

PROFANE LANDSCAPES, SACRED SPACES

LIST OF ABSTRACTS

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Miroslav Bárta (Charles University in Prague)

Profane and sacred: on landscape properties, symbolical monumental architecture and social change of Abusir and Saqqara necropoleis during the Old Kingdom

The main purpose of this contribution will be to show the close relationship and ways of interaction of profane landscape and symbolical aspects of ancient Egyptian kingship, symbolical monumental architecture, administration and religion. By using several examples based on the evidence provided by the Abusir excavations, I will indicate how ancient Egyptians used the landscape properties, historical and sacred places imbued with symbolical meaning for the kingship to achieve politically motivated objectives.

The chosen examples will focus on the location of the Lake of Abusir as a sacred gate to the Abusir-Saqqara necropolis associated with the notion of rebirth and resurrection and architectural features characterizing pyramid fields that were designed to ensure (not only, however) explicit manifestation of political goals of the current ruling elite.

John Burn (Macquarie University, Sydney, Australia)

Drought, Famine and the Nile. Adaptations within the Nile Marshlands Ecosystem in Response to late Old Kingdom Climate Change?

Significant amounts of scientific evidence, from many varied fields exists, suggesting that Ancient Egypt experienced a prolonged drought at the end of the Old Kingdom; the worst of which was reached about 4200 years ago. It is thought that, because of these conditions, the resource base of the land diminished, and the administration did not appear to have coped. As a direct or indirect consequence, this led to the fall of the Old Kingdom.

Since the environment influences human society and art reflects the culture that produced it, then we should be able to make inferences about past environmental conditions through an analysis of decorations that society produced. If Egypt did experience a severe drought during the late Old Kingdom, then the evolution, composition, and context of tomb scenes, for example, should reveal evidence of a developing environmental awareness or a changing societal response.

The corpus of Old Kingdom tomb themes produced by the Oxford Expedition to Egypt was investigated to see if the decoration programs in tombs changed over the time frame in question. A distribution and abundance analysis of the data was performed in order to identify if a succession sequence over time could be identified. Within this succession, certain scenes relating to particular marshland activities were observed to come into prominence and constitute an increasing importance in the proportion of decoration themes. The data suggested that fishing techniques and technologies changes in proportion, complexity and form over this time.

A summary of the data will be presented and a link between the artistic evidence and changing environmental conditions will be suggested. Finally an interpretation of the ecological conditions of the marshlands at this time will be offered.

Andrzej Ćwiek (Adam Mickiewicz University & Poznań Archaeological Museum)
The Pyramid of the Western Mountain

El-Qurn, dominating the Valley of the Kings on the south, was long ago recognized by scholars as a landmark bearing symbolic value. Called 'a natural pyramid', it is assumed to replace somehow the pyramids of the Old and Middle Kingdoms. However, the New Kingdom royal burial customs and the related architecture, are interpreted as distinctive in comparison to earlier periods, thus the choice of the Valley of the Kings is usually attributed to its desolate character. The 'pyramid' is seen as being barely a fortunate feature, an additional motive at the best. The role of the Theban *gebel*, although stressed in relation to private mortuary sphere, is – paradoxically – underestimated concerning the royal burials. It seems that some outside perspective is needed. Recently D. Polz pointed out the fact that Mentuhotep Nebhepetra's tomb, at the end of the long passage starting in his mortuary temple at Deir el-Bahari, is in fact located in the Valley of the Kings, and thus this king was the first royal occupant of the site. It was, however, Hatshepsut who made a decisive step, locating her (and her father's) KV 20 in the Valley proper. In fact, she did much more, creating a mortuary complex, which itself was a part of a world 'cosmological machine', extended between Karnak and the western mountain. In this respect the close spatial and functional relations of Deir el-Bahari and Karnak, on both sides of the Nile, along the main world axis, parallel the relations of the royal pyramid complexes of the Old Kingdom to Heliopolis. An overall scheme of Hatshepsut's mortuary complex: tomb-upper temple-causeway-valley temple, copies the structure of the Old Kingdom pyramid complexes. Certainly, her *Djeser-Djeseru* was not merely a mortuary temple, but a 'Mansion of Millions of Years', where divine was as important as royal. It has often been assumed that the case of Hatshepsut provides one of the earliest examples of a separation of the tomb proper from the 'Mansion of Millions of Years' related to it. But in fact it is not the case! There exists a serious difference between what would become a standard for the rest of the New Kingdom, and the spatial organization of Hatshepsut's mortuary complex. The tomb of Hatshepsut and her temple are sharing the same space – the rock massif separating Deir el-Bahari from the Valley of the Kings that can be perceived as part of a *gebel* pyramid. Hatshepsut's complex is thus exactly similar to the Old Kingdom pyramid complexes: the tomb is located inside the massif, and the mortuary temple is built against its eastern side.

And although all later mortuary temples were really separated from the 'pyramid', since they were located at the edge of the cultivation, the *gebel* continued to fulfil the role of a pyramid. It seems that the pyramidal peak together with the massifs of rock surrounding the Valley of the Kings constituted a generic superstructure for all its tombs. One might imagine that the peak itself was thus a 'pyramidion' only, the bottom of the valleys being the 'base' level of this imaginary pyramid. The tombs were therefore hewn in and under the 'pyramid'.

How much this 'natural pyramid' was a 'true' (?) pyramid and how much it was a return to some primeval ideas, should be a matter of future research.

Andreas Effland (Akademie der Wissenschaften zu Göttingen/ DAI Kairo)
Priests, Peqer and Processions - Aspects of the Abydene Ritual Landscape during the Late Period

The area of Umm el-Qaab consists primarily of an elite cemetery of the late Naqada Period and in particular of the necropolis of the kings of the 0 - 2nd Dynasty around 3000 BC. The Abydene ritual landscape was initially shaped by these royal tombs and their cultic installations of the Early Dynastic Period and continued to evolve in relation to Osiris' cult associated with Umm el-Qaab.

At least from the Middle Kingdom onwards, the Early Dynastic royal necropolis of Umm el-Qaab was regarded as the sacred burial place of the God Osiris. In the context of the Research Clusters of the German Archaeological Institute - established in 2006 - closer studies on the cultic remains and all finds not belonging to the Early Dynastic period which are in connection with the cult of Osiris can take place.

A votive cult comprising pottery vessels can be traced at the tomb of Djer as early as the late Middle Kingdom, a fact which finds an equivalent in the small finds and ritual relics such as seal impressions. But all in all, most of the excavated pottery and votives date to the New Kingdom, especially the 19th Dynasty and the reign of Ramesses II, the Libyan Period (mainly 22nd Dynasty) and to the Late Period, especially the 25th and 26th Dynasties.

Concerning the context of the pottery and votive activity from the tomb of Osiris within the larger site of Abydos, it is important to stress strong connections between Umm el-Qaab, Kom es-Sultan and the Temple of Seti I, bonds that are attested from the New Kingdom to the Late Period. In addition, during the ongoing excavations by the German Archaeological Institute Cairo it was possible to reconstruct an important cultic axis that had been marked by rows of pottery vessels extending from the Tomb of Osiris to the so-called Southern Hill, about 150 m southwest of the tomb of Chaschemui. This landmark of the sacred landscape can be associated also with the processional routes from Kom es-Sultan and from the Temple of Seti I.

All in all, in the Late Period already existing structures and aspects of the sacred landscape of Abydos created during the Middle Kingdom and especially during the New Kingdom were reactivated.

The cultic activity at the Osiris tomb in Umm el-Qaab of this Late Period will be the topic of the paper.

Andrés Diego Espinel (Centro de Ciencias Humanas y Sociales CSIC, Madrid, Spain)

Some profane and sacred features from Thebes: Hunting grounds (?) and high places in the West bank

The paper aims to offer some fresh interpretations on two poorly understood features attested in the mountains and wadis of the West Bank at Luxor. The first one, already documented long time ago by Petrie and Mond and Myers, are several stone walls that enclose the lower and middle course of two wadis. The first one is at the north of the road to the Valley of Kings, and the other one in the Armant area. According to their position along their gentler slopes and across the mouth of minor tributary wadis, and to other archaeological and epigraphic data is possible to suggest that these walls formed part of two hunting grounds possibly of Roman date (an earlier dating cannot be discarded however). The other feature under study is the so-called high places at the feet of el-Qurn peak. These small stone chapels, grouped in two different clusters, were first attested by Norman de Garis Davies. They were made by Deir el-Medina workers, probably in connection with the station du repos du col. The religious meaning of these small structures will be reconsidered having in mind their emplacement, orientation, materiality, line of sight with some other important religious traits of the Theban geography, and other similar parallels.

Linda Evans (Macquarie University)

Ancient Egyptian and Egyptological attitudes towards the natural world

We know that the natural world held great significance for the ancient Egyptians because many environmental features, such as plants, animals, landmarks, the sun, moon and stars, became the focus

of religious, architectural, literary and artistic expression. But what did the Egyptian people actually think of nature and how did they view their place within it? Understanding how they related intrinsically to their surroundings is important because this will have influenced how the Egyptians reacted to both environmental opportunities and challenges.

Cultural attitudes towards nature have been categorised in a range of studies in order to predict human response to environmental issues (e.g., Kellert, 1993; Ignatow, 2006). For example, anthropologist Florence Kluckhohn (1953) has identified three fundamental orientations to nature exhibited by cultures worldwide, past and present: 1) people *subjected* to nature, living at the mercy of what they perceive as a powerful and unpredictable environment; 2) people as an inherent *part* of nature, trying to live in harmony with the environment; and 3) people *against* nature, manipulating and controlling the environment (Altman and Chemers, 1980).

Contemporary Western cultures largely exhibit the latter orientation, a dominating view of the environment that is reflected in our excessive exploitation and widespread transformation of the natural world. This perspective is ascribed to our Judeo-Christian heritage, which has emphasised the primacy of human beings and a God-given obligation to conquer the earth and dominate all living things. In contrast, ancient Egyptian response to nature (along with other early cultures) is frequently characterised as harmonious and balanced (e.g., Hornung, 1967; te Velde, 1980; Germond, 2001). Drawing on mythological and other allusions that highlight equality between all living creatures, it has generally been concluded that the Egyptians did not view humankind as a dominant force in the natural world, but just one part of a larger cosmic unity.

A harmonious cultural response would be expected to have a limited physical impact on the environment, to shun expressions of human superiority, and to embrace all aspects of nature without prejudice. I propose, however, that the restricted range of plants and animals depicted in Egyptian cultural material, clear differences in the ways that humans and animals were represented, and modification of the landscape through cultural and economic activities, instead point to the Egyptians having adopted a more hierarchical and dominating approach to the natural world than is commonly accepted. Indeed, such a dynamic worldview is in accordance with the principles of maat, which demanded sustained action, rather than passive acceptance, to maintain the status quo.

The tendency by Egyptologists to see Egyptian culture as particularly attuned to nature possibly derives from an unconscious assumption that theirs was a less complex relationship than that found today, i.e., we do not expect to see contemporary attitudes towards the environment in the ancient past. However, such biases may affect our ability to accurately assess how the Egyptians interacted with their world.

This talk will explore ancient Egyptian and Egyptological environmental attitudes through an examination of artistic, literary, and physical data, and suggest that Egyptian values may have been closer to our own than we realise.

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Irene Forstner-Müller (Austrian Archaeological Institute, Cairo)

Towards the analysis of the landscape of Avaris

Investigation of the landscape was an integral element of the research at Tell el-Dab'a/Avaris long before this term became popular in archaeology. As the modern landscape differs significantly from the ancient one, mostly due to large-scale modifications during the second half of the 19th century and the construction of dams at the First Cataract, the ancient situation has to be reconstructed.

Pioneering work on the site was done by Manfred Bietak and Josef Dorner who compiled the first topographical and geological map of the area based on more than 800 auger drillings.

However, both the survey and the archaeological excavation gave only glimpses of the overall cityscape. With the introduction of a new survey method, magnetometry (Tomasz Herbich and Christian Schweitzer) it was possible for the first time to gain a complete overview of the town and its individual quarters such as residential areas, sacral precincts, mortuary areas and suburban districts. In recent years another method, VES-resistivity, has been added to the investigative repertoire in use at the site.

This paper will present firstly a holistic overview of the structure of Avaris, which was in the 2nd millennium B.C. one of the largest cities in the Ancient Near East, and then present the newest research on one part of the town: the main harbour of Avaris.

Anna Garnett (University of Liverpool)

Monumental Deserts: Sacred Landscapes of the New Kingdom Eastern Desert'

Sacred landscapes, as expressed through the medium of cultic architecture, are relatively well-known in the Nile Valley, particularly for the New Kingdom. To complement this existing data, this paper will explore the nature of divine kingship and non-royal personal expression as illustrated by the comparatively under-studied New Kingdom temple sites situated in strategic locations on the periphery of, and along the major routes of, the Eastern Desert, focussing on two sites: Wadi Hellal and Wadi Mia, in Upper Egypt.

The stone and mineral reserves of Egypt's Eastern Desert were extensively exploited by mining and quarrying expeditions during the New Kingdom. During the 18th and 19th Dynasties, particular desert sites were identified as being especially sacred and as such were subsequently transformed by the construction of royal cult temples and shrines, which were often integrated into pre-existing sacred landscapes. The influence of environmental factors on the development of these sacred landscapes will also be addressed, including evidence for the ephemeral flooding of the desert wadis, questioning why particular sites were considered more suitable than others for the expression of divine cults and the creation of arenas for sacred activity.

The deification of the king was a major focus during the design and construction of these structures, which formed permanent visual markers of the royal monopoly over the Eastern Desert mining and quarrying areas. The symbolic omnipresence of the king in the Eastern Desert was ensured through these structures, which served as a constant reminder of the king's domain even when he himself was so far removed from the sites. This paper will aim to reconstruct royal display at these sites through a study of surviving inscriptional material and architectural elements, including statuary, stelae and relief, which incorporated specific language and iconography intended to emphasise the divine power

of the royal cult and the close relationship between the king and the gods in these sacred 'desertscares'.

The presence of constructed religious space in the Eastern Desert primarily demonstrates the interest of the king in the key desert routes, quarries and mines; however several such loci, including Wadi Hellal and Wadi Mia, also preserve rock-cut stelae authored by certain eminent Ramesside officials. This paper will address the nature of these stelae and the background and particular motivations of their authors, while also questioning the extent to which the stelae can be considered representative features of the transformation of the Eastern Desert landscape during the New Kingdom.

Claudia Kemna (Freiburg im Breisgau, Germany)

Ancient Egyptians, Egyptologists and the representation of foreign landscapes

Under the rich legacy of Ancient Egypt there are the representations in tombs and temples concerning religion and daily life which found the interest of so many researchers and travelers in that country. One topic of daily life is the depiction of nature in its aspects of agriculture and gardening versus desert life and landscapes abroad. Especially during the New Kingdom, when Egypt became the dominant power in the Near East, an increasing interest in the nature of the subdued countries is perceptible. Though a lot of pictures are quite detailed which enable modern scientists to determine the species represented, there is a common sense that the Ancient Egyptians completely failed to draw the conifers of Lebanon, so that an exact determination of the species is impossible. Since LORET's article in 1916 it is mostly accepted that the *aS*-tree is a(n umbrella-)pine or a fir. Those who are not convinced follow CHABAS 1861 and SETHE 1908 who equated the *aS*-tree with the cedar of Lebanon. Some scientists remain neutral in translating *aS* as "conifer" others think even of juniper as a subspecies of *aS* (BARDINET 2008). So the translations of the Egyptian texts mentioning the *aS*-tree remain arbitrary, depending on the researcher's opinion on the nature of the tree as well as its presumed area of exportation.

The paper will reconsider the criteria which led to the identification of the *aS*-tree with conifers and will question whether the Egyptians of the New Kingdom might have seen something different abroad from the Egyptologists of the Industrial Era imagine. It assumes that the representations of the *aS*-tree are correct and indeed show deciduous trees. A possible candidate will be presented and compared to conifers and the *aS*-tree according to the criteria which led to the conifers.

Additionally, the paper will reflect further information the Egyptians give concerning habitat and timber production on the one hand and technological qualities in respect of weapon production and shipbuilding and products of the wood on the other. Finally the areas of export of the *aS*-tree in Lebanon will be determined (which throws a light on the deforestation of deciduous trees in Lebanon during the Middle Bronze Age) and an explanation of the origin of the rivalry between the gods Bata and Iam in the valley of the *aS*-tree will be given.

Marl Lehner (AERA, Boston – Giza)

Floodplain Interventions and Water Transport Infrastructure at 4th Dynasty Giza

The contribution will summarize architectural and geomorphological evidence of interventions into the floodplain, perhaps as dramatic hydrologically in the low floodplain as are the pyramids architecturally on the high plateau. This infrastructure would fill the requirements of 4th Dynasty Giza as a major international Nile port, a status hinted by analysis of the material culture from settlements along the low southeastern base of the Giza Plateau, showing imported Levantine pottery

(combed ware) and wood (cedar, oak, pine, and olive), by the historical context of Old Kingdom Egypt and the "Byblos Run," by comparison with proven Middle and Old Kingdom ports recently discovered on the Red Sea," and by the sheer requirement for importing massive quantities of granite and Turah-limestone for building the Giza pyramid complexes.

E. L. A. Lock-Cornelisse (Leiden University, the Netherlands)

Birds in the Marshes: a reflection of reality? A comparative study and an iconographic analysis of the birds in the marshland scenes in the Old Kingdom elite tombs in the Memphite area)

Old Kingdom mastaba reliefs are well-known for their often very realistic representations of nature. This paper is aimed at showing from an ornithologist point of view if and how the ancient Egyptians reflected their environment in the sacred space of their tombs. An iconographic analysis was made of 77 marshland scenes from 58 such tombs from the Memphite area. Combining the results thereof with a quantitative approach of a number of variables based on the Leiden MastaBase* not only confirmed this realism, but also produced some interesting new findings on the regular elements and characteristics of these scenes and on the evolution of this particular art form during the 5th and 6th Dynasties. To provide a benchmark, with the assistance of Ornithoegyptologist John Wyatt the Great Marsh Scene from the 5th Dynasty tomb of Ti at Saqqara was completely reappraised. A number of 32 bird species was identified, including four possibly firsts for Old Kingdom tomb art.

Comparing the birds on the reliefs with actual photos gives an amazing insight in the ancient Egyptians' ability to observe nature and to transfer these images into stone, while for the identification of birds the existence of characteristic features turned out to be nearly as important as the presence of colors. It proved possible to quantify the types and frequency of particular sub-scenes and the relatively few animal, insect and bird families/species portrayed. On the question of the degree of reflection of reality concerning the birds in Old Kingdom marsh scenes appeared to exist different answers. The whole is lavishly illustrated by photos and also line drawings by the author.

**The University of Leiden MastaBase CD-ROM is a digitalized database of the iconographical programs of the elite tombs of the Memphite area published up to 2007.*

Andrea Loprieno-Gnirs (University of Basel)

Challenged by nature: structural damages in Theban tombs and their impact on a cemetery

TT 95 is the tomb chapel of Mery and Hunay in the southern foothills of the cemetery of Sheikh Abd'el-Qurnah dating to the reign of Thutmose III and Amenhotep II. It suffered from substantial structural damage along a crack running from East to West through the courtyard and the rooms of the chapel: While parts of the ceiling in the South-Eastern corner of the second pillared hall had fallen down, half of the ceiling and a pillar in the South-Eastern aisle of the entrance hall had collapsed, exposing the room and its decoration to the challenges of nature. The building history of the chapel as well as archaeological and textual evidence suggests that severe damage took place during the period of tomb construction. In this paper, I will discuss the tomb's specific location within the non-royal cemetery of the middle 18th Dynasty and its interrelations with surrounding funerary monuments, the environmental challenges encountered by the builders and stonemasons involved in the construction of the tomb and the risks they took when trying to realize ambitious building projects, and finally the pathology and history of the damages inflicted to the building structure of the chapel. I will examine what the owners of the tomb complex undertook after the incident and how the chapel was used in later times. Similar records from other contemporary sites within the Theban Necropolis may provide

information about the possible date and the causes of harm to their basic structure. Also, the question can be asked if some of the cases presented, including Mery and Hunay's tomb, could be linked to seismic activities in the Theban region. After a brief overview of the seismicity of Egypt and of geophysical and archaeological studies discussing possible impacts of earthquakes on Egyptian monumental architecture during the Bronze Age, I will re-examine the evidence from the 18th Dynasty Theban Necropolis and ask how the environment was adapted to human needs and how it itself influenced human behaviour, in which way natural events had repercussions on technological, social, political, and religious practices of their time.

Jiří Janák (Charles University in Prague)

Birds, Oars and Jars – Ritual Landscape of Images and Script

Three mysterious „runs“ (*Vogellauf*, *Ruderlauf* and *Vasenlauf*) are attested among royal cultic scenes depicted on temple walls, or even on private coffins. Their oldest evidence dates back to the Middle Kingdom and the latest comes from the 1st century BC. These ritual scenes usually depict the king as if running towards a deity with an object or objects in his hand(s). The objects in question were identified as the northern bald ibis and sceptres of life, stability and power (*Vogellauf*), two *heset*-jars (*Vasenlauf*) and the so-called navigation tool and an oar (*Ruderlauf*). The aim of this paper is to envisage these rituals from several different points of view, bridging natural environment, iconography, language and religion in search for their interpretation.

Jiménez Higuera, María de los Ángeles (University of Liverpool)

The Sacred Landscape of Dra Abu el-Naga

The aim of this talk is to present the study of the spatial development of the sacred landscape of the southern area and the beginning of the northern of Dra Abu el-Naga from the 18th to the 20th Dynasties (1550-1069 BC). This multidisciplinary work analyses the topographical elements of this area, together with the geomorphologic, architectural and archaeological changes that Dra Abu el-Naga encountered throughout the New Kingdom in order to explain how the distribution of the territory took place. In this sense, I will resort to Geographical Information System's studies as they enable us to connect the landscape features with the cultural, socio-political and religious background, which also played a very important role in the distribution of the territory.

My working hypothesis is based on the existence of a clear connection between the private tomb-chapels and the mortuary and cult temples, as well as between the location, size and quality of the tomb and the status of the owner when it came to select the location of a tomb.

The methodological approach that we are going to adopt is based on Landscape Archaeology, which suggests an approach to the spatial reality of ancient populations from different variables, defining landscape in a more holistic and relational sense, including pieces of evidence that due to their characteristics are closer to the symbolic and conceptual.

Three different but complementary analyses of the tombs of Dra Abu el-Naga will be addressed:

1. Study and development of the tombs from an archaeological and architectural point of view throughout the New Kingdom, by focusing on their external part, as this modifies our vision of the necropolis and the landscape.

2. A Prosopographical and Genealogical Study of the tomb-chapels' owners is going to be carried out, with special attention to the familial and professional relationships between the owners. This study expects to verify whether social status and kinship relationships played a part in the choice of the place

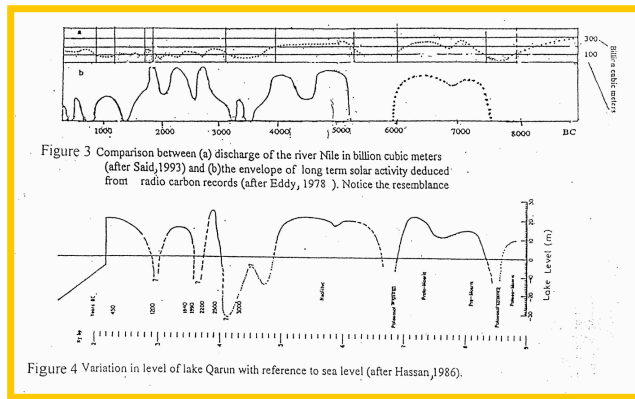
for the location of a tomb, determining whether the tombs of family members were intentionally located according to a spatial relationship between them, and to ascertain whether there is a clustering of tombs or family complexes or not.

3. A study of the distribution of the territory and its connection with other areas of the necropolis and the surrounding religious-cultic zones by using GIS technology. In addition to the visibility study, a reconstruction of the ancient paths and processional routes will be carried out with a view to finding an explanation for this site's layout after analysing the evidences and data collected in a survey at Dra Abu el-Naga South between February and April 2013.

Amanda–Alice Maravelia & Mosalam A.M. Shaltout (Hellenic Institute of Egyptology, Athens, Hellas & NRIAG, Helwan, Cairo, Egypt)

The Influence of the Solar Activity and of the Nile Flooding on the Ancient Egyptian Culture

The Sun and the River Nile were always the main factors that influenced the ancient Egyptian *forma mentis* and way of life! Rē' (the highest solar god) and H'apy (the Nile–god of abundance and flooding) were always a very important diptych of the ancient Egyptian culture and of the climate in the land of pharaohs. The Egyptian civilization from the Pre–Historic Period up to our era is highly correlated with the Nile flooding. The Nile Valley and Delta, as fertile (black/green) areas cover only ~ 5% of the total area of Egypt (*Kmt*), and the remaining ~ 95% is a very dry and hard (red) desert land (*Dšrt*). With the beginning of the Holocene (c. 10000-8000 BC), the inter–tropical covering zone (ITCZ) moved northwards, covering the northern parts of Sudan and the southern parts of Egypt up to a latitude of 27° N. The rain–fall rate was about 200 mm/y, which equals the current rate of the Savanna area in Africa. During the wet Holocene there have been many valleys in the eastern and western deserts. The eternal virtual fights between fertility and desert, life and death, consisted of important archetypes in the minds of the ancient Egyptians and influenced significantly their culture, contributing to the creation of virtual sacred spaces (e.g.: temples of millions of years at Thebes West) and borders (e.g.: the boundary steles defining a broader quasi–sacred space in Akhet–Aten) in relation to the climate and the solar cycle, as well as of what is felt as that particular, pleasant and unique *Egyptian style* ... In our study we have been based on soil profiles [measuring salinity, *pH*, the concentration of various chemical substances related to salinity (like e.g.: chlorides and sulfates), as well as the electric conductivity of the ground] near lake Mœris at Qaroun in the Fayoum Depression (starting from 10000 BC down to the Helleno–Roman Era. The amount of Nile flooding can be calculated from these data and from microscopic studies of samples dating from various chronologies, hence our comparisons of these data with ancient Egyptian sources (e.g.: the *Palermo Stone* and the *Papyrus of Neferty*) contribute to our scope, that is to study the correlation between the solar activity, the Nile inundation and the impacts of these very phenomena on the ancient Egyptian civilization. These and other related topics are discussed in our paper, which shows explicitly that the *maxima* in solar activity correspond to the most flourishing periods of the ancient Egyptian history (Old, Middle and New Kingdoms), while the *minima* of the solar activity correspond to the less flourishing and frequently more troubled periods of relative decline (Intermediate Periods) and sometimes of ... famine.



Hana Navrátilová

Visitors' graffiti - traces of a re-appropriation of sacred spaces?

The visitors' graffiti corpus from Memphis and neighbouring areas includes texts from the archaeological sites of Abusir, Saqqara, Dahshur; and the site of Maidum near Fayyum oasis. The corpus consists of almost 400 texts of varied length.

The texts are placed within recognised sacred spaces of royal funerary complexes and sun temples. They are also part of a wider landscape of the necropolis. Using mainly Saqqara and Dahshur material, the paper aims at suggesting a contextualisation of the graffiti within a broader sacred landscape of Memphis. Graffiti production might have been motivated by different aspects of religious experience as well as cultural memory.

Claire Ollet (University of Liverpool)

Integration of Monument and Landscape - Hatshepsut's Temple at Deir el Bahari: Agenda and Legitimation

Hatshepsut directed substantial resources to the monumental development of the sacred landscape at Thebes: the divine temples of Karnak and Luxor, her cult temple at Deir el Bahari, and the development of religious festivals. This paper will investigate the mechanisms and communication strategies that she developed to legitimise her kingship within this sacred, monumental landscape.

This process of legitimisation included a programme of royal self-presentation. Utilising a three-fold methodology, which encompasses an examination of architectural context, iconographic programme and textual composition, this royal self-presentation can be analysed to form a theoretical reflection on the meaning and functionality of the monuments themselves and the landscape as a whole.

The issue of self-presentation is particularly relevant in the case of Hatshepsut as her reign as king was unusual and her legitimacy uncertain: first she was a female ruling within a predominantly male dynastic framework and second, and perhaps more importantly, there was already a legitimate king on the throne.

This paper will present elements of the integrated three-fold analysis, with a specific focus on the cult temple of Djoser-djeseru at Deir el Bahari: a temple built to Hatshepsut's specifications and the epitome of the integration and symbiosis of monument and landscape. It will consider various research questions relating to accessibility and audience, whilst seeking to elucidate the motivations that lay behind the development of this functioning and interactive environment, in an attempt to establish whether there was a specific personal agenda. It will also consider the connectivity and inter-

relationships at play within the landscape, across the broader landscape of Thebes, and Egypt as a whole, and present some current working hypotheses.

Mary-Ann Pouls Wegner (University of Toronto)

The Geography of Abydos and the Landscape of Post-Mortem Transformation

The paper aims to present an innovative analysis of the spatial and organization of the ceremonial center of Abydos during the New Kingdom, and to relate these findings to the much broader question of the ways in which sacred landscapes functioned within the ancient Egyptian context. The contribution of the research extends to enhancing our understanding of how ritual informed the ancient built environment and how social and religious structures are reflected and replicated in the features of complex ceremonial landscapes.

Geographically-informed research allows crucial insight into the organizing principles that underlie the development of the sacred landscape of the site, and therefore enhances the interpretation of individual components from that context. The proposed paper posits that the Abydos landscape replicated the conceptual geography of the Duat, which the deceased navigated in a prescribed way in order to successfully attain post-mortem transformation. The divine archetype for the journey was Osiris, and the cult institution of that god at the site formed a major node around which ritual activity was focused. The processional festival, in which statues of the gods were carried across the landscape and events surrounding the death and regeneration of Osiris and the triumph of Horus over his enemies were re-enacted, imbued features of the environment with symbolic significance and linked together elements of the built and natural geography. The festival also provided an interface for individual participation in the transformation of Osiris, and hence formed an important venue for displays of political and economic status and articulations of social relationships.

The methodology employed in the paper analyzes correlations between the topography of the Abydos landscape and patterning evident in the location and orientation of monuments and the deposition of votive artifacts across the site. It utilizes accurate geographical information derived from the integrated survey of the Greater Abydos Area undertaken by the author, and from subsequent excavations in which geographical data associated with archaeological material was collected in order to allow for GIS-based analysis.

The analysis examines evidence for correlations between the geography of the built and natural environment of Abydos and the remains of ritual activity that are preserved in the archaeological record from the site. It identifies distinct functionally-defined regions of the sacred landscape of the site, and links those regions to areas in the conceptual realm of the Duat as it was portrayed in contemporary funerary literature. The research therefore presents a new framework within which to understand the built environment and the significant evidence of ancient votive activity at Abydos as the articulation of a mythical landscape, providing a powerful key for decoding some of the multifaceted meanings attached to the archaeological evidence from this important sacred landscape.

Ute Rummel (Deutsches Archäologisches Institut Abteilung Kairo)

The ritual topography of Dra' Abu el-Naga: Recent results of the DAI's excavations in tomb complex K93.11/K93.12

In the course of more than 20 years' archaeological research in the northern part of Dra' Abu el-Naga, the German Archaeological Institute Cairo (DAI) has been able to collect and evaluate a large amount of data on individual tombs, the evolution of tomb architecture and the formation and development of

this part of the Theban necropolis. One key monument within the DAI's concession area is the large double tomb complex K93.11/K93.12 which has been investigated over the last two decades (1993-2000; 2006-present). Originally cut in the 18th dynasty it was reused in the 20th dynasty by the High Priest of Amun Ramsesnakht and his son and successor Amenhotep who remodeled the existing rock tombs into two elaborate tomb-temples. The remains of their destroyed monuments, thousands of relief fragments and architectural pieces of sandstone, were discovered in the fill of the forecourts. Besides the shattered sandstone installations the remains of monumental mud brick architecture came to light, and both testify to the elaborate tomb-temple concept which Ramsesnakht and Amenhotep had realized at this site. Furthermore, their monumental modifications reveal a particular spatial concept developing the existing (ritual) infrastructure.

The results obtained in K93.11/K93.12 have provided a considerable amount of additional information with regard to Ramesside tomb architecture and semantics, and to the composition of the local ritual landscape. They shed more light on the function of tombs as an element of this landscape, i.e. on the form of their inclusion into the Beautiful Feast of the Valley and other religious festivals. Moreover, the archaeological observations highlight the importance of Dra' Abu el-Naga as a stage for the festival processions during the Ramesside period.

The research in K93.12/K93.11 forms an important basis for the comprehensive study of the ritual infrastructure of Dra' Abu el-Naga which combines archaeological findings and, e.g., available GIS data on Thebes. This paper presents the results of the ongoing research illustrating amongst others the significance of spatial interrelations between tombs, sanctuaries and/or physical landscape.

Teodozja I. Rzeuska (Institute of Mediterranean and Oriental Cultures, Polish Academy of Sciences, Warsaw)

The Historical landscape of Meidum

Meidum is the southernmost part of the Memphite necropolis. The site - renowned for the paintings of geese and the famous statues of Rahotep and his wife Nofret as well as the characteristically shaped pyramid - is generally considered to be a cemetery dated to the times of the early 4th dynasty. Paradoxically, it has never been closely investigated, resulting in a large gap in the knowledge of both the period preceding the emergence of the early Old Kingdom burial ground and the later times. However, an analysis of the finds as well as the archival materials could help to fill the blank pages of the history of this significant archaeological site.

Helen Strudwick (Fitzwilliam Museum, Cambridge)

Visibility - Invisibility – Intervisibility. The effect of seeing in a sacred landscape

Within ancient Egyptian architecture the concept of axuality — structures built to have a straight, or almost straight axis of alignment — is entirely familiar and accepted as the norm. It is, however, a feature found in the architecture of very many cultures indicating that it is the result of a fundamental human concern. The axial relationship between two monuments clearly signifies a connection of some kind, generally a relationship of sphere of influence, but why is that. We all know that the shortest distance between two points is a straight line, and perhaps it was the ability to be able to exert control by having a direct route of access between two spaces that was important. This paper, however, considers the importance of the ability to see within a landscape in ancient Egypt and how that conveyed power over what was within the line of sight, as well as the importance of not being seen.

Lenka Suková (Charles University in Prague)

Sacred places and profane spaces in the rock-art landscapes of Lower Nubia: case study from the Czechoslovak concession

Rock art – non-utilitarian anthropic marks made on natural, unmovable rock surfaces by means of techniques involving reductive (petroglyphs) and additive (pictograms) processes – constitutes an archaeological source of a peculiar nature. It is a direct testimony left behind by peoples of prehistoric and historical times of themselves and their lived and/or spiritual worlds as they experienced them and/or conceived them. The complex spatial and temporal dynamics on some surfaces further shows that the pictorial statements made by some artists at one time were added to, modified, or even reduced by others who felt the urge to leave their own characteristic trace on the particular panels and thus to represent themselves on or to appropriate the panels and to charge them with extended, updated, or even new – their own – meanings. To extract the exact – and often layered – meaning these images of distant times once bore for their creators and direct audience is a task of marked difficulty without informed knowledge provided by those who used or reused the surfaces. Nevertheless, we can still learn a lot about these ancient peoples if we view their works as historical documents and look for what they told us about themselves unintentionally by creating their distinctive images at particular places and by engaging into dialogues with the landscape and with other graphic – both inscriptional and pictorial – and archaeological evidence.

In this paper, we will visit the rock-art landscapes in two sections of the Nile Valley in Lower Nubia and survey a selection of sites where the character of the rock art from the point of view of thematic, stylistic, structural, and technical aspects and/or the marked spatial and temporal dynamics of the rock-art panels allow us to perceive these sites as “Places” – locales of special social or religious significance – in the otherwise profane, albeit through rock art humanised landscapes.

Josef Wegner and Paul Verhelst (University of Pennsylvania, PA)

Lost Landscapes of Abydos: the Malih and the Sacred Lake of Osiris

An important element of the landscape of Abydos into the 20th Century was the area locally called the *Malih*. The *Malih* was a wide expanse including two adjacent lakes extending along the south side of the Kom es-Sultan. These two water bodies were filled in during the 1950s and since the 1970s the area has been entirely covered by housing. Strangely, although 19th century scholars such as Maspero commented on the importance of this area of Abydos - and its possible identification as a sacred lake associated with the Osiris temple - the existence of the *Malih* has passed entirely without comment in modern archaeological literature on Abydos. It is a crucial element of the Abydene landscape, but one that has been lost –both physically and to scholarship- over the last century.

Using 19th Century maps, plans and photographs, in combination with aerial photographs and satellite imagery from the 1960s onwards, we consider the original size and location of the *Malih*. The two adjacent lakes appear to represent residual components of a once large (ca. 300 m. long) man-made sacred lake. Millennia of alluviation and growth of the floodplain had reduced the lake, by the 19th Century AD, to the two water bodies observed by early modern archaeologists. Originally, this lake flanked the south side of the Kom es-Sultan but extended a significant distance behind it, pushing all the way to the very base of the desert escarpment. The feature appears like to represent a sacred lake connected with the main Osiris temple and its associated religious rituals. The structures that developed around it were connected with its position on the landscape and the role this lake had in the annual Osiris procession and other religious elements of the Osiris cult.

Most importantly, the position of this sacred lake of Abydos directly fronted the beginning of the wadi approach towards Umm el-Qa'ab and marked the beginning of the processional route that led to the symbolic tomb of Osiris. The lake itself is likely to have been involved in the water-borne components of the annual Osiris procession that included the *Neshmet* barque and the "great departure" that led across the desert to Umm el-Qa'ab. We examine textual sources for the development of the lake during the Middle Kingdom and later New Kingdom activity associated with it. The sacred lake may date to the early 12th Dynasty but was altered during the New Kingdom. By the reign of Thutmose III the lake was flanked on either side by chapels that may have served as way-stations in the boat elements of the Osiris procession. Over time, the sacred lake served as a focal point for a variety of religious structures including the private chapel zone that flanked the lake's northern edge directly behind the Osiris temple, as well as the royal commemorative buildings arrayed along the desert edge toward the local south.

John Wyatt (independent scholar)

Climate Change in Ancient Egypt and its Effects on Bird Populations

Any sustained period of climate change, such as that which started in Ancient Egypt around 4000 BCE, leads to habitat change and thus to the disappearance of some species from former habitats and to their replacement by others in newly-evolved niches. Nearly 250 species of bird have now been identified, from hieroglyphs, bone and mummy records, art and literature, as having probably occurred in Ancient Egypt from Pre-dynastic times through to the end of the Graeco-Roman Period either as residents, passage migrants, winter, summer and flood season visitors, or vagrants. By examining when and where these species were present in the three macro-habitats of the Western Desert, Eastern Desert and especially the Valley of the River Nile, it has proved possible to determine when species, such as the Saddle-billed Stork, *Ephippiorhynchus senegalensis*, may have become extinct in Egypt and when others, such as the Black-headed Plover, *Vanellus tectus*, may have arrived during or following desertification. It has also proved possible to assess those species, like the Long-tailed Cormorant, *Phalacrocorax africanus*, probably effected by habitat reduction rather than total loss and those, for example the Siberian White Crane, *Grus leucogeranus*, forced exceptionally south of their normal wintering ranges in Europe and the Middle East to Egypt by exceptionally cold winter periods in the north. This research continues.