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臨遺跡集落モデルとしての奈良県明日香村の遺跡と集落の暮らし  
—サッカラ村の今後を考えるための方向性の提示—

徳勢貴彦・岡絵理子

Life in Archaeological Sites and Settlements in Asuka Village as a Model Case  
for Managing Settlements Adjacent to Archaeological Sites:

A Proposal for the Future of Saqqara

Takahiko TOKUSE, Eriko OKA

1-12ページ

This study reviews the history of and people's attitudes to the archaeological sites and settlements in Asuka village, Nara prefecture. Because of its structural similarities, Asuka village offers useful insights for the future of Saqqara, a settlement adjacent to an archaeological site, regarding the appropriate management of the archaeological site and the settlement in relation to each other. In Asuka Village, where archaeological sites and the landscape of settlements have been viewed integrally, creative heritage management and utilization have been promoted by means of urban planning methods through the preservation of archaeological sites and the creation of a landscape that fits as the sites' background. Moreover, the Program for the Development of the Living Environment and Industrial Infrastructure in Asuka Village was formulated, which has led to the administration of projects aimed at stabilizing residents' lifestyles and the establishment of the Asuka Village Development Fund. The local government, residents, scholars, and people knowledgeable in culture and the arts have been involved in the preservation process in various ways. Those in charge of the future of Saqqara should learn from Asuka by viewing the settlement and the archaeological site as one integrated landscape and by developing the living environment and the infrastructure of the settlement while preserving the archaeological site.

臨遺跡集落・サッカラ村の生活と空間構造(その4)

—「古い村」(カルヤ型集落)としてのサッカラ村の現状— [英語版]

岡絵理子

Life and Spatial Structure in Saqqara Village, a Settlement Adjacent to  
an Archaeological Site (Vol. 4): The Existing State of Saqqara as an "Old Village"  
(Karya -Type Village) [English version]

Eriko OKA

13-21 ページ

This paper examines the role of Saqqara village as a settlement in Egypt, based on previous studies on the Egyptian settlement, the findings from our studies over a three-year period, and a supplemental survey that we conducted this year. Although located in the vicinity of the large city of Cairo, Saqqara has

characteristics of a typical old village, or a *karya*-type village. Its local community and culture as well as its old buildings and living space make Saqqara a potential tourist site that can offer visitors insights into old Egypt.

ゼロ繫辞文における一致関係—標準アラビア語の[Ø NP<sub>1</sub> + NP<sub>2</sub>] 構文の場合—  
スライマーン・アラールディーン

Agreement in Zero Copula Construction: The Case of [Ø NP<sub>1</sub> + NP<sub>2</sub>] Construction  
in Modern Standard Arabic

Alaaeldin SOLIMAN

23-31ページ

This paper deals with agreement in the [Ø NP<sub>1</sub> + NP<sub>2</sub>] construction, one type of the zero copula constructions in Modern Standard Arabic. The zero copula construction in this paper refers to a construction in which the relation between a subject and a nominal predicate is not marked by overt copula or verb.

There is a general consensus in the traditional Arabic grammatical theory and modern linguistic theory that in the [Ø NP<sub>1</sub> + NP<sub>2</sub>] construction, when the predicate is a noun, or adjective, the predicate agrees with the subject. This paper has two objectives. The first one is to illustrate that agreement in the [Ø NP<sub>1</sub> + NP<sub>2</sub>] construction is limited to a specific category of multifunctional descriptive nouns, and not all predicate nouns nor adjectives agree with the subject in the [Ø NP<sub>1</sub> + NP<sub>2</sub>] construction as described in the literature. The second objective is to determine the group of derivatives which some of it agrees with the subject in the [Ø NP<sub>1</sub> + NP<sub>2</sub>] construction, and functions as the nucleus of adjectives in Arabic.

ペンメルウ (*Pn-mrw*) の遺書に見る女性の位置づけ—葬祭神官の職をめぐる—

吹田真里子

The Position of Women in the Will of Penmeru (*Pn-mrw*) Concerning the Office of  
Funerary Priest

Mariko SUITA

33-39ページ

This paper discusses the position of women in the will of Penmeru (*Pn-mrw*), which concerns the office of the funerary priest. Penmeru was the overseer of funerary priests and director of the kitchen in the Fifth Dynasty. His mastaba is located in the Western Cemetery at Giza. Inscriptions about the will are engraved on the wall of the open chapel in the mastaba.

The position of women who are written in wills were considered in my previous papers. Women could make a will the same as men, and in that regard, women held the same legal capacity as men. However, even though women held such a possibility, the property inheritance of women was mentioned in the wills of men in practice.

A funerary priest or priestess was one of the notable point that women could be involved in property inheritance. The funerary priest or priestess meant a person who served offerings to the dead, and there were women who went to this position. This paper examined, how women were treated in the succession of property of Penmeru, comparing with the wills in my previous research.

As a result, even women could engage in the office of funerary priest, as is clear from the will of Pepi and Buwt, but in their cases, they are daughter of the deceased. Even though Penmeru had a son and daughter, he did not transfer the office of funerary priest to them. Furthermore, the wife of Penmeru was alive when the first part of the will was made, but the office were not transferred to her, but to non-relatives. Therefore, it is considered that women could make a will the same as men, and in that point, women also retained the legal capacity as men, but that wives of the deceased could not be involved in the office of funerary priest.

陛下の第一の大將軍パディアセトについて—石棺Berlin29 の碑文からみた前4世紀のエジプト—

藤井信之

Some Remarks on the “First Great General of His Majesty” Padiesis and  
the Political Structure of the 30th Dynasty

Nobuyuki FUJII

41-54ページ

The purpose of this study is to examine the political structure of Egypt in the 4th century B.C.E. by analyzing the titles of Padiesis (*PA-di-Ast*), which were inscribed on his sarcophagus registered as Berlin 29.

On the basis of the typology of the sarcophagus, the date that Padiesis had held the offices is estimated to

be the 30th Dynasty, but it may be possible that Padiesis was alive until the Macedonian Period. He bore fifteen titles including priestly, military and administrative titles (see Table 1). The most important title among these fifteen titles was as a “General (*imy-r mSa*),” which he inherited from his father. From this we may assume that he belonged to a military family. General Padiesis also bore some priestly titles of temples in the Western Delta, such as Sais and Buto. In addition, he bore the title “*wr aA*,” which means, local monarch. That military personnel concurrently served as priests occurred less in the Saite Period, but more frequently in the Libyan Period. It was also often in the Libyan Period that a General with a priestly title was a local monarch. The Libyan Period was the Era of Decentralization. Under the Libyan Dynasty, the king was only *primus inter pares* among Libyan chiefs ruling the local regions. It seems reasonable to suppose that if Padiesis was a local monarch, the political structure of the 30th Dynasty was also decentralized.

It is worthy of note that Padiesis bore the title, “Controller of Upper and Lower Egypt (*xrp Smaw tA mHw*).” This title suggests that he had controlled Egypt temporarily on behalf of a king. In this paper, therefore, I examine whether it is possible to identify Padiesis of Berlin 29 with Padiesis on the Demotic Ostrakon which Smith (1988) published, or Petisis (Greek form for Egyptian *PA-di-Ast*) that Arrian (III, 5) referred to. Given that Padiesis of Berlin 29 was alive until the Macedonian Period, it may be possible that both Padiesis were actually the same person.

### Removal of the White Marine Deposits Disfiguring the Granitic Monumental Objects of Alexandria Lighthouse, Alexandria, Egypt

Adel M. Akarish, Ahmed S. A. Shoeib, A. Nageh

55-65ページ

At the end of the last century, many of the monumental objects of Alexandria Lighthouse were lifted out from underwater and stored or exhibited at different places in Alexandria City. Although these objects had been desalinated and cleaned after being lifted from underwater, they still suffering from the presence of a large amount of white marine encrustations and concretions deposited on their surfaces. The main aim of the present work is to define and introduce an appropriate cleaning method to remove these deposits that are still disfiguring the surface of most (if not all) of these objects. Visual examinations, polarizing microscope and XRD methods are used to define the nature and the composition of these insoluble deposits. These deposits range from white to yellowish white in color, are relatively hard (about 3-4 by the Mohs scale) and their thicknesses range from millimeters to about 1 centimeter. Microscopic examination shows the impregnation of these deposits inside the exfoliation of the stone minerals (biotite) of the granitoids monumental objects. The XRD analysis indicated that the main components of these incrustations are the calcium carbonate minerals; mainly aragonite with calcite, in addition to quartz. The Physical-chemical method of cleaning processes has been applied in our work. For the present cleaning processes, poultices formed of EDTA +CMC alone or with other mixtures were tested for removing the considered insoluble deposits. Using EDTA 20% in the form of a poultice with the help of brushes and/or fiberglass is a safe and successful method to remove the insoluble white marine deposits disfiguring the granitic monumental objects.

### Conservation of the Machu-Picchu Archaeological Site: Investigation and Experimental Restoration Works of the “Temple of the Sun”

Tadateru NISHIURA, Yasuyoshi OKADA, Hideaki SHIBATA, Isamu ONO, Masaaki SAWADA, Atsushi ITO, Tatsuaki NISHIGATA, Haruhiro FUJITA, Masayuki MORII, Fernando ASTETE, Champi MONTERROSO, Carlos CANO

67-79ページ

The Machu-Picchu archaeological site, which is called the “ancient capital in the sky,” is one of the most important and famous world-heritage sites. It was the special place of the Inca Empire in the Sixteenth Century, and is located on a high ridge in Peru. There are about 200 remaining structures built of stones (granite) in the 13,000 km<sup>2</sup> site. Systematic conservation measures for the structures have not been conducted, except emergency measures by the regional office. Thus, the authors have started a project for the conservation of the remaining structure, especially for the preservation and restoration of the “Temple of the Sun,” which is one of the most important structures in the site, in cooperation with the Ministry of Culture of Peru. There are three emergency problems at the Temple of the Sun. One problem is that the stones of the structure have cracks probably caused by a lightning bolt. Another problem is that the structure has become instable because some of the joint parts in the stones have been opened. The other problem is the color change of the stones because of

the growing lichen population on their surface.

ナポレオンの地中海域遠征と「アンピール様式」—パリにおける古代エジプト・ローマ文明—  
浜本隆志

Napoleon's Expedition to the Mediterranean and the "Empire Style": The Ancient Egyptian and Roman Civilizations in Paris

Takashi HAMAMOTO

81-112ページ

Napoleon Bonaparte (1769–1821) emerged as a young officer in the midst of the chaotic and turbulent period of the French Revolution, served as Consul, the head of the Consulate, and finally became the Emperor in 1804. Napoleon is generally known as a hero because of his important military and political contributions in early 19th-century European history. He did indeed play a leading role in ending the French Revolution; the real Napoleon, however, was a belligerent, ambitious hegemonist.

Napoleon's talents as a commander became evident in the campaign in Northern Italy, when he was the commander-in-chief of the Italian expeditionary force (1796–1797). Recognized for his military competence, Napoleon decided to arrange a subsequent expedition to Egypt and Syria (1798–1802). Although these troop deployments to the Mediterranean were meant to keep the coalitions against France and British colonialism in check, they also ended up bringing the regional cultures and arts to France, giving rise to the French fascination with ancient Egyptian and Roman civilizations. This art trend is called, the "Empire Style," which is also known as Neoclassical style. It is found in paintings, architecture, interior decoration, furniture, pottery, personal ornaments, and many other art forms.

The "Empire" in the English name "Empire Style" means "emperor" in French (*empereur*), and since this style originated in France, it is usually pronounced with the French pronunciation in Japan. In a narrow sense, the French "empire" is understood as the period of Napoleon's reign as Emperor from 1804 to 1815, but in this paper, it also refers to the period between 1800 and 1820, including the Directory Era and Napoleon's confinement at St. Helena.

This paper reviews Napoleon's expeditions to Italy, Egypt, and Syria and how the Empire Style was established, and examines how the Empire Style has been embodied in paintings, architecture, monuments, symbols, furniture, and everyday commodities. Napoleon exploited the Empire Style to win the hearts and minds of the French people and succeeded in his ambition to dominate Europe, as a result of which, historical legacies of the ancient Egyptian and Roman Civilizations were left behind in Paris. This paper reveals that the Empire Style not only enjoyed a great deal of popularity in the history of French art and architecture, but also fostered nationalism and colonialism, and is closely tied to today's tourism in France.

革命期の文化イデオロギー—ベルナルディーノ・ドロヴェッティと文化遺産(1)—

柏木治

Cultural Ideology in the Age of the French Revolution: Bernardino Drovetti and Cultural Heritage (1)

Osamu KASHIWAGI

113-124ページ

The concept of cultural property was formed in Europe between the end of the eighteenth century and the beginning of the nineteenth century. However, many cultural properties of Egypt currently housed in major museums in Europe were "looted" from Egypt and brought to Europe during this period.

This paper reviews how the concept of cultural property emerged through the act of vandalism during the French Revolution. It also examines the circumstances which led to concurrent looting in Egypt by its neighboring countries, focusing on the relation between the European view of cultural property and the birth of the idea of the modern state. Nineteenth century Europe saw the growing trend of protecting the historical property of one's own country as national property as well as the tendency to view the property of "outsiders" as the target of looting. Our ultimate goal is to investigate these trends through the examination of Bernardino Drovetti, a French ambassador to Egypt for almost half a century. This paper provides a preliminary discussion to the investigation of these trends.

エジプト・ギリシア・近代ヨーロッパ—『黒いアテナ』論争のこれから—

中澤務

Egypt, Greece and Modern Europe: New Possibilities of the Black Athena Debate  
Tsutomu NAKAZAWA  
125-133ページ

In this essay I further discuss the 'Black Athena Debate' which has been carried on since the publication of Martin Bernal's first volume of *Black Athena* (1987). This debate is mainly concerned with problems of image formation in 19th century Europe regarding ancient Greek civilization and the influence of Egypt and the Near East. To investigate new possibilities in this debate, I discuss a new study, the *African Athena: New Agendas* (2011), and examine new points of view developed in this book that show how history has been revised to ignore African (and Semitic) contributions to Greek culture.

気相系シャーレおよび彩色石片上での *n*-アルカノールの抗カビ活性  
廣池晋治、坂元仁、アフメド・シュエイブ、吹田真里子、吹田浩、高鳥浩介、土戸哲明  
Antifungal Activity of *n*-Alkanols in Vapor Phase on Petri Dishes and Painted Stone  
Chips

Shinji HIROIKE, Jin SAKAMOTO, Ahmed S. Shoeib, Mariko SUITA, Hiroshi SUITA,  
Kosuke TAKATORI, Tetsuaki TSUCHIDO  
135-145ページ

The inhibitory activity of gaseous *n*-alkanols on fungal growth was investigated using a petri dish and a painted stone chip. The fungi used in this study were xerophilic *Aspergillus restrictus* and *Eurotium amstelodami*, xerotolerant *Aspergillus niger* and *Penicillium funiculosum* and, as *n*-alkanols, ethanol (EtOH), *n*-propanol (*n*-PrOH), *n*-butanol (*n*-BuOH) and *n*-pentanol (*n*-PeOH) were used. Fungal spores were inoculated with a small amount of liquid broth onto paper disks and then the disks were placed on the surface of the petri dishes and of the painted stones in a plastic container sealed with plastic tape. On both the petri dish and the painted stone chip, longer carbon-chain alkanol demonstrated stronger inhibitory activity on fungal growth. On the petri dish, although a longer-chain *n*-PeOH demonstrated a different inhibitory activity on the strain to strain used, shorter-chain *n*-alkanols were more effective on xerotolerant fungi than xerophilic fungi. On the painted stone chip for which only *n*-PeOH and *A. restrictus* were used, black carbon and brownish ferric oxide used as pigments supported fungal growth but blue and green pigments containing copper compounds showed an inhibitory activity, indicating some differences in the effect of pigment colors on the fungal growth.

GC-MS 及び ATR-IR 分析によるミイラの布の有機付着物分析  
五百崎太輔、山下和子、アフメド・シュエイブ、アーデル・アカリシュ、川崎英也、吹田浩、荒川隆一  
Chemical Analysis of Organic Fouling of Mummy Clothes by GC-MS and ATR-IR  
Taisuke IHOZAKI, Kazuko YAMASHITA, Ahmed S. A. SHOEIB, Adel I. M. AKARISH,  
Hideya KAWASAKI, Hiroshi SUITA, Ryuichi ARAKAWA  
147-152ページ

We carried out GC-MS analysis in a purpose to find the organic compositions included in linen fragments of ancient mummy, which belongs to Idout, 2360 B.C., in Saqqara, Egypt. The investigated fragments were collected from the linen debris found on the floor of the burial chamber. It was supposed that the organic materials of glues or resins might be used to fix the linen cloth of the mummy.

IR spectrum suggests a fatty series or aromatic compounds in a peak derived from CH<sub>2</sub> near 2800-3000 cm<sup>-1</sup>. Wide and gentle absorption of a hydroxyl group derived supposedly from the cloth was detected in the range of 3600-3000cm<sup>-1</sup>. In the range of 1200-1000cm<sup>-1</sup>, we detected some peaks (1023 cm<sup>-1</sup>, 1103 cm<sup>-1</sup>, 1157 cm<sup>-1</sup>) in the thin fragment, whereas no peak in the thick one. When the thick fragment was peeled off, ATR-IR detected components exposed on its surface. As for the adhesives of the surface, they might be phosphorus compounds derived from animal in peaks of PO. We could not lead to identification in the range of 1200-1000cm<sup>-1</sup> because of many peaks of organic compounds.

イドウトのマスタバ調査プロジェクトにおけるアーカイブシステムの提案  
安室喜弘・松下亮介・西形達明・吹田浩  
New Digital Archiving System for Mastaba Idout Project  
Yoshihiro YASUMURO, Ryosuke MATSUSHITA, Tatsuaki NISHIGATA, Hiroshi  
SUITA  
153-165ページ

Egyptology involves variety kinds of technical fields as well as archaeological specialty areas. Especially for maintenance and restoration of the historical ruins and cultural heritages like wall reliefs and paintings, ICP (Institute for Conservation and Restoration of Cultural Properties) and successive group of CHC (The Center for the Global Study of Cultural Heritage and Culture) in Kansai University organize the research members from fields of civil, architectural, chemical, material engineering, informatics and computer science. This research proposes a new type of digital archive system to achieve the transversal studies in such organization for sharing the live and accumulated information. The system provides a realistic virtual space on web-browsers that allows sharing the on-site information rooted from the environments of the field and discussing over the common target in a cross-sectional manner via the internet. This paper describes the detailed technical implementation scheme of the proposed system framework and also shows the possibility of spontaneously arising bridges between different specialized areas and their works.

シリカ、アルミナ、炭酸カルシウムへのシランカップリング剤の反応性  
中村吉伸・山崎諒太・下嶋康平・藤井秀司

Reactivity of Silane Coupling Agent on Various Inorganic Surface  
Yoshinobu NAKAMURA, Ryota YAMAZAKI, Kohei SHITAJIMA, Syuji FUJII  
167-176ページ

Reactivity of a silane coupling agent with various inorganic particles was investigated. For this purpose, surface treatment of silica, alumina and calcium carbonate particles with a silane coupling agent having glycidoxy and amino groups was carried out by a wet-treatment method using 2-propanol as solvent. Physically adsorbed molecules were removed by alcohol washing, and the adsorption percent was measured by thermogravimetric analysis (TGA). In the case of glycidoxy functional silane, the adsorption was about 35% for silica, and about 5% for alumina and calcium carbonate each. In the case of amino functional silane, the adsorption was about 60% for silica, about 35% for alumina, and about 40% for calcium carbonate. Judging from the electronegativity (as originally proposed by Linus Pauling), silica tends to form a covalent bond with the silanol group of silane, which is why the adsorption of silica is highest. The amino group of silane adsorbs to the hydroxy group on an inorganic particle surface by ionic interaction. An ionic interaction occurs easily in the order of calcium carbonate > alumina > silica. For this reason, the adsorption increased for amino functional silane, and was more remarkable for calcium carbonate and alumina.

文化財施設環境中の空中浮遊微粒子と浮遊カビの相関性  
高鳥浩介・村松芳多子・太田利子・久米田裕子・高橋淳子・土戸哲明

Correlation between Air Particle Substance and Air-borne Fungi in Cultural Asset Environment  
Kosuke TAKATORI, Kanako MURAMATSU, Toshiko OTA, Yuko KUMEDA, Atsuko TAKAHASHI, Tetsuaki TSUCHIDO  
177-184ページ

Recent engineering technology on measuring skill remarkably progresses. The technique is applied among several fields such as air particle measurement and real time floating microbe counter. In case of these technological application to progress in environmental research, it is important to use available and optimal instruments. In this study, we carry out the correlation between air particle substance and air borne fungi. Because of measurement for rapid and accurate technological inspection by using modern instruments, it also required the accurate measurement.

As the microbial measuring method of air particle in in-door environment, there are mainly 2 types; microbial falling measurement method and air sampler measuring method. These measuring methods owe to the microbiological analysis. However, it needs to have a long time to judge the microbiological results in environments. Therefore, we investigate to develop the rapid measuring method by using particle counter (PC). PC is originally to estimate the air particle substances by each particle size with microbes together.

The ranges of particle size to measure are among 0.5 to 10.0 micron meter. We especially focus the particle size 3 to 5 micron meter because of distributing in air borne fungi which cause the damage to cultural asset and influence to the human health hazard. In this paper, we investigate the correlation between air particle substance and air borne fungi in cultural asset environments.

Crisis of Egyptian Monuments and the Future  
Mohamed Ibrahim  
187-198ページ

The Reality and Challenges of Preserving Egyptian Antiquities in Light of Changes that  
Occurred in Egypt after the Revolution of January 2011  
Hani Ahmed  
201-214ページ

Present Situation and Problems for the Protection of Culultural Heritage in Saqqara  
Sabry Farag  
215-222ページ

Saqqara Administration for the Conservation and Restoration of Antiquities over 70  
Years  
Mostafa Abdel-Fatah  
223-232ページ

The Current Condition of the Saqqara Monuments  
Nasser Fergany  
233-249ページ

Examples of Conservation and Restoration Work in Saqqara  
Ashraf Youssef  
251-264ページ

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An Ancient Egyptian Piece of Weight in the Cairo Museum

Salah el-Kholy

1-4 ページ

The present article deals with an ancient Egyptian piece of weight, which had been chosen once for the last one hundred year anniversary of the Cairo Museum and was exhibited during that occasion. This weight of grey basalt deserves a special interest since it was inscribed in hieroglyphic signs on its front side with the standard to which it belonged, and the number of units which it contained. Such a characteristic was not current in all weights. Most of the weights have no inscription.

One should guess its standard just only by depending on its actual weight. It weighs 1,275.9 grs. Therefore, it gives 14.17 grs for a unit as it was inscribed with 90 units. In the following study, this weight is reconsidered to define thoroughly the main standard to which it belongs, i.e. the exact weight of its unit, and lastly to define its date.

臨遺跡集落モデルとしての奈良県明日香村の遺跡と集落の暮らし

—サッカラ村の今後を考えるための方向性の提示—[英語版]

徳勢貴彦・岡絵理子

Life in Archaeological Sites and Settlements in Asuka Village as a Model Case for Managing Settlements Adjacent to Archaeological Sites:

A Proposal for the Future of Saqqara [English version]

Takahiko TOKUSE, Eriko OKA

5-20 ページ

This study reviews the history of and people's attitudes to the archaeological sites and settlements in Asuka Village, Nara Prefecture. Because of its structural similarities, Asuka Village offers useful insights for the future of Saqqara, a settlement adjacent to an archaeological site, regarding the appropriate management of the archaeological site and the settlement in relation to each other. In Asuka Village, where archaeological sites and the landscape of settlements have been viewed integrally, creative heritage management and utilization have been promoted by means of urban planning methods through the conservation of archaeological sites and the creation of a landscape that fits as the sites' background. Moreover, the Program for the Development of the Living Environment and Industrial Infrastructure in Asuka Village was formulated, which has led to the administration of projects aimed at stabilizing residents' lifestyles and the establishment of the Asuka Village Development Fund. The local government, residents, scholars, and people knowledgeable in culture and the arts have been involved in the conservation process in various ways. Those in charge of the future of Saqqara should learn from Asuka by viewing the settlement and the archaeological site as an



integrated landscape and by developing the living environment and the infrastructure of the settlement while conserving the archaeological site.

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徳勢貴彦・岡絵理子  
21-37 ページ

臨遺跡集落・サッカラ村の生活と空間構造(その4)  
—「古い村」(カルヤ型集落)としてのサッカラ村の現状—[アラビア語版]  
岡絵理子  
39-48 ページ

A Prosopographical Study of the Inscription on the Sarcophagus of Pediese (Berlin 29):  
An Aspect of the Political Structure of Egypt in the Fourth Century B.C.E.  
Nobuyuki FUJII  
49-65 ページ

This paper presents all the titles Pediese bore on the basis of the inscription on Berlin 29 and examines Pediese himself as well as the political structure of Egypt in the fourth century B.C.E.

The prosopographical data of this Pediese in previous studies were incomplete. Pediese's prosopography in this study reveals the following. Pediese of Berlin 29 came from a military family and took over the position of "General" from his father. His religious titles and his mother's title indicate that Pediese was based in the central part of the western Nile Delta including Sais and Buto. He was also a provincial ruler as *wr aA* "Great Prince." Moreover, in his career, he temporarily governed Egypt as *xrp Smaw tA mHw* "Controller of Upper and Lower Egypt." Whether this happened during a king's expedition in the Thirtieth Dynasty, in the Second Persian Period (the Thirty-first Dynasty) or under the reign of Alexander (the Great) remains unknown. The author also examines whether it is possible to identify Pediese of Berlin 29 with Pediese on the Demotic Ostrakon which Smith (1988) published, or Petisis (Greek form for Egyptian *PA.di.Ast*) that Arrian (*Anabasis*, III, 5) referred to.

Pediese of Berlin 29 was a "General" from a military family and was a priest at prestigious temples in the western Nile Delta including Sais and Buto, and also was a provincial ruler. Individuals who concurrently held these titles were frequent in the Libyan Dynasty but were less in the Saite Dynasty. Pediese's prosopography examined in this paper shows that Egypt in the fourth century B.C.E. after gaining independence from Persian Empire was decentralized like the Libyan Dynasty rather than the centralized Saite Dynasty. In Egypt, especially in Lower Egypt, provincial military forces that were prominent in the Libyan Dynasty re-emerged and served as provincial rulers in the fourth century B.C.E.

Once recognizing the significance of the military forces, the background of Ptolemy's restoration of the land of Buto temple, an event described on the Satrap Stela, becomes clearer. Ptolemy's intention of restoration the land was to win over the support of influential military forces such as the family of Pediese's. While Ptolemy attached importance to Egyptian priests, it was the Egyptian military forces that he attached special importance to. Ptolemy was in the Wars of the Diadochi and needed the cooperation of Egyptian military forces in order to secure stability in Egypt.

標準アラビア語における基本構文の分類—動詞を含む文と無動詞文の違いについて—  
スライマーン・アラールディーン

The Classification of Sentence Types in Modern Standard Arabic: On the Differences  
between Verbless and Verb-containing Clauses  
Alaaeldin SOLIMAN  
67-79 ページ

Arabic grammatical theory divides clauses into two types depending on the nature of the initial word in the clause. This initial word criterion may be inspired by the nature of the verb-containing clauses in Arabic where all the heads precede their dependents, or by the dominant Government Theory in the traditional Arabic grammatical theory and modern linguistic theory. In this paper I addressed some problems in the classification of clause types in Modern Standard Arabic, and observed major differences between verbless clauses and

verb-containing clauses. While we can find concord and agreement between all verbal predicates and their subjects in verb-containing clauses, on the contrary verbless clauses such as [PP + NP], and [NP + PP] constructions do not have any agreement. Agreement in the [ $\emptyset$  NP<sub>1</sub> + NP<sub>2</sub>] construction, one of the verbless constructions in Arabic, is limited to a specific category of multifunctional descriptive group of derivatives, and not all predicate nouns nor adjectives agree with the subject in the [ $\emptyset$  NP<sub>1</sub> + NP<sub>2</sub>] construction.

Verbless clauses is different from verb-containing clauses in its syntactical and informational structure, and it is not appropriate to be analyzed by criteria that depend on Agreement or the concept of head-dependent.

### Conservation of Ayutthaya Historical Site as a Result of Major Floods

Tadateru NISHIURA

81-87 ページ

The author carried out the investigation on the conservation of Ayutthaya historical site as a result of major floods at the site with staffs of Fine Arts Department of Thailand in April, 2015. Some remarks and recommendations for the conservation of this historical city are reported.

### Characterization of Old Mortars from Historic Buildings in Muharraq, Bahrain

Ahmed Shoeib, Salman Almahari

89-96 ページ

Muharraq Old City is one of the most emblematic areas of Bahrain and is classified by UNESCO as a World Heritage site (Pearling, Testimony of an island economy).

The city is rich with historic buildings which are in bad condition and need conservation interventions. Many monuments have suffered several conservation interventions in the last 30 years especially by using Portland cement, without, however, any type of previous knowledge about the type of mortars and materials used. This work was carried out to identify the mortar's composition in different buildings and to try to find the appropriate conservation mortars. XRD and petrography studies were carried out to find the results in addition to the physical and mechanical characterization. The results showed that the main composition of the bedding mortar and plasters are Gypsum.

### Treatment and Conservation of the Statue of Nefer from the Czech Mission Excavations in Abusir Area

Ashraf Youssef Ewais

97-107 ページ

The Czech mission in Abusir had a successful archaeological season in 2012. They discovered a tomb of Nefer, where they found more than ten limestone statues of Nefer. Nefer was a great official in the time of the king Neferirkare of the fifth dynasty.

One of the statues had a broken head. The Saqqara Administration for the conservation and Restoration Antiquities used one material for treatment and conservation of the unique statue. This material is Paraloid B72, which is usually used as a consolidant and is a reversible material used for different purposes.

### Ptahshepses Mural Painting and its Characterization at Gesr El-Mudir in Saqqara, Egypt

Mustafa Ahmed Abdelfatah, Muhamed Kamal, Shabban Mahmud

109-126 ページ

The main aim of this paper is to identify the painting materials used in decorating the burial chamber of Ptahshepses. In particular, this study characterizes the ancient Egyptian mural paintings and plaster discovered at Gesr El-Mudir in Saqqara area. In this area, a number of tombs dating back to the 5th dynasty were discovered. One of such tombs is the Ptahshepses tomb, which has a unique decorative burial chamber. The chamber walls were cased with limestone, carved with bass and raised reliefs, and covered with plaster layers painted with different colors. The characterization of the mural painting was done by using an Optical Microscope (OM), Scanning Electron Microscopy equipped with an energy disperse X-ray detector (EDX), and X-ray diffraction analysis (XRD). Analysis of the examined samples indicates that the plaster layer is composed mainly of gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ), quartz and calcium carbonate; the red pigment is red ochre; the yellow pigment is goethite; the orange pigment is a blend of red pigment and yellow pigment, and the blue pigment is Egyptian Blue (*Cuprorivaite*). The colors and the plaster compositions help to provide an idea of some of the

painting materials used during the Old Kingdom in the decorative burial chambers in Saqqara between the time of Unis (the last king of the Fifth Dynasty) and the time of Teti (the first king of the Sixth Dynasty).

#### 古代ギリシアにおける異文化理解の諸相(1)—ノモスとピュシス—

中澤務

Aspects of Cross-cultural Understanding in Ancient Greek 1: Nomos and Physis

Tsutomu NAKAZAWA

127-139 ページ

The notions of “nomos” and “physis” played an important role in the cross-cultural understanding of the ancient Greeks. As to the origin and historical role played by these notions, F. Heinemann’s view is still influential. His view is as follows: (1) The origin of these notions stems from ethnological studies of the various cultures of the time. (2) However, the antithetical way of thought of philosophers at that time (e.g. ‘name vs reality’ or ‘seeming vs being’) changed the notions of “nomos” and “physis” into sharp antithetical notions. (3) The Sophists used these notions to oppose ‘law and convention’ (nomos) to ‘human nature’ (physis) and accepted the latter and rejected the former.

In this paper, I reexamine his view and propose a new interpretation. The outline of my interpretation is as follows: (1) The origin of these notions was not only derived from the ethnological studies, but also from the thoughts of Protagoras, the Sophist. (2) Protagoras presupposed close interrelations between “nomos” and “physis.” (3) This presupposition was shared by many Sophists of the day including Antiphon (whom Heinemann regarded the champion of anti-nomos thought).

In my view, ancient Greeks had consistently used these twin notions as effective tools for cultural understanding.

#### 古代エジプトにおける「シンデレラ物語」の世界伝播(1)—ヨーロッパ伝播を中心に—

浜本隆志

Global Dissemination of *Cinderella* from Ancient Egypt 1: Mainly in Europe

Takashi HAMAMOTO

141-161 ページ

*Cinderella*, one of the most popular fairy tales, has been the favorite of many people including children. Although most people in recent years first heard the story of *Cinderella* in the animated film produced by Walt Disney (1901-1966), the film is based on *Cendrillon, or The Little Glass Slipper* (referred to as “*Cendrillon*” below), by the French fairy tale writer Charles Perrault (1628-1703). The name “*Cinderella*” stems from cinder (French *cendre* and German *Asche*), provoking an image of a girl covered in ashes, doing drudgery in the kitchen.

Perrault apparently based *Cendrillon* on *La Gatta Cenerentola (The Cat Cinderella)*, composed by an Italian writer Giambattista Basile (1575-1632). Both Perrault and Basile’s fairy tales had significant influence on the Brothers Grimm (elder brother Jacob, 1785-1863; younger brother Wilhelm, 1786-1859) in their writing of *Aschenputtel (Cinderella)*. Thus in the West, the fairy tale was handed down from Basile to Perrault to the Brothers Grimm to Disney.

That being said, a historical examination of *Cinderella* shows that the fairy tale also existed in other parts of the world, including ancient Egypt, Southwest Asia (Turkey, Arabia, and India), East Asia (Tibet, Java, China, Korea, and Japan), and North America (e.g. among Native Americans). Then how many *Cinderella* stories are there in the world?

In the late-nineteenth-century Britain, Marian Roalfe Cox (1860-1916) published a collection of as many as three hundred forty-five versions of *Cinderella*, attesting to the story’s wide dispersion. Further studies have been done on the subject since then. In the Aarne (1867-1925) - Thompson (1885-1976) classification system, over seven hundred variants are listed. According to Anna Birgitta Rooth (1919-2000), this spread of the fairy tale across the world is called the *Cinderella cycle*. In Japan, Shizuka Yamamuro published *Cinderella Stories in the World* and demonstrated its worldwide dissemination with examples.

As previous research suggests, the variants of the *Cinderella* story did not naturally occur in different regions with no historical ties to each other; instead, the original tales were disseminated while being heavily influenced by each other. These different versions generally share the basic plot structure in which a heroine suffering from some kind of hardship receives help from a supernatural character and marries a rich man.

Previous research has established that *Yeh-Shen*, the Chinese version of *Cinderella*, was written in the

ninth century, and some scholars believe it is the original *Cinderella*, linking the Chinese tradition of foot-binding to *Cinderella's* slipper. This theory, however, is not so likely because older variants of the story have been found in further studies on the variants of *Cinderella* in recent years. Although specifying the original dates of fairy tales and folktales is difficult, a certain degree of estimation is possible based on indirect sources.

For example, there are much older versions of *Cinderella* than the ninth-century *Yeh-Shen*. The author explores the ancient Egyptian version of *Cinderella*, *Rhodopis*, as the most prominent of these cases. The story of *Rhodopis* was introduced by a Greek historian Herodotus (around 485 - 420 B.C.E.), which indicates that the tale dates back to the sixth to fifth century B.C.E.

In this bulletin, the author examines what caused the global dissemination of *Rhodopis* from ancient Egypt by paying close attention to the motif and features of the *Cinderella* story that are found in *Rhodopis* and analyzing the tale's structure. To narrow the broad scope of the subject, which is "global dissemination" of the story, this paper focuses on the dissemination in Europe as the first part of the discussion.

### 近代エジプト学の成立と所蔵品の帰趨—ベルリン・エジプト博物館をめぐる— 森貴史

Establishment of Modern Egyptology and Acquisition of Collections:  
Neues Museum in Berlin

Takashi MORI  
163-177 ページ

The Neues Museum on Berlin's Museum Island, a UNESCO World Heritage site, reopened in September 2009 after being closed for seventy years. The centerpiece of the museum's collection is the bust of Queen Nefertiti of the Egyptian Museum, which is a controversial piece with the Egyptian government repeatedly demanding its return since the early twentieth century. The discovery of the Rosetta Stone during Napoleon Bonaparte's Egyptian campaign and Jean-Francois Champollion's success in deciphering the hieroglyphics ushered in the rise of modern Egyptology in Europe. Germany has played a leading role in the establishment of Egyptology. German Egyptology was founded by Karl Richard Lepsius, and the Egyptian Museum of Berlin significantly contributed to the promotion of Egyptology. The museum still houses the Troy collection donated by Heinrich Schliemann, but most of the collection was seized by the former Soviet Union during World War II. The bust of Nefertiti was excavated in Tell el-Amarna in December 1912 thanks to a benefactor James Simon and an Egyptologist Ludwig Borchardt, and it was obtained by Germany under the partage system. Egypt deems the procedures of partage themselves invalid, and thus has requested the repatriation of the bust. Ownership of ancient artwork is still a subject of dispute not only at the Egyptian Museum of Berlin but also between prominent museums in Europe and the countries where the artworks were unearthed. Of the antiquities the Egyptian Museum of Berlin acquired in the eighteenth and nineteenth centuries, many were obtained via ways that the museum officials would rather not reveal. Returning artifacts to their countries of origin, however, does not offer an instant solution to the problem in terms of preservation and exhibition. More time and further discussion will be needed.

### ミイラの布に含まれる有機低分子化合物の熱分解 GC-MS 分析 五百崎太輔、山下和子、アフメド・シュエイブ、川崎英也、吹田浩、荒川隆一

Py-GC-MS Analysis of Low-molecular Organic Compounds Included in Mummy Clothes  
Taisuke IHOZAKI, Kazuko YAMASHITA, Ahmed Sayed SHOEIB, Hideya KAWASAKI,  
Hiroshi SUITA, Ryuichi ARAKAWA

179-184 ページ

Pyrolytic (Py) GC-MS analysis was carried out to examine low-molecular organic compounds in linen fragments of an ancient mummy from the Mastaba Idout, 2360 B.C., in Saqqara, Egypt. The investigated fragments were collected from linen debris found on the floor of a burial chamber. The organic materials in the linen debris such as glues and resins are assumed to have been used to fix the linen cloth of the mummy. Py-GC-MS for the untreated linen debris was performed with 590°C pyrolysis.

The results showed that the pyrolyzed products of the organic compounds in the linen cloth were classified as histidine, furan, benzene, steroid, alkane, alkene, and their analogs. However, at this stage, it is difficult to estimate the type of initial organic material from the analysis of these pyrolyzed products.

シラン化合物の混合方法が複合系の特性におよぼす影響

中村吉伸・下嶋康平・嘉流望・福田知由・藤井秀司

Influence of Addition Method of Silane Compound on Composite Properties

Yoshinobu NAKAMURA, Kohei SHITAJIMA, Nozomi KARYU, Tomoyoshi FUKUDA,

Syuji FUJII

185-192 ページ

The influence of loading method of silane coupling agent on the mechanical properties of a styrene-butadiene rubber/silica composite were investigated using mercapto-functional silane with dialkoxy and trialkoxy types. The pretreatment method and the integral blend method were compared. The 200% modulus was higher in the pre-treatment than in the integral blend for dialkoxy type. However, it was higher in the integral blend than in the pre-treatment for trialkoxy type. The binding of rubber molecular chains by the silane chains on the silica surface was higher in the pre-treatment for dialkoxy type, whereas it was higher in the integral blend for trialkoxy type. In the pre-treatment for dialkoxy type, a linear silane chain formed in the case of multi-layer coverage. The silane chain entangled with the rubber chain and improved the reinforcement effect. In the integral blend for trialkoxy type, the formation of the silane network and the entanglement progressed simultaneously during the preparation process. A well entangled interfacial region was formed. The  $^1\text{H}$  pulse nuclear magnetic resonance spectroscopy was measured for the unvulcanized rubber/silica mixture. The measured relaxation time was found to be in good correlation with the 200% modulus.

文化財環境真菌細胞のタンパク質含量

村松芳多子・太田利子・高橋淳子・久米田裕子・土戸哲明・高鳥浩介

Protein Contents of Fungal Cells Isolated from Cultural Properties

Kanako MURAMATSU, Toshiko OTA, Atsuko TAKAHASHI, Yuko KUMEDA, Tetsuaki

TSUCHIDO, Kosuke TAKATORI

193-199 ページ

We measured the amount of protein in indigenous fungi such as *Aspergillus*, *Penicillium*, *Cladosporium*, and yeasts, which exist normally in the air where cultural properties are housed. The amount of protein in the spores of these fungi was uneven and in the range of 9.9-68  $\mu\text{g}/10^6$  spores, showing that the maximal amount of protein in the fungal spores was approximately 7-fold in some fungal groups such as *Penicillium*, *Aspergillus*, and *Eurotium*. Likewise, we also analyzed the fungal mycelium of the same fungal group as described above, and found that the amount of protein in the fungal mycelium varied in the range of 289-7,334  $\mu\text{g}/\text{g}$  mycelium. From these results, a large and widespread variation in the amount of protein was noted in the fungal mycelia rather than in the fungal spores.

寒天ゲル相系でのアルカノール異性体の抗カビ活性とその阻害作用における疎水性相互作用の役割

廣池晋治、原田真美、坂元仁、古田雅一、高鳥浩介、土戸哲明

Antifungal Activity of Alkanol Isomers of in Agar Gel Phase and the Role of

Hydrophobic Interaction for Their Inhibitory Action

Shinji HIROIKE, Mami HARADA, Jin SAKAMOTO, Masakazu FURUTA, Kosuke

TAKATORI, Tetsuaki TSUCHIDO

201-214 ページ

We have investigated the possibility of application of alkanols in order to protect ancient wall paintings from fungal contamination. In this study, the antifungal activities of isomers of alkanols in agar gel phase were examined and compared those with the activities of *n*-alkanols. The objective fungi used were xerotolerant *Aspergillus niger* and *Penicillium funiculosum* and xerophilic *Aspergillus restrictus* and *Eurotium amstelodami* and, as alkanols, ethanol (EtOH), *n*-propanol (*n*-PrOH), *n*-butanol (*n*-BuOH), *n*-pentanol (*n*-PeOH), 2-propanol (2-PrOH), 2-butanol (2-BuOH), *t*-butanol (*t*-BuOH), 2-pentanol (2-PeOH), 3-pentanol (3-PeOH) and *t*-amyl alcohol (*t*-AmOH) were employed in this study. The kinetics of fungal growth were analyzed by using two empirical equations, one of which expresses the relationship between the colony area and the treatment time and the other of which does that between the inhibition percentage of fungal growth and the alkanol concentration. From the former relationship, the growth rate  $\alpha$  was calculated and, the second parameter  $\beta$  indicating the dependency of the percentage of growth inhibition, which was obtained from  $\alpha$  value, upon the alkanol concentration was calculated using the latter relationship. Further, from the latter relationship, the

inhibitory concentration indices, IC<sub>0</sub>, IC<sub>50</sub> and IC<sub>100</sub>, were obtained and used to compare the antifungal activity among different alkanol isomers. We concluded by evaluating these parameters and indices that *n*-pentanol was the most effective among tested alkanols and secondary and tertiary alkanols were not as much powerful as primary alkanols. We also suggested that the hydrophobicity of alkanol molecule is the key factor for the growth inhibitory ability of alkanol, although we could not determine whether the surface hydrophobicity of fungal colony mat or spore had some substantial effect on the antifungal activity of alkanols. Based upon the results obtained in this study, we propose the potential use of *n*-pentanol possibly as a vapor for the protection of mural paintings from fungal contamination.

古代エジプト古王国時代のマアトの一側面—ピラミッド・テキスト第 260 番から  
肥後時尚

An Aspect of Maat, Egyptian Concept, in Old Kingdom: Utterance 260 of Pyramid Texts

Tokihisa HIGO

215-228 ページ

I outlined the research history of Maat and, as a case study, I treated the Utterance 260 of the Pyramid Texts. Researchers, who follow Frankfort and Wilson, focus on some limited aspects of Maat. I translated and commented the Utterance 260, as the word of Maat appears the most frequently in the Texts and Maat seems to act in its context in the Utterance.

In the Utterance, Maat corresponds to an attribute of kingship as often mentioned. In addition, another aspect, which personifies it as goddesses “dual Maat,” has a unique trait; the goddesses have actions: “hear” and “command.” This personified Maat is characterized in comparison with abstract Maat (justice etc.) or the personification as offering to Amon-Re in the New Kingdom. In the aspect of “dual Maat,” I drew notice to its unique personification for future research.

## 関西大学国際文化財・文化研究センター紀要

### 『The Journal of Center for the Global Study of Cultural Heritage and Culture』第3号



287 ページ

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#### イドウトのマスタバ調査プロジェクトにおけるモバイルAR システムの提案

安室喜弘・松下亮介・肥後時尚・吹田浩

On-site Augmented Reality System for the Mastaba Idout Project

Yoshihiro YASUMURO, Ryosuke MATSUSHITA, Tokihisa HIGO, Hiroshi SUITA

1-8ページ

This study proposes a graphical user interface for mobile devices to access the database at the site of an archeological project. We have already developed a web-based 3D archiving system to support the archeological project and personnel, which consists of professionals in diverse specialties and of many nationalities, who are conducting the surveys and restoration work. Our 3D archiving system is designed to spontaneously update, accumulate, and share information on findings to better enable frequent discussions via a 3D virtual copy of the field site. This system lets users visit, explore, and embed information in the virtual site over the Internet. Here, we present an AR-based, human interface to enhance access from mobile devices at the actual site to engage the archiving system. Using SFM (structure from motion) and solving the PnP (Perspective-n-Point) problem, a photo taken at the site can be stably matched to the pre-registered photo collection in the archiving system. When someone accesses the archiving system it smoothly associates the 3D coordinates between the system and the actual user viewpoint. Our implementation has worked effectively on an on-going project developed at Mastaba Idout in Saqqara, Egypt.

#### イドウトのマスタバ「第3室西壁」における3次元計測データを用いた復元と再解釈

肥後時尚・青木彩香・松下亮介・安室喜弘・吹田浩

Utilization of 3D Scanning Data for Restoration and Reinterpretation:

An Ancient Egyptian Relief on the West Wall of Room III in the Mastaba of Idout

Tokihisa HIGO, Ayaka AOKI, Ryosuke MATSUSHITA, Yoshihiro YASUMURO,

Hiroshi SUITA

9-22ページ

As part of the conservation and restoration work of the Center for the Global Study of Cultural Heritage and Culture (CHC), this study explores the reconstruction and explanation of a relief on the west wall of Room III in the Mastaba of Idout.

This Mastaba (tomb), was originally prepared for Ihy, an Unis' vizier. It is located in Saqqara and belongs to the earliest Sixth Dynasty (ca. 2360 BC). It has vivid reliefs of the Old Kingdom; however, they are deteriorating with time. After Macramallah (1935) published the first report for her Mastaba, Kanawati (2003) published his latest report on the subject. However, despite their studies, there is still room to study the inscriptions and what is described in the reliefs. By using 3D data, this study intends to not only create a more detailed reconstruction of the relief but also interpret the images that ancient Egyptians perceived in the

marshland.

In this relief, there are some characteristic expressions; a relationship between a hippopotamus giving birth and a crocodile that is about to prey on a baby hippopotamus and a scene of a genet that has caught a fledgling. These descriptions imply that ancient Egyptians thought about the creation of new life and its relationship to death in the flourishing of nature.

#### 臨遺跡集落・サッカラ村の生活と空間構造(その5)

—サッカラ村居住者の遺跡や村への認識の実態—

岡絵理子

Life and Spatial Structure in Saqqara Village,  
a Settlement Adjacent to an Archeological Site (Vol. 5):

How the Residents of Saqqara Perceive Ruins and their Village

Eriko OKA

23-30ページ

The agricultural village of Saqqara is located not far from the ancient burial ground of Saqqara, 17 km southward of the Egyptian capital Cairo. In the recent years, the wealth of Saqqara has increased since villagers have been hired to achieve tasks such as cleaning of sightseeing facilities, or burial ground excavation manual works. In spite of the village proximity to the burial ground of Saqqara which is a world-class tourism resource, the desertification of these old urban areas is going on due to the lack of basic urban infrastructures, e.g. road; and water/sewage system. A series of studies hitherto conducted by us have clarified the spatial and landscape structure of the hamlet in order to explore the future tourism potential of the Saqqara village. In this study, we have carried out a questionnaire survey with Saqqara village residents and asked them about their thinking in regard to the future tourism development of the Saqqara village. Our findings have revealed that while a majority of surveyed people are in favor of the village's development as a Cairo commuting suburb, they were very few who positively assessed the beauty of the agricultural scenery surrounding the village and the Saqqara landscape. Villagers considered not only ruins in Saqqara but those in Egypt as sightseeing spots that foreign tourists visit. Hence, those sites are perceived as workplaces but not as anything that villagers actively get involved in. It is necessary to make the villagers realize the attractiveness of the Saqqara village the same way as the foreigners or people outside the village do. We believe that this is what will create job opportunities and help the village to develop.

#### Effect of Clay Minerals on Mural Paintings of Ptahshepses Burial Chamber

at Gisir El-Mudir, Saqqara

Mostafa Ahmed ABDELFAH, Mohamed Kamal KHALLAF

31-44ページ

This study aimed to identify the clay minerals present in the bedrock of the Ptahshepses burial chamber and their effect on the mural paintings. The minerals were identified by powder X-ray diffraction (XRD), chemical analysis, and optical microscopy. The analyses showed that the main components of the bedrock of the Ptahshepses burial chamber are calcite, quartz, and clay minerals (montmorillonite, kaolinite, and illite). The clay minerals caused partial or complete separation of the mural painting layers that were directly applied on the bedrock or casing layer. The mural painting layers had fallen due to the cyclical shrinkage and swelling of the bedrock. Clay minerals swell and shrink on the basis of water content. Presumably, the clay minerals in the bedrock of the Ptahshepses burial chamber facilitated the buckling of the casing blocks and their fall.

#### Conservation and Restoration of an Offering Table

from the Excavation of the French Archaeological Mission in Saqqara (Autumn 2014)

Ashraf Youssef EWAIS, Rémi LEGROS

45-54ページ

Saqqara is one of the most important heritage sites in Egypt and the world. Many foreign missions have been operating there for a long time. The French mission is one of the oldest missions working in Saqqara. In 2014, under the supervision of Prof. Philippe Collombert, the mission pursued the excavation of the Shawaf site, which is to the north and east of Queen Behenu's pyramid. At the entrance of the complex, they found some stone blocks and several offering tables. One of the offering tables may possibly be dated back to the Herakleopolitan Period. It was very fragile and needed to be cleaned. For security reasons, the offering table



was transported to the storeroom, where conservation and restoration works were completed.

## A Review of the Seismicity and Impact of Earthquakes on Life in Egypt

Hesham MOHAMED

55-72ページ

This review assesses seismicity in Egypt and the risks posed by earthquakes to the economy and to human life. Historical seismicity and tectonic data enable assessment of earthquake recurrence and severity. Hazard assessment of this sort is very important for Egypt due to the great expansion in construction and particularly the rapid increase of illegal construction, following the political unrest of 2011. Unregulated construction poses a great threat to citizens. In Egypt, even moderate earthquakes can cause economic disaster and serious loss of life, as in 1992. Egypt has a recorded earthquake history dating back to 2200 B.C. Seismic events have been documented near Alexandria in 1870 and 1955, near Fayum in 1303 and 1847, and in the Nile Valley and near Cairo in 2200 B.C. and 1111. The seismotectonic setting of Egypt suggests relatively high activity along the Gulf of Aqaba-Dead Sea transform, the Northern Red Sea and Gulf of Suez, Dahshour, near heavily populated Cairo, and in Aswan. Based on data from the National Research Institute of Astronomy and Geophysics (NRIAG), the International Seismological Centre Bulletin, published papers, and catalogs, I have constructed a list of historical and recent earthquakes in Egypt.

## 文化財汚染にみられる好乾性および耐乾性カビ孢子に対する

ガンマ線照射の発育抑制効果の解析

原田真美・坂元仁・古田雅一・高鳥浩介・土戸哲明

Analysis of the Suppressive Effects of  $\gamma$ -Ray Irradiation on the Growth of Xerophilic and Xerotolerant Fungal Spores Contaminating Cultural Properties

Mami HARADA, Jin SAKAMOTO,

Masakazu FURUTA, Kosuke TAKATORI, Tetsuaki TSUCHIDO

73-82ページ

Cultural properties including mural paintings, ancient papers and documents, and historical stones are often contaminated with various fungi. To protect such valuable properties from fungal growth, we investigated the effects of gamma ray irradiation on the spores of *Aspergillus restrictus* as a xerophilic fungus and *Aspergillus brasiliensis* as axerotolerant fungus. Paper disks containing approximately 100 fungal spores were irradiated with gamma ray at doses between 0.2 and 2.5 kGy and then placed on agar plates. During the cultivation of those plates at 25°C for seven days, the diameters of the colonies on each paper disk were measured to calculate colony areas as the parameter  $A$  (mm<sup>2</sup>). The increase in  $A$  was apparently proportional to the cultivation day after an apparent lag period. Notably, the antifungal effect of gamma irradiation did not represent the delay of the initiation of growth, but the suppression of the growth rate after growth initiation. By comparing the rates of increase of the colony areas for unirradiated and irradiated spore samples, the percentage of growth inhibition was estimated to compare the radiation sensitivity of the two fungi. Consequently, *A. restrictus* was found to be more sensitive to gamma irradiation than *A. brasiliensis*. On the basis of these results, the growth kinetics of radiation-injured fungal spores as a fundamental aspect and the possibility of utilization of irradiation for the decontamination of cultural properties as an application aspect were discussed.

## 器物におけるカビの発育に関する研究

高橋淳子・村松芳多子・太田利子・土戸哲明・高鳥浩介

The Effects of Relative Humidity on the Fungal Growth in Three Types of Materials

Atsuko TAKAHASHI, Kanako MURAMATSU,

Toshiko OTA, Tetsuaki TSUCHIDO, Kosuke TAKATORI

83-98ページ

This study aims to reveal fungal growth patterns in three materials under various relative humidity (RH) conditions. The materials are cardboard, plasterboard and lumber. Fungal growth was observed continuously for two months. Fungal growth was generally restricted on all three materials when the RH was less than 80%, and very little fungi grew exceptionally when the RH was under 73%. However, spore production was observed without *Fusarium* sp. on all materials. When the spore amounts were compared, there were significant amounts of *Cladosporium* sp., *Penicillium* sp., *Aspergillus versicolor*, and *Chaetomium* sp.

The fungal growth activity was reduced when the RH was less than 90% and restricted completely when it was less than 80%. Therefore, it is beneficial to maintain RH in indoor environments at less than 80% to control the development of fungi in these materials. Particular attention should be paid to *Cladosporium* sp. and *Aspergillus* sp., which are very prolific at spore production.

#### Study of Cellulosic Fiber Degradation by Four Common Fungi: Chromatic Alterations and SEM Examination

Maisa M. MANSOUR, Mohamed Z. M. SALEM, Ahmed S. A. SHOEIB  
99-110ページ

In the present study, papers manufactured from cotton cellulose were used. White paper (without inks), paper with cinnabar ink (red ink and HgS), and paper with iron gall ink (black) were used to facilitate colonization by *Trichoderma viride*, *Penicillium roqueforti*, *Eurotium chevalieri*, and *Aspergillus flavus*. The identification of cellulose, and the inks used and binder material (Arabic gum) was achieved using FTIR spectra. Degradation of cellulosic fiber was performed by measuring the hyphal growth of the studied fungi using an environmental scanning electron microscope (ESEM). Color changes in the inoculated papers with each of the four fungi tested was determined by assessing the surface of the studied cellulosic fibers treated with tea tree oil (0.25%) and thyme oil (0.5%). The color change values ( $\Delta E$ ) refer to fungal growth. The least fungal growth (*A. flavus*) was found on the white and red papers treated with tea tree oil, with a  $\Delta E$  value of 1.95, whereas the highest fungal growth ( $\Delta E$  39.17) was exhibited by *T. viride* on red paper treated with thyme oil. The greater value of  $\Delta E$  between the control and inoculated samples of the same species in the same type of paper presented the highest fungal growth on the paper. From both the ESEM examination and the chromatic alteration of the inoculated papers with four fungi, *T. viride* was observed to be the most destructive fungus for the tested papers, whereas *A. flavus* was the least destructive.

#### Utilization of TiO<sub>2</sub> Nanoparticles to Protect Limestone Artifacts against Microorganisms Attack

Maisa M. MANSOUR, Adel I. M. AKARISH, Hiroshi SUITA, Ahmed S. A. SHOEIB  
111-122ページ

Limestone artifacts are susceptible to attack by bacteria and fungi. This study aims to explore the utilization of titanium dioxide (TiO<sub>2</sub>) nanoparticles for protecting limestone artifacts against fungal attack. Isolate microorganisms, primarily fungi, were identified by scanning electron microscope (SEM) and light microscope (LM). Six different fungal species were detected, *Fusarium solani*, *Stemphylium* sp., *Aspergillus niger*, *A. flavus*, *A. versicolor* and *Curvularia geniculata* along with *Actinomyces* spp. All of these microorganisms caused deterioration of the elemental contents of the used stone. Both *Actinomyces* spp. and the fungi were able to consume calcium carbonate as a carbon source, reducing the content of all the detected elements, including (e.g. silica, alumina and magnesia etc.) compared to the control sample. Coating of the surface of limestone slabs with a consolidated mixture formed of 2% TiO<sub>2</sub> nanoparticles dissolved in B-72 at a concentration of 5% and its effects on *A. niger* colonization were assessed. Coating of the slab surfaces with TiO<sub>2</sub> nanoparticles resulted in good consolidation, with these nanoparticles displaying excellent antifungal activity; suggesting that coating of limestone artifacts with TiO<sub>2</sub> nanoparticles can protect them against fungal activity.

#### タッピング型走査プローブエレクトロスプレーイオン化法による 高分子フィルム中の添加物の質量分析イメージング 嶋津亮・川崎英也・荒川隆一

Mass Spectrometry Imaging of Additives on Polymer Surfaces  
Using Tapping-Mode Scanning Probe Electrospray Ionization  
Ryo SHIMAZU, Hideya KAWASAKI, Ryuichi ARAKAWA  
123-128ページ

We report the application of tapping-mode scanning probe electrospray ionization (t-SPESI) to mass spectrometry imaging of industrial materials. The t-SPESI parameters were optimized using a quadrupole mass spectrometer to improve mass spectrometry (MS) imaging of thin-layer chromatography (TLC) and additives in polymer films. This enabled us to obtain discriminable MS imaging profiles of three dyes separated by TLC and the additive stripe pattern of a PMMA model film depleted by UV irradiation.

高分子／無機ハイブリッド接着剤による遺跡の脆弱な壁の補強の検討

中村吉伸・嘉流望・野田昌代・豊川翔・藤井秀司

Reinforcement of a Brittle Wall of Remain Using Polymer/Inorganic Hybrid Adhesives

Yoshinobu NAKAMURA, Nozomi KARYU,

Masayo NODA, Syo TOYOKAWA, Syuji FUJII

129-136ページ

The polymer/inorganic hybrid adhesive was explored as a means to reinforce the brittle base rock layer at the back of the mural paintings of the Idout Tomb in Saqqara, Egypt. The adhesive consists of a mixture of one liquid-type, room temperature, and humidity curable epoxy resin (ketimine hardener) and OH100 (tetra ethyl silicate). The content of the OH100 is in the range of 70-80 wt%. Both good permeability and solidification were obtained for the test using Toyoura standard sand. The <sup>1</sup>H pulse nuclear magnetic resonance analysis showed that phase separation occurs in the cured adhesive. From the scanning electron microscopic (SEM) observation for the ethanol added adhesive, the porous structure was observed. The SEM observation for the solidified Toyoura standard sand solidified when the ethanol was added and the adhesive showed spot bonding of the sand particles. These results indicate a possibility that gas permeability is attainable. This adhesive was actually tested on the wall of the Idout Tomb in August 2015. Good permeability and solidification were confirmed.

ハギア・ソフィア大聖堂のペンデンティブに残るモザイクおよび壁画に関する調査

佐々木淑美・小椋大輔・安福勝・水谷悦子・石崎武志

Research on Mosaic and Wall Paintings

on Pendentives in Hagia Sophia, Istanbul, Turkey

Juni SASAKI, Daisuke OGURA, Masaru ABUKU,

Etsuko MIZUTANI, Takeshi ISHIZAKI

137-148ページ

Hagia Sophia is one of the world's most famous cultural heritage sites because of its unique structural system, where there is evidence of coexisting of religions and various mosaics that were executed from the sixth to the fourteenth centuries. This historical building has many conservation problems, especially in the western part of the building. The inner wall is suffering from salt flaking of mortar and crystallization, and the outer wall has been weakened. In this study, we consider the deterioration of the wall painting at the Northwest pendentive and the date of mosaics at the Northeast pendentive.

First, the types of crystallized salts at the Northwest pendentive were identified as sodium nitrate, sodium sulfate, and gypsum. At the bottom of the pendentive, the major type of salt is sodium sulfate. Salt crystallization and flaking are in progress. The crack behind the pendentive construction is thought to be the cause of deterioration in the wall painting.

Moreover, we have tried to identify correlations of materials and dates of the mosaics in the Northeast pendentive. Differences among the production materials and techniques in the pendentive can be determined by visual observation and measurement of tessere color. The pendentive mosaics may have been executed in different periods, as the western part was executed in a period earlier than the fourteenth century when the eastern section of the dome collapsed. The eastern section was executed in the fourteenth century as part of the dome and pendentive reconstruction.

古代エジプトにおける「シンデレラ物語」の世界伝播(2)—アジア伝播を中心に—

浜本隆志

Global Dissemination of Cinderella from Ancient Egypt 2: Mainly in Asia

Takashi HAMAMOTO

149-188ページ

In the previous article, "Global Dissemination of Cinderella from Ancient Egypt 2," I compared common motifs and plots in the Egyptian tale of "Rhodopis" and the European story of "Cinderella," as told by Basile, Perrault and Grimm. As a result, I believe I was largely able to demonstrate that the European route of the "Cinderella" story started from roots in Egypt, passed through ancient Greece, Italy and France, and then spread to Germany.

Extending upon that discussion, in this essay I will reveal the route taken by the "Cinderella" story

through Asia. Specifically, I will pursue the “Cinderella” story through the Middle East, Tibet, China, Myanmar, the Korean peninsula and Japan. Here we shall see that, in these countries too, the “Cinderella” stories reveal a surprising degree of similarity to one another. Indeed, far removed from Egypt, in both Europe and Asia, we observe a common plot development whereby adverse circumstances are escaped through marriage and a happy ending ultimately ensues.

This being the case, we must solve the mystery of how these similar versions of the “Cinderella” story spread over the wide area of Europe and Asia. As a premise, I think it is likely that the “Cinderella” story was not born independently in each of these countries and regions, but that there was an “original story” common to all of them. We may infer that many different versions of the “Cinderella” story were generated from this original story.

I will address this problem in the latter half of this paper. There, it will be necessary to trace the migration of Homo sapiens from the prehistoric period through the ancient period. In short, today it is commonly accepted that Homo sapiens, from whom today’s human race takes its roots, emerged from Africa over 200,000 years ago and migrated from there throughout the world, thus leading us to the hypothesis that these Homo sapiens brought the “original story” of “Cinderella” with them out of Africa and spread it throughout the world.

We may infer analogically that this process created the many different versions of the “Cinderella” story that exist throughout the world. What, however, is the connection between the migrations and motivations of Homo sapiens and the “Cinderella” story? There are, of course, various reasons for their migration, but in this article I will consider this question from the point of view of the “Cinderella” story’s narrative structure.

I will therefore examine here the different versions of the “Cinderella” story we find along its Asian route, and analyze their common motif of overcoming adversity to attain marriage. From there I shall deduce an “original story” to the “Cinderella” story and infer that the motive for migration was an exogamous marriage system in which incest is shunned. I will demonstrate below that this was an important factor in the spread of the “Cinderella” story throughout the world.

エジプト古代遺産収集と文明史的な位置づけ  
—ベルナルディーノ・ドロヴェッティと文化遺産(2)—  
柏木治

Collecting Ancient Egyptian Heritage and the History of Civilizations:  
Bernardino Drovetti and Cultural Heritage (2)  
Osamu KASHIWAGI  
189-202ページ

In my previous paper, I focused on how the concept of cultural heritage took root during the revolutionary period, discussing how the revolution’s ideology gave birth to discourses on the topic. In this paper, I will consider the background to the removal of ancient Egyptian cultural heritage from the country, which became pronounced at the beginning of the nineteenth century.

Consul General Bernardino Drovetti acted as a French representative in Egypt and had absolute authority regarding the collection of ancient artifacts. First, I will review the actual circumstances that led him to become involved in such activities. Then, I will provide an overview of the cultural background that led France and other European powers to begin collecting Egyptian antiques, focusing on the change in Egypt’s position in European civilizational theory as well as the Egyptomania that overflowed from the revolutionary period to the Napoleonic era.

州立エジプト美術博物館(ミュンヘン)のリニューアル  
—ヴィッテルスバッハ家のエジプトコレクション—  
森貴史

The Renovation of the State Museum of Egyptian Art in Munich:  
The Egypt Collection of the House of Wittelsbach  
Takashi MORI  
203-222ページ

The State Museum of Egyptian Art (Staatliches Museum Ägyptischer Kunst) in Munich, which reopened in June 2013 after undergoing renovation, does not have its own building; it is built underground of the University of Television and Film Munich (Hochschule für Fernsehen und Film München).

The history of the museum and the origins of its collection items can be traced back to the Kunstammer of Duke Albert V of Bavaria (Herzog Albrecht V. von Bayern). Later, through the collections of Charles Theodore, Elector of Bavaria and Palatinate (Kurfürst Karl Theodor) during the latter half of eighteenth century and Ludwig I of Bavaria (Ludwig I., König von Bayern), the Munich collection of ancient Egyptian art rapidly increased. In addition, the museum received donations by individual supporters such as Baron Friedrich Wilhelm von Bissing (Freiherr Friedrich Wilhelm von Bissing), and today operates through subsidies from the Friends of the Egyptian Collection in Munich (Freundkreis der Ägyptischen Sammlung München e.V.).

Duke Maximilian Joseph of Bavaria (Herzog Maximilian Joseph in Bayern) is one of the members of the House of Wittelsbach who contributed to the growth of Munich's Orient Collection. He was called Duke Max (Herzog Max) and is the father of Empress Elisabeth of Austria (known by the affectionate nickname of Sissi), upon whom the heroine of a historical musical would later be based. With only a few attendants, Duke Max made a trip to the Orient in 1838 during which he visited Alexandria, Cairo and Jerusalem, made the acquaintance of Muhammad Ali, and collected many Egyptian excavated artifacts. Today, over half of this collection is kept and publically displayed at the Banz Abbey (Kloster Banz).

Among the characteristics of the Munich Egyptian museum are its hands-on exhibits emphasizing experience. For example, this exhibition approach makes a distinct contrast with that of the Neues Museum in Berlin, a fixture of urban tourism where tourists flock and draw long lines in front of the admissions ticket counter, whose Egyptian Museum boasts exhibits that display a large number of collection items in enormous exhibit spaces.

#### 古代ギリシアにおける異文化理解の諸相(2)—ヘロドトスとスキュティア—

中澤務

Aspects of Cross-cultural Understanding in Ancient Greek 2: Herodotus and Scythia

Tsutomu NAKAZAWA

223-236ページ

In this paper, I investigated the characteristics of cross-cultural knowledge of ancient Greeks, who understood non-Greek cultures through the concept of “otherness.” Herodotus was a thinker who represented other cultures to Greek audiences through many techniques dubbed “the rhetoric of otherness.” The most typical and important example is his description of the Scythians. For this study, the following five typical topics concerning Scythia, which were presented by Herodotus in the fourth book of his Histories, were analyzed with regard to his rhetorical techniques for representing the otherness of non-Greek cultures. (1) Descriptions of the king of the Scythians as the center of nomads. (2) The otherness of Scythian religion. (3) Explanations by Greeks concerning Salmoxis (the god of Getae). (4) Stories of Scythian intellectuals who crossed the border between Greece and other countries. (5) Descriptions of the Scythian expedition by King Darius.

#### 2015 東アジア文化遺産保存国際シンポジウム in 奈良

西浦忠輝

2015 International Symposium on Conservation of East Asian Cultural Heritage

in Nara

Takashi HAMAMOTO

237-277ページ

“2015 International Symposium on Conservation of East Asian Cultural Heritage in Nara” was held on 26 to 29 August, 2015 very successfully. 289 specialist (145 from Japan, 69 from China, 73 from Korea, one from Mongolia and one from USA) were participated in the Scientific Meeting, and 311 audiences were attended to the Open Lecture.

The Center for the Global Study of Cultural Heritage and Culture (CHC) is one of the cosponsors of the symposium. Fifteen members of CHC contributed to the scientific meeting and the open lecture. Next symposium will be held in Shanghai, China in 2017, and most probably in Japan in 2021 after the one in Korea in 2019.

#### 臨遺跡集落・サッカラ村の生活と空間構造 (その5)

—サッカラ村居住者の遺跡や村への認識の実態—[アラビア語版]

岡絵理子

Life and Spatial Structure in Saqqara Village, a Settlement Adjacent to an  
Archeological Site (Vol. 5):

How the Residents of Saqqara Perceive Ruins and their Village [Arabic version]

Eriko OKA

1-10ページ(278-287ページ)

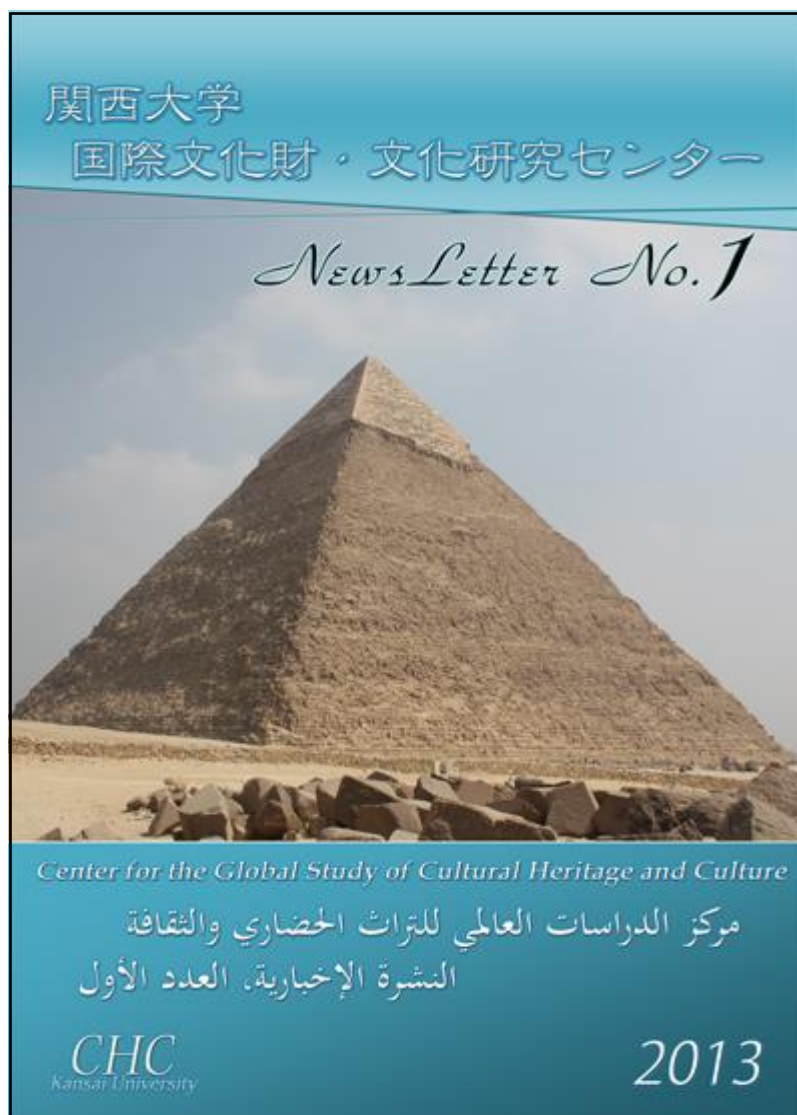
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## NewsLetter No.1

2014年3月6日発行

20 ページ

▶目次  
センター長ご挨拶  
プロジェクトの経緯  
研究活動  
研究者紹介  
キャンパスマップ



関西大学国際文化財・文化研究センター ニュースレター

## NewsLetter No.2

2015年3月19日発行

20ページ

▶目次

エヴァ・ロズネルスカ先生 追悼

セミナー

エジプト調査 2014年度

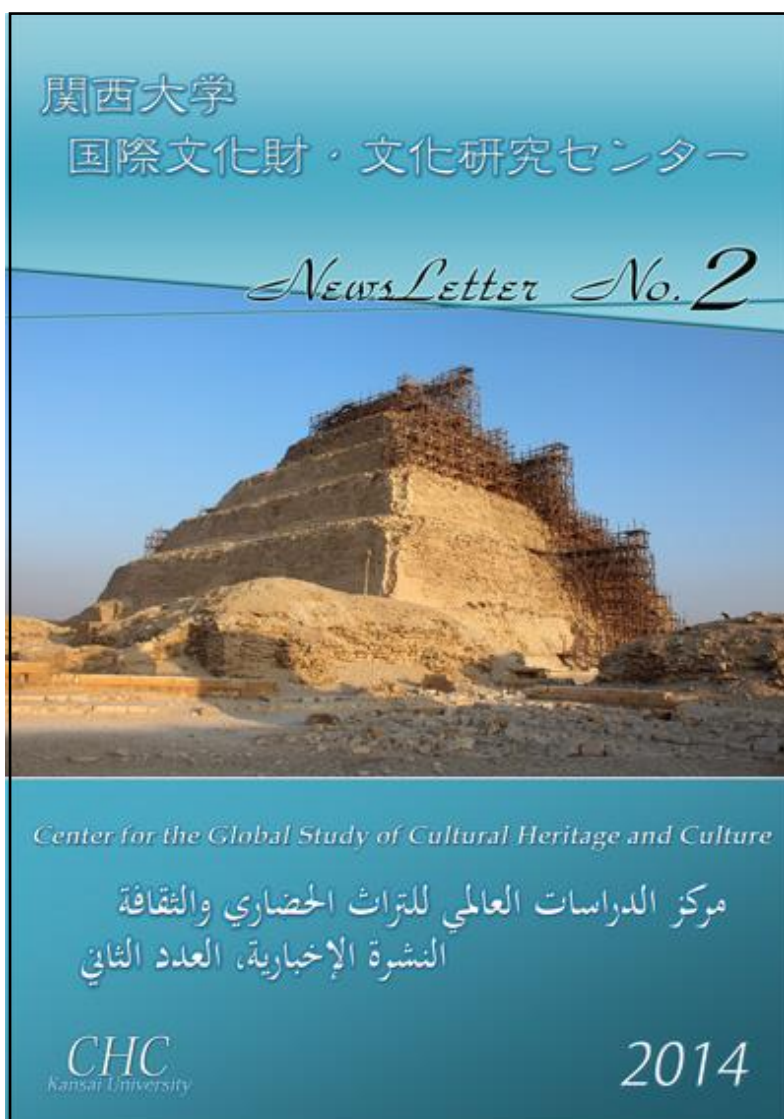
国際シンポジウムの開催

研究活動

その他の活動

「エジプト学・文化財研究セミナー」講義録 目次

キャンパスマップ





関西大学国際文化財・文化研究センター ニュースレター

## NewsLetter No.3

2016年3月7日発行

20 ページ

▶目次

エジプト調査 2015年度

バハレーン調査

セミナー

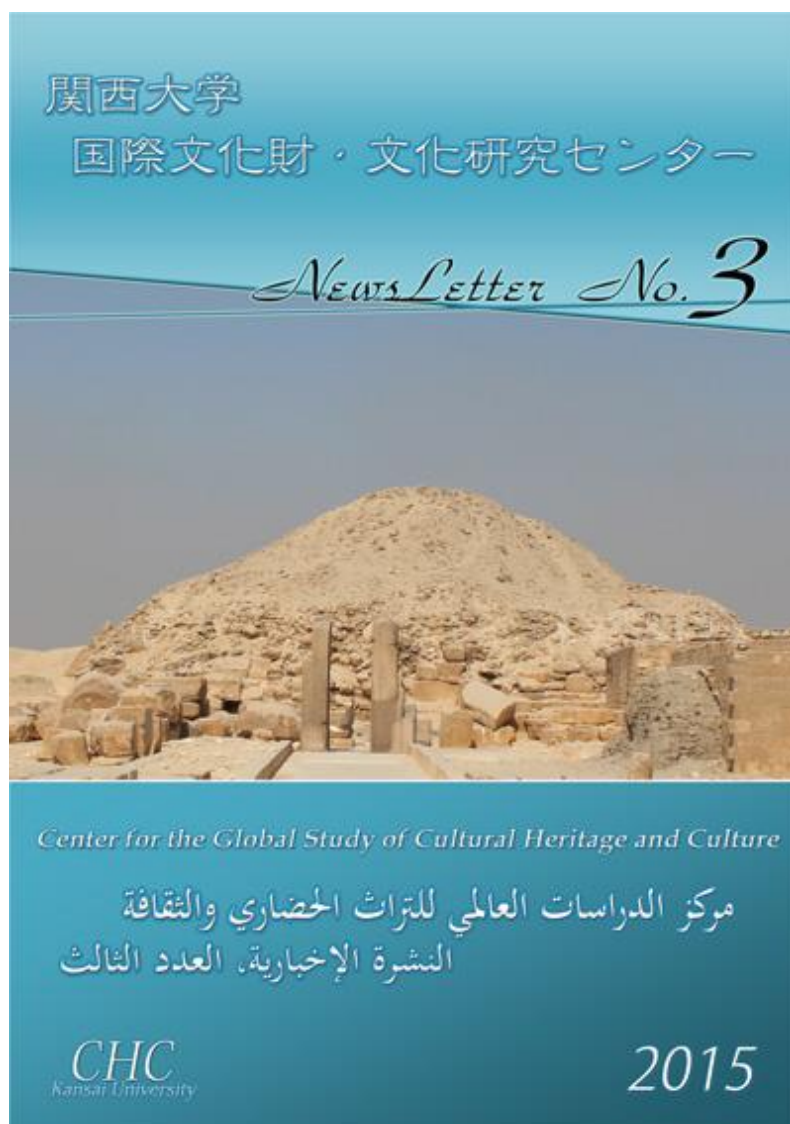
国際シンポジウムの開催

研究活動

その他の活動

研究者紹介

キャンパスマップ



関西大学国際文化財・文化研究センター  
『エジプト学・文化財研究セミナー』



281 ページ

2015 年 2 月 12 日発行

Language and Education in Ancient Egypt  
Said Gaber Gohary  
1-6 ページ

古代エジプトにおける言語と教育  
サイド・ガービル・ゴハリー  
7-12 ページ

Diplomacy between Egypt and the Ancient Near East through the Amarna Letters  
Nasser Mekawy  
13-21 ページ

アマルナ文書から見るエジプトと古代近東地域の外交関係  
ナーセル・メッカーウィ  
23-31 ページ

Horus “*Hry wAD.f*” as a Protector God  
Salwa Kamel  
33-41 ページ

守護神としてのホルス、「ヘリ・ウアジ・エフ」(*Hry wAD.f*)  
サルワ・カーメル  
43-51 ページ

The Semantic Relations between the Hieroglyphic Signs and the Meaning of Words  
in Ancient Egyptian Language: Determinatives and Phonetic Signs  
Heba Moustafa Nouh  
53-66 ページ

古代エジプト語における象形文字と語彙の意味関係—決定詞、表音文字を中心に  
ヘバ・ムスタファ・ヌーハ  
67-80 ページ

Methodology of Studying Ancient History Applied to Ancient Egyptian History

Zakia Zaki Gamel Eldeen  
81-91 ページ

古代エジプト史研究の方法論  
ザケーア・ザキ・ガマルツディーン  
93-103 ページ

Study on the Deterioration Aspect of Mural Painting in Egyptian Oasis  
New Trend in the Analysis and Conservation of Ancient Egyptian Mural Painting  
Mona Ali  
105 ページ

エジプト、オアシス地域における壁画の劣化状況に関する研究  
古代エジプト壁画の修復と分析における新しい動向  
モナ・アリ  
106 ページ

Conservation Strategy for Monumental Limestone in Egypt  
Mohamed Abd el-Hady  
107-126 ページ

エジプトにおける石灰岩製文化財の修復戦略  
ムハンマド・アブデル・ハーディ  
127-145 ページ

Theories of Papyrus Manufacture and the Conservation Treatment of Papyrus  
Wafika Noshy Wahba  
147-171 ページ

パピルス紙の製造に関する諸説とパピルス紙の保存処置  
ワフィーカ・ノスヒー・ワフバ  
173-196 ページ

Technology of Glass Making Processes in Ancient Egypt during Pharaonic Era,  
Roman Period, and Islamic Period  
Salwa Gad el-Karim  
197-218 ページ

ファラオ時代、ローマ時代、イスラム時代の古代エジプトにおけるガラス製造工程についての技術  
サルワ・ガード・エル・カリーム  
219-240 ページ

Detecting the Forgery of an Oil Painting by Ivan Aivazovsky  
Moustafa Attia  
241-257 ページ

アイヴァゾフスキーの油絵贋作の発見  
ムスタファ・アティア  
259-273 ページ

掲載紙名・媒体	年月日	タイトル	掲載者
日刊工業新聞 東京本社	2013年6月12日	排水機能の鉄筋補強 城郭石垣を延命	西形達明(CHC研究員)
朝日新聞 朝刊	2013年8月21日	太陽の神殿修復へ着々 世界遺産マチュピチュ	西浦忠輝(CHC学外研究員)
日本経済新聞 夕刊	2013年8月30日	関西大学から世界へ エジプト文化財修復への取り組み	国際文化財・文化研究センター
関西大学オープンキャンパス	2014年6月	関西大学の研究力	国際文化財・文化研究センター
独立行政法人 国際協力機構 HP	2013年9月10日	第2回大エジプト博物館保存修復センターシンポジウム 博物館における保存修復:現在と未来	アーデル・アカリシュ((CHC海外研究員)
テレビ朝日 「奇跡の地球物語～近未来創造サイエンス」	2013年10月6日	天空の城 竹田城 時空を越えた建築技術	西浦忠輝(CHC学外研究員)
朝日新聞 朝刊	2013年11月15日	特別講演「エジプト文化財の危機と今後」	国際文化財・文化研究センター (エジプト考古大臣)
日本経済新聞 夕刊	2013年11月30日	エジプトの文化財をどう守る	国際文化財・文化研究センター (エジプト考古大臣)
アル・アハラム経済紙 エジプト	2013年12月1日	考古大臣の日本訪問 メディアの関心を集めエジプトの現状を明らかに	国際文化財・文化研究センター
朝日新聞 夕刊	2013年12月10日	イブラヒム・エジプト考古相 関西大で講演 文化財保護には観光収入が必要	国際文化財・文化研究センター (エジプト考古大臣)
毎日新聞 夕刊	2013年12月12日	混乱のエジプト 苦難の文化財保護	国際文化財・文化研究センター (エジプト考古大臣)
関西大学ニューズレター Reed	2014年2月28日	文部科学省ミュージアム「情報ひろば」で、企画展示を開催	国際文化財・文化研究センター
朝日新聞 朝刊	2014年3月1日	マチュピチュ遺跡 保存修復活動語る	西浦忠輝(CHC学外研究員)
読売新聞 朝刊	2014年8月23日	研究活動を通じて社会貢献を実感	国際文化財・文化研究センター
読売新聞 朝刊	2014年9月14日	エジプト講演会 エジプト紙「アル・アハラム」元編集長カマル・ガバル氏	国際文化財・文化研究センター
アル・アハラム経済紙 エジプト	2014年11月30日	ハラール食品を輸出するチャンス	国際文化財・文化研究センター
朝日新聞 夕刊	2015年4月2日	観光と保存 両立さぐる	国際文化財・文化研究センター
TBS 世界ふしぎ発見! 放送	2015年4月18日	『開拓の灯をともし 馬チュピチュを創った日本人』	西浦忠輝(CHC学外研究員)
関西大学ニューズレター Reed	2015年6月4日	街をつくる住まいの調査研究 大阪の市街地改造と集合住宅	岡絵理子(CHC研究員)
文部科学省 科学技術白書 平成27年版	2015年6月1日	世界遺産の保存・修復への貢献	西浦忠輝(CHC学外研究員)
NHKニュース 大阪放送	2016年2月27日	遺跡・文化財修復 国際シンポジウム	国際文化財・文化研究センター
アル・アクバル新聞	2016年3月16日	学問を求めよ! エジプトに赴くことになっても	吹田浩(CHCセンター長)

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HOME > HOME

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平成25年度(2013年度)に関西大学において「国際文化財・文化研究センター」(Center for the Global Study of Cultural Heritage and Culture, CHC)が設立されました。このプロジェクトは、文部科学省の私立大学戦略的研究基盤形成支援事業で「国際的な文化財活用方法の総合的研究」が採択されたことを受けたもので、平成29年度(2017年度)までの5年間の計画で研究を進めています。

関西大学では、すでに2008年度から2012年度まで文部科学省の私立大学戦略的研究基盤形成支援事業から助成を受けて「文化財の保存修復、技術開発と活用の研究-エジプトを中心に」というプロジェクトを文化財保存修復研究拠点(JCP)にて行い、成果をあげてきました。今回のプロジェクトは、その成果を受けて、新たなプロジェクトとして始まったものです。

この新たなプロジェクトでは、(1)エジプト学・エジプト社会グループ、(2)文化財修復グループ、(3)国際文化グループ、(4)科学技術グループの4つのグループで、文化財の保全と活用のために文理融合型で国際的な研究を推進します。4つのグループの研究者は、エジプト学者や現代エジプト社会の研究者、文化財修復の研究者、異文化の研究を行う人文学研究者、地盤・建築工学、分析化学、微生物学、高分子化学、マルチメディア工学などの理工系研究者が日本、エジプト、ポーランドから加わり、共同して、国際的な文化財の保全と活用のセンターの形成を目指しています。

「国際文化財・文化研究センター」は、文化財の研究を推進することとあわせて、若手研究者の育成や社会教育活動も大きな目的としており、文化財の修復技術を学ぶ講習会やエジプト学の専門的知識を学ぶ講習会を実施します。また、文化財の保全と活用のための文理融合型の総合的なアプローチの確立を目指し、各種のシンポジウムやワークショップを開催する予定です。

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HOME | CHC - Center for the Global Study of...

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関西大学ホーム | 入学試験情報 | お問い合わせ | 交通アクセス | キャンパスマップ

Japanese | English | Arabic

Home | Greeting | Project Members | Research Activities | Publication | Access | Link

Home >

### Center for the Global Study of Cultural Heritage and Culture

The Center for the Global Study of Cultural Heritage and Culture (CHC) was established at Kansai University in 2013 as a result of Kansai University's obtaining approval for the project, "Comprehensive Global Studies for Utilizing Cultural Heritage" as part of the Strategic Project to Support the Formation of Research Bases at Private Universities under the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The project is planned for five years through 2017.

The launch of the CHC is due to the large success in the prior project, entitled "Research on Technological Development and Application for the Conservation and Restoration of Cultural Properties: Focusing on Egypt," which was implemented by the Institute for Conservation and Restoration of Cultural Properties (ICP) at Kansai University and sponsored by MEXT's Strategic Project to Support the Formation of Research Bases at Private Universities from 2008 to 2012.

In order to preserve and put cultural heritage to practical use, the CHC will promote research activities that transcend the boundaries of nations and academic disciplines—humanities or science, under the following four research groups: 1) the Egyptology and Egyptian Society Group, 2) the Cultural Heritage Restoration Group, 3) the International Culture Group, and 4) the Science and Technology Group. Working in these groups are experts in the fields of humanities such as Egyptology, modern Egyptian society, restoration of cultural heritage, and cross-cultural studies; or in science and engineering fields, including geotechnical and structural engineering, analytical chemistry, microbiology, high polymer chemistry, and multimedia engineering. These researchers, from Japan, Egypt, and Poland, will work jointly to achieve the center's mission to preserve and utilize cultural heritage worldwide.

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HOME | CHC - Center for the Global Study of Cultural Heritage and Culture

KANSAI UNIVERSITY  
 関西大学ホーム | 入学試験情報 | お問い合わせ一覧 | 交通アクセス | キャンパスマップ  
 Japanese | English | Arabic

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الرئيسية Home | رسالة مدير المركز Greeting | أعضاء المشروع Project Members | الأنشطة البحثية Research Activities | منشورات بحثية Publication | الخريطة Access | روابط Link

Home >

**مركز الدراسات العالمية للتراث الحضاري والثقافة بجامعة كانساي**

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تأسس مركز الدراسات العالمية للتراث الحضاري والثقافة (CHC) بجامعة كانساي في العام المالي 2013 وتبنت وزارة التعليم والثقافة والرياضة والعلوم والتكنولوجيا اليابانية هذا المشروع الذي أطلق عليه اسم "البحوث المتكاملة لتستخدم الأمتل للتراث الحضاري العالمي"، وهو أحد مشاريع الوزارة الهادفة إلى دعم وقع أسس للدراسات الإستراتيجية بالجامعات الخاصة، ويستمر العمل في هذا المشروع لمدة 5 أعوام حتى السنة المالية 2017.

وكانت وزارة التعليم والثقافة والرياضة والتكنولوجيا قد دعمت مشروع "دراسات حفظ وترميم واستخدام التراث الثقافي، وتطوير التقنيات ذات الصلة في هذا الشأن" والذي تم إنجازه في فترة الأعوام المالية من 2008 إلى 2012 في معهد حفظ وترميم التراث الثقافي بجامعة كانساي، وذلك في إطار برنامج الوزارة الذي يهدف إلى دعم وقع أسس للدراسات الإستراتيجية بالجامعات الخاصة. وقد أحرز هذا المشروع نتائجاً طيبة، الأمر الذي ترتب عليه انطلاق مشروعنا الجديد.

ويصمى هذا المشروع الجديد إلى النهوض بالبحوث الدولية من أجل الوصول إلى أفضل سبل حفظ وصيانة واستخدام التراث العالمي، وذلك عن طريق الدمج بين متخصصين في الدراسات الأدبية والعلمية، حيث يضم هذا المشروع: (1) مجموعة دراسات علم المعصرات، والمجتمع المصري، (2) مجموعة دراسات ترميم التراث الثقافي، (3) مجموعة دراسات الثقافات العالمية، (4) مجموعة دراسات التقنيات العلمية، وتتم المجموعات البحثية الأربعة باحثين من اليابان، ومصر، وبولندا، وهم متخصصون في علم

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タイムライン | 基本データ | 写真 | レビュー | いいね! | 動画 | イベント

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★★★★★  
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 4月23日 21:25 · 公開  
 エジプトの文化財に関する記事を、エジプト・インディペンデント紙の記事から要約で紹介いたします。  
 考古者がアレクサンドリアにあるヘレニズム期の遺跡を破壊  
 アレクサンドリアにあるヘレニズム期の考古遺跡を破壊するという考古者の決定は、古代の遺跡を破壊し、地域の区画を平坦にする、という形で実行された。  
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