middle Kingdom pyramid. On the second place he was interested in the labyrinth of the literary sources. Moreover he extended his activity area towards the area north of the pyramid where he discovered a huge cemetery. The most famous finds revealed by Petrie at the Hawara necropolis are the gilded masks and mummy portraits, which he found in the late-Ptolemaïc and Roman tombs, e.g. the wooden panel of Hermione, the schoolteacher, being among the very few surviving examples of painted portraits from Classical Antiquity, the "Faiyum portraits". In 1888 he first focused on the pyramid and the labyrinth. He divided the necropolis north of the pyramid in chronological zones ranging from the Middle Kingdom to Byzantine times. Here he found the first Roman mummy portraits and masks. In 1889 he identified the pyramid as that of the 12th dynasty pharaoh Amenemhat III and his daughter Neferuptah. He continued working in the burial area in the northern part of the site and cleared a Byzantine basilica north-west of the pyramid. His successful campaigns attracted other excavators, in search of papyri and mummy portraits.

The actual site of the Egyptian labyrinth was most important, finally identified by Professor Flinders Petrie in 1888. Sufficient of the original foundations remained to enable the size and orientation of the building to be roughly determined. Namely about 304 meters [997 feet] long and 244 meters [800 feet] wide. Large enough to hold the great temples of Karnak and Luxor. He found that the brick chambers which Lepsius took to be part of the labyrinth, were only remains of the Roman town built by its supposed destroyers. He concluded that the labyrinth itself being so thoroughly demolished that only the great bed of fragments remained on top of an artificial stone foundation. Anyway Petrie drew up a tentative restoration based upon the descriptions of Herodotus and Strabo so far as these tallied with the scanty remains discovered by him. He speculated that the shrines which he found formed part of a series of nine, ranged along the foot of the pyramid, each attached to a columned court, the whole series of courts opening opposite a series of twenty-seven columns arranged down the length of a great hall running east and west; on the other side of this hall would be another series of columned courts, six in number and larger than the others, separated by another long hall from a further series of six.

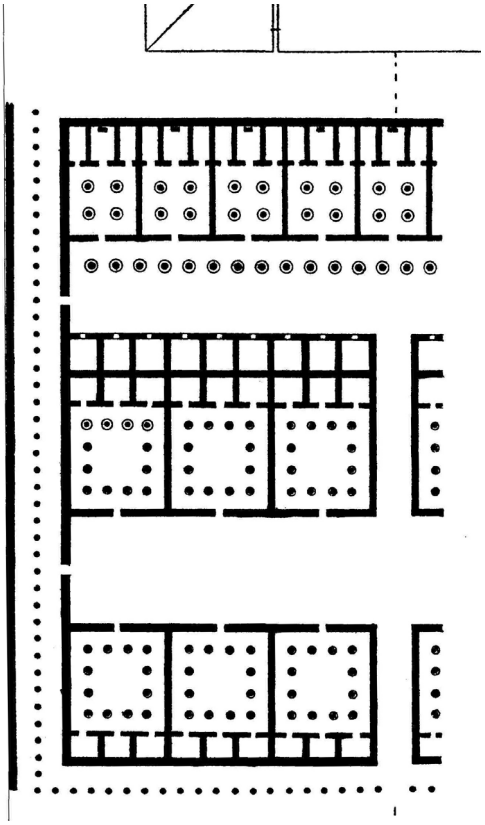
His finding at Hawara included also scattered bits of foundations, a great well, two door jambs, one to the north and one to the south, two granite shrines and part of another, several fragments of statues and a large

granite seated figure of the king, who is still generally recognised to have been the builder of the labyrinth. Namely Amenemhet (or Amenemhat) III of the XIIth Dynasty (also known as Lampares), who reigned twenty-three centuries BCE.

W.M. Flinders Petrie wrote (Ten Years Digging in Egypt, pp. 91-92):
"Though the pyramid was the main object at Hawara, it was but a lesser part



Hawara sitemap by F. Petrie



imaginary labyrinth reconstruction by Petrie

of my work there. On the south of the pyramid lay a wide mass of chips and fragments of building, which had long generally been identified with the celebrated labyrinth. Doubts, however, existed, mainly owing to Lepsius having considered the brick buildings on the site to have been part of the labyrinth. When I began to excavate the result was soon plain, that the brick chambers were built on the top of the ruins of a great stone structure; and hence they were only the houses of a village, as they had at first appeared to me to be. But beneath them, and far away over a vast area, the layers of stone chips were found; and so great was the mass that it was difficult to persuade visitors that the stratum was artificial, and not a natural formation. Beneath all these fragments was a uniform smooth bed of beton or plaster, on which the pavement of the building had been laid: while on the south side, where the canal had cut across the site, it could be seen how the chip stratum, about six feet thick, suddenly ceased, at what had been the limits of the building. No trace of architectural arrangement could be found, to help in identifying this great structure with the labyrinth: but the mere extent of it proved that it was far larger than any temple known in Egypt. All the temples of Karnak, of Luxor, and a few on the western side of Thebes, might be placed together within the vast space of these buildings at Hawara. We know from Pliny and others, how for centuries the labyrinth had been a great quarry for the whole district; and

its destruction occupied such a body of masons, that a small town existed there. All this information, and the recorded position of it, agrees so closely with what we can trace, that no doubt can now remain regarding the position of one of the wonders of Egypt."

In 1911, Petrie returned to Hawara to excavate in the labyrinth and to find more of the so-called Faiyum portraits on the Roman Period mummies. As usual, Petrie published his results soon after his work and also depicted partial reconstructions of the complex within his volumes. These were still mainly based on the classical authors, and only few points depended on the little evidence he found for the original architecture (Petrie et al. 1912). The crucial information Petrie knew 'from Pliny and others' about the disappearance of labyrinth as a quarry is unscientificly vague and even completly lost for contemporary researchers. That the whole of the structure of the labyrinth could have been carried away was certainly a possibility, but it would have been a Herculean feat considering its size and the mass of the stones used to build it. If this was indeed the labyrinth described in antiquity, no act of pillaging could match the total annihilation that should have occurred there. During Petrie's absence at Hawara excavations were subsequently undertaken in 1892 by Heinrich Brugsch, J. von Levetzau and von Niemeyer and Richard Von Kaufmann, who all discovered Roman mummy portraits. In the same year R. von Kaufmann discovered the intact Roman mudbrick chamber of 'Aline' (see now Germer, Kischkewitz and Lüning 1993). A local dealer discovered four or five portraits and an unknown number of gilded masks (cf. Drower 1985, p.143).

In 1910, G. Lefèbvre excavated on the site (cf. Parlasca 1966, p.34; Grimm 1974, p.35) and Petrie resumed his work in the Labyrinth and in the Roman cemetery, again finding lots of mummy portraits.

Among other parts of the site the area east of the pyramid was further excavated in more recent times by the Inspectorate of Faiyum Antiquities worked in the necropolis north and east of the pyramid and by the Egyptian archaeologists by Fathi Melek and Hishmat Adib (1972), Motawi Balboush (1974) and el-Khouli (1983). (see the reports in Leclant 1973, p.404; Leclant 1975, p.208-209, and Leclant 1984, p.370) The entrance to the pyramid was cleared by A. Al-Bazidy in 1995.

The last survey before the Mataha-expedition of the site was undertaken in 2000 by a Belgian mission. From 5 to 23 March 2000 the Catholic University of Leuven mapped the architectural remains visible on the surface. The complementary study of the surface pottery resulted in a chronological framework of the different areas of the site and in a representative catalogue of the Hawara ceramics covering the period between the Middle Kingdom (ca. 2000 BCE) and the 10th century CE. Inge Uytterhoeven (field director Hawara 2000 survey) of the Leuven University published the survey report in fall 2009.

total expedition time line

1800 31 December: survey by two engineers of the French expedition, Caristie and Martin, published by Jomard in "Description de l'Egypte, Antiquités, volume IV (Pancoucke edition, Paris1821), 478-485 Comment: valuable as the first scientific survey, carried out earlier than the cutting of the Bahr Wahbi canal across the site.

1818 Labyrinth Field examination by Giovanni Battista Belzoni, as decribed in his book: "Narrative of the Operations and Recent discoveries within the pyramids, temples,tombs and excavations in Egypt and Nubia; and a journey to the coast of the Red Sea, in search of ancient Berenice; and another in the oasis of Jupiter Ammon (1820). After Belzoni's early death in 1823, Sarah Banne his wife and travel companion still lived for many years in Brussels (Belgium).

1820s: date uncertain: survey by John Gardner Wilkinson, published in his "Modern Egypt and Thebes, being a description of Egypt, including the information required for travellers in that country, volume II (London, 1843), 337-340

1830 – 1835: Linant de Bellefonds. The canal construction of the Bahr Wahbi by the French engineer Linant de Bellefonds, is normally not classified as an archaeologic expedition, but it certainly needs consideration. Seen the archaeological interests of the French engineer and the higher elevation of the pyramid base, we can presume that Linant de Bellefonds intentionally directed the canal towards the pyramid, in order to cross the labyrinth area. The digging of the canal, as a giant archaeological cross section, surely must have unearthed many antiquities. Per contra, Petrie's alleged labyrinth foundation remained untouched, like the canal does not reach the according depth.

1837: survey by Howard Vyse and Perring, published in their "Operations carried on at the Pyramids of Gizeh in 1837, volume III (London, 1842), 82-83 Comment: first record of the present canal across the site

1840s: survey and excavation by the expedition under Richard Lepsius, published in his "Denkmaeler aus Aegypten und Aethiopen I (Berlin, 1849), plates 46-49, with posthumous publication of his notes in "Denkmaeler Text II (Berlin, 1904), 11-30 Comment: this is the most accurate published account of the site, from a time when the ruins of the Hellenistic and Roman village survived over the area of the Labyrinth. (Lepsius interpreted those ruins as part of the original complex.)

1862 August: excavations around the site by Luigi Vassalli, published in the journal "Recueil de Travaux 6 (1885), 37-41

1888-1889: excavations and survey by William Matthew Flinders Petrie, published in his reports "Hawara, Biahmu and Arsinoe" (London,1889) and "Kahun, Gurob and Hawara" (London, 1890): his letters home are now in the Griffith Institute, Oxford (the 'Petrie Journals'), and his pocket books (the 'Petrie Notebooks') are in the Petrie Museum (published with Secure Data Services in the Petrie Museum Archives CD-ROM, 1999) Comment: the main achievement of Petrie lies in his survey of the pyramid and its inner

chambers, and in his discovery and rescue of the famous encaustic mummy portraits from the Roman Period burials north of the pyramid. In other areas the quality of his work falls below modern standards, reflecting the early date in the history of archaeology and in his own career. His survey of the area around the pyramid is inadequately recorded, and most of the tombs were emptied by workmen without Petrie himself ever seeing the finds in place.
1892: exploration of the Roman Period cemeteries at Hawara by R. v. Kaufmann, mentioned as the discoverer of a group burial containing eight mummies, in "Renate Germer, Das Geheimnis der Mumien, Ewiges Leben am Nil (Berlin 1998), 150-151

1911: excavation of the labyrinth area and the Hellenistic and Roman Period cemeteries by William Matthew Flinders Petrie, published in his "The Labyrinth, Gerzeh and Mazghuneh (London 1912), and "Roman Portraits and Memphis IV" (London 1911) Comment: in this season Petrie uncovered some of the most remarkable sculpture fragments, as well as more structures within the area of the labyrinth.

1973 Fathi Melek and Hishmat Adib excavated 1972 some shaft tombs of the Middle and New Kingdom (Orientalia 42 (1973), 404)

In June 1974 excavated a mission of the Service des Antiquités under the direction of Motawi Balboush in the east of the pyramid from Hawara. They found the undisturbed tomb of a certain "Kheif Maakht". The tomb is not yet published, cf. Orientalia 44 (1975), 208-9

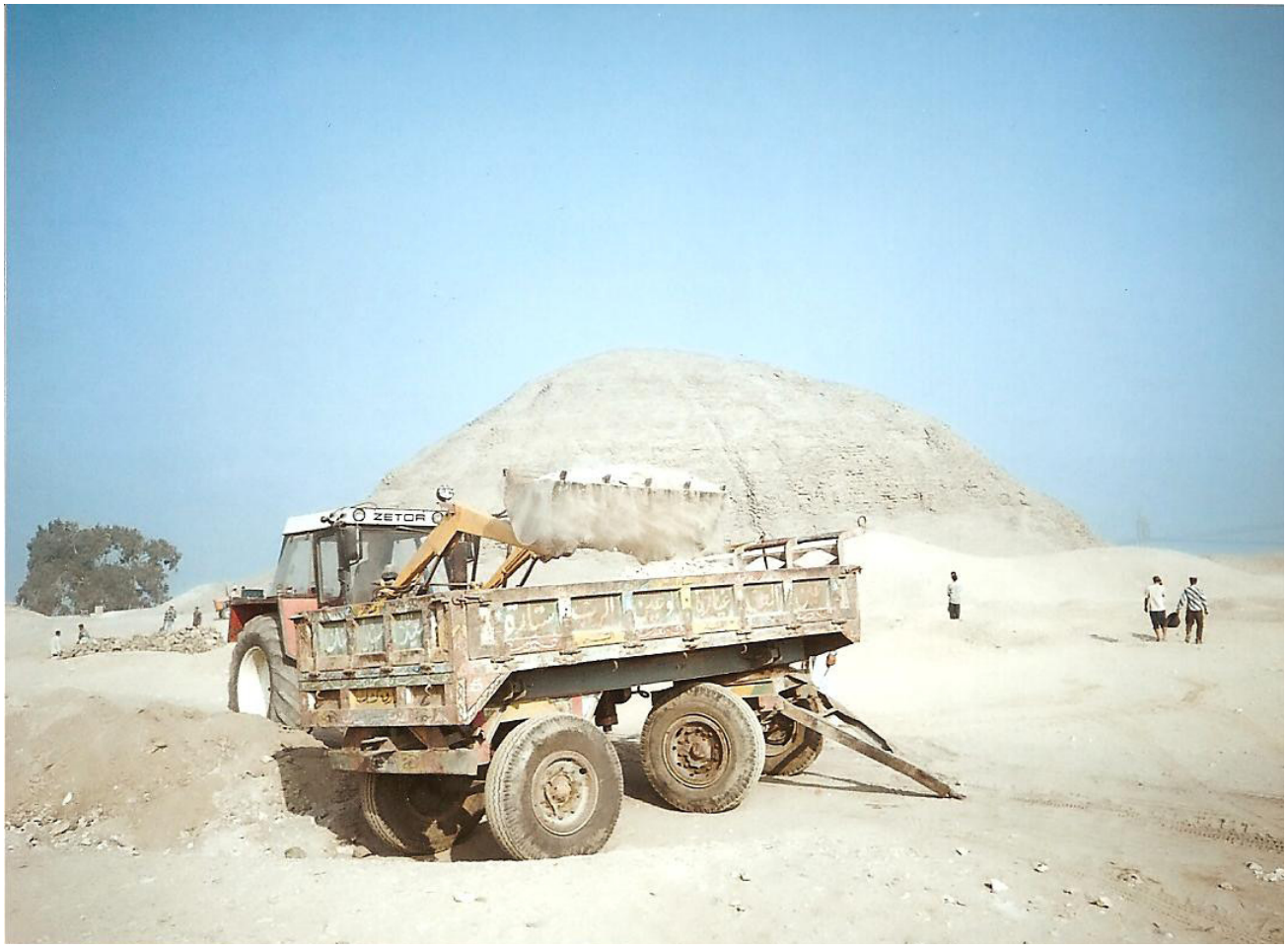
1984 Ali el-Khouli excavated 1983 about 20 tombs of the New Kingdom, Orientalia 53 (1984), 370

2000 Belgian survey "the Hawara 2000 surface-survey of the Faiyum Project" (Netherlands-Flemish Institute in Cairo) (Katholieke Universiteit Leuven - Section: Ancient History). - Willy Clarysse (General director) - Inge Uytterhoeven (Field director) - Anny Cottry (Photographer) - Katrien Cousserier (Archaeologist) - Bart Demarsin (Archaeologist) - Lieven Loots (Archaeologist) - Sylvie Marchand (Pottery specialist - IFAO) - Veerle Muyldermans (Archaeologist) - Ilona Regulski (Egyptologist) - Katrien Slechten (Archaeologist) > - Ayman Mohammad Sedik el-Hakim (Inspector) - Ashraf Sobhy Rezkalla (Inspector)

21 april 2004 Groundwater examination of Hawara, by Keatings, K.; Tassie, G.J.; Flower, R.J.; Hassan, F.A.; Hamdan, M.A.R.; Hughes, M.; Arrowsmith, Carol. Published in Geoarchaeology magazine, volume 22 (n°5) 2007 Wiley interscience

2008 February-March Mataha-expedition: Egyptian-Belgian geophysic research of the Hawara Necropolis (Pyramid + Labyrinth) by the National Research Institute of Astronomy and Geophysics and Ghent University. The General Director of the NRIAG Geophysic Survey was Associate Prof. dr. Abbas Mohamed Abbas (National Research Institute of Astronomy & Geophysics and Member of the Egyptian Committee of the Protection of Antiquities from Environmental Effects).

March 2008 survey of the Hawara pyramid (Cairo University - Wroclaw University). General Director Prof. Dr. Alaaeldin Shaheen, Dean of the Faculty of Archaeology of Cairo University.



Hawara renovation works: Egyptian Polish mission (Cairo University - Wroclaw University)

April 2009 renovation & excavation works Hawara Necropolis by the Cairo University - Wroclaw University cooperation, directed by Prof. Dr. Alaaeldin Shaheen (UCairo). The Egyptian Polish mission is shortly after the UCairo Labyrinth Conference (1-3 april 2009) suspended by the Supreme Council of Antiquities.

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Mataha-expedition team

The Mataha-expedition is a project of joint efforts, which would not been possible without the encouraging patronage of the Supreme Council of Antiquities. The scan-project is realized by the NRIAG, with the support of Ghent University/Kunst-Zicht, and the coordination of Louis De Cordier.

Supreme Council of Antiquities

The Mataha-expedition was granted to take place by the Supreme Council of Antiquities. The SCA is part of the Egyptian government and is responsible for the conservation, protection and regulation of all antiquities and archaeological excavations in Egypt. With encouraging support the Supreme Council of Antiquities gave the permission to the Egyptian National Research Institute of Astronomy and Geophysics (NRIAG) to realize the geophysic survey of the Hawara Necropolis. The Geophysical research conducted by the NRIAG scientists, applied 6 different geophysical tools on the archaeological site, in order to prepare for preservation works, and to map any possible underground archaeological remains. The research was helpfully supervised by SCA councillor Prof. Dr. Moustafa Kamel El-Ghamrawy (Faculty of Engineering, Azhar University, Cairo). All the scientific efforts (field data acquisition, data processing and interpretation) were also achieved by the Egyptian scientific team of the NRIAG. Special thanks to Dr. Zahi Hawass,the Secretary General of the Supreme Council of Antiquities, who has since longtime been forcefully working to realize the preservation of the Egyptian antiquities.

NRIAG

The Mataha cooperation with Ghent University was personally encouraged by the president of the National Research institute of Astronomy and Geophysics Prof. Dr. Salah M. Mahmoud and Dr. El-Said Ahmed Al-Sayed (apllied & environmental geophysics). The Mataha geophysic research is realized by the geophysicists of the NRIAG under the general direction of Associate Prof. dr. Abbas Mohammed Abbas. The National Research Institute of Astronomy and Geophysics (NRIAG) is one of the oldest scientific institutions in Egypt. It was founded in Boulac (Cairo) in 1839 as an astronomical observatory. In 1865, it was transferred to Abbassia (Cairo). Finally, it was transferred to its current location (Helwan) in 1903. From that time up till now and along this time span of more than a century NRIAG has witnessed large developments and expansion phases in several disciplines such as Astronomy, Space research, Solar research, Seismology, Geomagnetism, Geoelectric, Geothermal, Gravimetry, Geodesy, Geodynamics, and recently Crustal Movements. Nowadays NRIAG plays an important application role in the national development plan of Egypt. Many thanks to Dr. Abbas Mohamed Abbas (Associate Professor of Applied Geophysics, NRIAG, Leader and Manager of the Hawara Geophysical Team), Dr. El Said A. E. Ragab (Professor of Applied Geophysics, Head of Geoelectrical and Geothermal Laboratory, NRIAG), Dr. Hany Salah A. Mesbah (Lecturer of Geoelectric, NRIAG), Dr. Usama Saad A. Massoud (Lecturer of Electromagnetic, NRIAG), Dr. Ayman Ismael Taha (Lecturer of Electromagnetic, NRIAG), Dr. Essam Abboud (Lecturer of Magnetism, NRIAG), Dr. Ahmed Qotb El-Emam (Lecturer of Magnetism, NRIAG), Dr. Ahmed Mohsen Lethy (Lecturer of Magnetism, NRIAG),

Mr. Hany M. Shaaban (Assistant Lecturer of Geophysics, NRIAG), Mr. Abdel Latif (Assistant Lecturer of Geophysics, NRIAG).

Ghent University/Kunst-Zicht

Specially for the Mataha-expedition, Ghent University established a partnership with the NRIAG to corporate the geophysic scanning at Hawara. Ghent University has bundled a wide range of international partnerships, in which the cooperation with the NRIAG is framed. The Ghent University started the involvement in the geophysical survey to contribute to the preservation of the antiquities at Hawara and to support the contemporary art & science project by Louis De Cordier, framing in the new cross-bordering approach of the Ghent University Kunst-Zicht unit, directed by curator Guy Bovyn (Ghent University Department of Communication, curator Contemporary Art Ghent University; coordinator of the postgraduate program 'Exhibition and Conservation of Contemporary Art'). Ghent University is one of the most important institutions of higher education and research in Europe, with a worldwide high scientific & innovative reputation. Ghent University yearly attracts over 30,000 students, with a foreign student population of over 2,200 EU and non-EU citizens. Ghent University offers a broad range of study programs in all academic and scientific branches. With a view to corporate in research and community service, numerous research groups, centers and institutes have been founded over the years. Ghent University distinguishes itself as a socially committed and pluralistic university in a broad international perspective. At the basis of all education and research lie curiosity and ambition. Both on the regional and international level Ghent University has developed an extensive network, which is extended year by year. Ghent University wants its students and researchers to push frontiers. Curious and ambitious people shape the future world. A philosophy that was encouraged in 2007 in the Ghent University publicity campaign with the slogan: "Dare to think" (Durf denken). Many thanks to Prof. Dr. Paul Van Cauwenberge (Rector Ghent University), Prof. dr. Morgan De Dapper (Department of Geography, unit Geomorphology & Geoarchaeology) Prof. dr. Frank Vermeulen (Department of Archaeology), Guy Bovyn (Department of Communication, Ghent University curator Contemporary Art Ghent University; coordinator of ,the postgraduate program 'Exhibition and Conservation of Contemporary Art'), Prof. Dr. Peter Vandenabeele (Ghent University, Department of Archaeology and Ancient History of Europe), Prof. Dr. Johan Braeckman (Ghent University, Department of Philosophy), Kaat Van de Velde (communication), Tom De Smedt (communication), Karen Wulgaert.

Louis De Cordier

Contemporary artist Louis De Cordier was the expedition coordinator. The vision of the Mataha-expedition is seen by Louis De Cordier as an early foray of a holistic movement to enable research and innovation through the cooperation of varied art & science disciplines. Devoted to the preservation and investigation of Egyptian antiquities, he started the project with a serie of private lectures, funding the project with the sale profits of the Golden Sun Disk. A timepiece designed by Louis De Cordier to ignite the global fire of comprehensive awareness and awakening. An opener of ways to meditate about

our human condition and the destiny of our species. The record incorporates sacred geometry, earth sciences and astronomy. Its message reflects the state of Man, broken free, wandering endlessly around in an ever-changing space. The sculpture is a place for rest, a sacred instrument for moving through this dynamic and chaotic spacetime. The Golden Sun Disk, an archaeological artifact of the future, is an expression of artistic and technological creation and a symbol of human-scaled introspection. In the eventuality of the fall of civilization, the design of the time piece conceals the power and hope to transmit its content to very distant generations.
For more info about his works and projects see > **www.louisdecordier.com**

thanks to

HORUS Foundation

The H.O.R.U.S. Foundation (Herodotus Original Research Using Science) is an American non-profit organization founded by Frank Clark (US) and Mark Beaver (Australia). The foundation assembled experts and state-of-the-art technologies from the aerospace industry to maximize archaeologic research, in relation to the written records of Herodotus. The Horus foundation contributed to the geophysic survey with providing the NRIAG logistical support.

Golden Sun Disk

The Mataha-expedition team wants to thank all people who funded the project with the acquisition of a Golden Sun Disk for the encouraging support. Gratefulness to art curator Andree van de Kerckhove for the organisation of the labyrinth exhibition (Tabularium #05 CBK Delft), and the production of the first Golden Sun Disk.

Leuven University

Gratitude to Prof. Dr. Willy Clarysse & Dr. Inge Uyterhoeven (archaeologist), the team-leaders of the “Hawara 2000 surface survey” for their interest, practical information and help in the research of the Hawara history.

Association Egyptologique Reine Elisabeth

Many thanks to the AERE Board of directors for their human network support. The Association Egyptologique Reine Elisabeth was founded in memory of the Belgian Queen Elisabeth’s visit to the tomb of Tutankhamun, on February 18, 1923. Its main purpose was to stimulate egyptological and papyrological research in Belgium. Over the years the association has become a scholarly institution, which promotes the study of the history and civilisation of Pharaonic, Graeco-Roman and Christian Egypt.

UNESCO

Many thanks for the encouraging UNESCO presence on the workshop in Cairo, and hopefully the future support of Hawara. The United Nations Educational, Scientific and Cultural Organization seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage.

Isel Foundation

Many thanks to Peter Cooreman and Ilse Adam of the Isel foundation for the personal support. The Isel Foundation is a private foundation situated in Merelbeke, Belgium. The foundation publishes its own Isel magazine, but is in the first place a cultural platform where artists, cultural organisations and companies meet and are promoted. The foundation supported the Mataha-project by organizing several Labyrinth lectures, bringing the right people together to start the project's realization.

Gino Ratinckx

Many thanks to Gino Ratinckx for his research as a graduated civil engineer, astronomer and archaeologist, regarding the archaeoastronomical localisation of the labyrinth of Egypt. Since more than a decade Gino Ratinckx developed a system to position and sometimes even to date architectural antiquities in relation to the movements of the earth. In this way he geo-positioned the labyrinth based on the astronomic location of the Hyades star cluster in the constellation of Taurus. Archaeoastronomical situated besides the pyramid of Hawara, which represents Aldebaran, the brightest star of the Taurus constellation.

Patrick Geryl

The Mataha-expedition should not been possible without the help of author and independent researcher Patrick Geryl. Since many years Patrick Geryl researched the labyrinth of Egypt. In his book the Orion Prophecy, he launched the importance of the labyrinth situated at Hawara. Ever since he has been promoting an archaeological expedition. Patrick Geryl introduced Louis De Cordier to the Egyptian National Research Institute of Astronomy and Geophysics on the 17th December 2007 in Cairo. Opening the way to the effective realisation in Egypt. In his books, Patrick Geryl continues his scientific analysis with the millennia-old codes of the Maya and Egyptians. He determines that both cultures arose from a lost civilization, which was able to calculate pole shifts and that we should take very seriously their calculations, that place the next reversal in 2012. Geryl expects in his books that the labyrinth of Egypt will contain the Circle of Gold, the forgotten hall of records of this ancient civilization, as a message for humanity.

support

People can support the project on many ways. Much needs to be done. The most important thing right now is to raise global interest for Hawara. This can be done by making your network aware by posting a link, weblogs, articles, a mailing…

The Mataha Foundation

The Mataha Foundation supports and promotes ongoing research into the labyrinth at Hawara. This non-profit organization is established in 2009 by Louis De Cordier, the coordinator of the Mataha Expedition.

For more info see:
www.matahafoundation.com

public lecture

The public lecture presented the final results of the Mataha-expedition geophysic survey, as conducted early 2008 by the NRIAG (National Research Institute of Astronomy and Geophysics, Helwan, Cairo), framed by an outline of the Supreme Council of Antiquities (Egypt) about the history and the future of the labyrinth.

The Mataha-expedition public lecture guestspeakers were: Prof. Dr. Paul Van Cauwenberge (Rector Ghent University), Prof. Dr. Moustafa Kamel El-Ghamrawy (Faculty of Engineering, Al Azhar University, Cairo & Member Supreme Council of Antiquities), Prof. Dr. Alaaeldin Shaheen (Dean faculty of Archaeology, Cairo University & Member Supreme Council of Antiquities), Associate Prof. Dr. Abbas Mohamed Abbas (National Research Institute of Astronomy & Geophysics, Director of the Hawara Geophysic Survey and Member of the Egyptian Committee of the Protection of Antiquities from Environmental Effects), Mark Beaver HORUS Foundation (US), Prof. Dr. Peter Vandenabeele (Ghent University, Department of Archaeology and Ancient History of Europe), Prof. Dr. Johan Braeckman (Ghent University, Department of Philosophy), Guy Bovyn (Kunst-Zicht, Curator Mataha-project: curator Contemporary Art Ghent University; coordinator of the postgraduate program 'Exhibition and Conservation of Contemporary Art'), Louis De Cordier (Mataha-expedition coordination & concept).

28th October 2008 Ghent University (Belgium)
Aula Auditorium, Volderstraat 9, 9000 Gent, Belgium

press

This website labyrinthofegypt.com is composed to give as much information as possible about the Mataha-expedition. Please read the content carefully, before directing questions to the Mataha-expedition contact persons.

For general information contact Louis De Cordier, the coordinator of the Mataha-expedition. For interviews and statements about the present and future of Hawara, please direct your questions to Dr. Zahi Hawass: Supreme Council of Antiquities, 3 Al-Adel Bakr St., Zamalek, Cairo, Egypt.

More press-information online:
http://labyrinthofegypt.com/press

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