Reinstallation of the National Archaeological Museum in Cherchell

Residence of the Mauritanian kings and Roman provincial capital, Cherchell in present-day Algeria went through a period of great artistic flowering that lasted into Late Antiquity. This is attested by a collection of some 400 sculptures and colourful mosaics that is unequalled in North Africa, and is displayed in the archaeological museum in Cherchell. The museum building, erected at the start of the 20th century and protected as national heritage, was badly damaged in earthquakes in the 1980s along with many of the exhibits. The German Archaeological Institute has been working on the refurbishment and reinstallation of the museum since 2008 with funding from the Cultural Preservation Programme of the Federal Foreign Office.

In collaboration with Algerian colleagues, the sculptures have been restored and mounted on new, earthquake-proof plinths. Professional training has been provided for regional specialists in the restoration and re-mounting of statues and additional ideas have enriched museum education and outreach. A new exhibition concept has been developed with the involvement of the local population. The collaboration increases an appreciation of the archaeological exhibits and their historical and cultural significance as part of Algeria’s cultural heritage.

Please make a donation to support this and similar projects!
Archaeologists today conduct research into all facets of human life. This also includes the effects of climate change on the environmental conditions which people in the past lived in and which they also influenced. Archaeological research provides high-resolution data on the local or regional impact of climatic fluctuations from a long historical perspective. In collaboration with many different disciplines, archaeology can contribute to a gain in knowledge about climate change. Archaeology and cultural heritage are themselves affected by the ongoing climate change. Global warming with its very different local repercussions entails a wide range of threats to the cultural heritage of the past. As far as preserving cultural heritage is concerned we are faced with growing challenges that can only be overcome jointly, interdisciplinarily, and in networks. A prerequisite of this is taking stock and discussing the challenges collectively.

A conference at which these issues are to be discussed, Ground Check – Cultural Heritage and Climate Change, was originally planned for spring 2020 but will now take place as a series of online events. This series of events organized by the German Archaeological Institute and the Archaeological Heritage Network will address both thematic areas – i.e. research into climate change and its specific local and regional consequences from a long-term perspective, and the impact of climate change on our cultural heritage today. It is hoped that the series will promote more intensive international cooperation.

The first of five online discussions will open on 23 September with an introduction to the topic by the President of the DAI, Prof. Dr. Dr. h.c. Friederike Fless. Each week international experts will speak on the subject of cultural heritage and climate change. The discussion series ends with a closing event on 29 October.
DEAR READERS,

The strategies a society employs to deal with a crisis are many and varied, as the ongoing Corona pandemic illustrates. They include stringent regulation by the state, more or less binding guidelines, and individuals taking responsibility for themselves. The globally active DAI has in recent months been confronted with a virtually unquantifiable profusion of requirements and has devised for itself effective ways of continuing to operate and collaborate with partners internationally at the same time as ensuring proper safety.

An essential prerequisite of any form of crisis management is that an approaching crisis should be recognized as such. Only then will it be possible to make decisions that influence the course and outcome of the crisis.

As we deal with the coronavirus pandemic, we have been looking back in history. The Spanish flu of 1918 and the Hong Kong flu of 1968–1970 serve as important points of reference. Consulting the history books enables us to analyse the great pandemics of the past from the outbreak onwards. In the process we also see how resilient a given society was, how readily it recovered from the crisis.

The ancient world experienced several epidemics, too, which affected cities or regions, even large swathes of the Roman Empire. How ancient societies reacted to them, and dealt with other crises, will be explored in this edition of Archaeology Worldwide. Since one of the responses to a pandemic in antiquity was to withdraw into the private sphere, we will also be taking a look at gardens. From the small Pompeian house to the large Roman villa, gardens were cultivated and styled as places of refuge. In Roman culture the villa was a place of peace and leisure, otium, serving as a counterweight to the bustling world of business, negotium.

I hope our magazine provides many hours of absorbing reading in your leisure time!

Prof. Dr. Dr. h. c. Friederike Fless
President of the German Archaeological Institute

Photo: Kuckertz
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Building survey handbook and guidelines for the protection of cultural property (SiLiK) now in an Arabic translation

In August, the Archaeological Heritage Network (ArchHerNet) and the Division of Building Archaeology at the Head Office of the DAI presented the Arabic translation of a handbook on building survey methodology produced by the Technical University (TU) of Munich. The translation has just been published with the aid of funding from the Federal Foreign Office.

In an online discussion, Prof. Dr. Alexander von Kienlin and Dipl.-Ing. Tobias Busen from the TU Munich talked with Dr. Dr. h.c. Margarete van Ess and Dr.-Ing. Ulrike Siegel, who direct the Iraqi-German Expert Forum on Cultural Heritage (IGEF-CH) at the DAI, as well as Wassam Alreza (DAI), who translated the handbook into Arabic, about the possibilities of giving instructions in the methodology of building archaeology virtually and remotely. The handbook represents an important building block in this. Produced under the supervision of Prof. Dr.-Ing. Manfred Schuller and first published in 2015, the compact handbook offers a stepwise introduction to the field with illustrated guidelines. In the Arabic translation some of the case histories and terminology were adapted to the specific situation on the ground. The Arabic translation of the handbook can be viewed online at https://www.ub.tum.de/tumuniversitypress/title/baunaufnahme-arabisch-ausgabe and is also available as a print-on-demand publication from TUM University Press.

An Arabic translation of guidelines for the protection of cultural property, known by the German acronym “SiLiK,” was presented in July at the virtual event “saving.cultural.heritage.together” following a greeting by the Minister of State for international cultural policy at the Federal Foreign Office, Michelle Müntefering (MD), and additional greetings by the President of the Federal Office of Civil Protection and Disaster Assistance (BBK), Christoph Unger, and the President of the Leibniz-Gemeinschaft, Prof. Dr. Matthias Kleiner.

SiLiK is a project of the Conference of National Cultural Institutions (RKK) with support from the BBK. The guidelines, initially drawn up just for Germany, help museums, libraries and archives to review security measures in place at their own establishments, and serve as an evaluation tool and an advice service for risk assessment and disaster prevention. The guidelines include reference materials (e.g. emergency plans) and further information on each topic, such as lists of specialist publications, regulations and recommendations, and a collection of links.

The Arabic translation was produced in cooperation with the Archaeological Heritage Network and the DAI with funding from the Federal Foreign Office with the aim of sharing the information with cultural institutions throughout the Arabic-speaking world. The two events inaugurated a series of online discussions hosted by the Archaeological Heritage Network on aspects of capacity building, which is now facing particular challenges as a result of the Corona pandemic. Partners of ArchHerNet will take part in presenting and discussing questions of online communication, hands-on teaching and the interplay of distance learning and remote teaching.

For information on upcoming events of the Archaeological Heritage Network, go to: https://www.archernet.org/en/^

SiLiK guidelines for the protection of cultural property in German, English and Arabic: http://www.konferenz-kultur.de/SiLiK/EN/index1.php?lang=en

NEWS

DAI expert in safeguarding cultural heritage accompanies relief agency to Beirut

On 4 August there was a devastating explosion in the port of Beirut which left several hundred people dead, thousands more injured, and caused massive damage to extensive areas of the city. As part of international efforts to help, a team from the German emergency relief agency THW travelled to Beirut to provide technical assistance. The THW team was accompanied by an expert in the protection of cultural heritage, Christoph Rogalla von Bieberstein of the German Archaeological Institute. Bieberstein is coordinator of the project “KulturGutRettter” which develops emergency salvage plans and mechanisms for rapid assistance in protecting and preserving historical structures in crisis situations. For the project the DAI has partnered with the Römisches-Germanisches Zentralmuseum (RGZM) and there are plans for a partnership with the THW, too. Bieberstein’s visit was about supporting colleagues from local museums in conducting damage assessment and taking initial protective measures. Furthermore in consultation with the Directorate General of Antiquities of Lebanon and the Lebanese branch of the International Council on Monuments and Sites (ICOMOS), the DAI’s Orient Department immediately dispatched two more experts to offer assistance in evaluating the damage to historic monuments and to help out at the archaeological sites in the urban area: the structural engineer Axel Seemann, a member of the DAI’s advisory committee on historical monuments, and architect Henning Burwitz, who is familiar with the locality.

The German Archaeological Institute has been involved in collaborative research projects with Lebanon for a long time and has close contacts with Lebanese institutions and colleagues. The research is concentrated at the site of Baalbek, 80 kilometres from Beirut, where Near Eastern and Classical archaeologists, building archaeologists, geodesists, geologists and geophysicists are working on an international level on the exploration of the ancient city.

“KulturGutRettter” is an initiative of the Archaeological Heritage Network in the framework of the project “Zero Hour!” Read more on p. 26. The tasks and objectives of “KulturGutRettter” were presented by Christoph Rogalla von Bieberstein together with Michelle Müntefering, Minister of State at the Foreign Office, during an online event entitled “saving.cultural.heritage.together” in July 2020. A recording of the event as well as further information about the project are available on the Archaeological Heritage Network website: https://www.archernet.org/2020/07/14/virtuelle-veranstaltung-gemeinsam-kulturgut-retten-mit-staatsministerin-michelle-muentefering-mdb/

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During an official visit to Sudan on 27 and 28 February 2020 the president of the Federal Republic of Germany, Dr. Frank-Walter Steinmeier, visited the National Museum in Khartoum where he learned about the contribution Germany has made to the study of Sudanese history. Among other things, the German Archaeological Institute presented four of its current projects to him. In the presence of the Federal President a digital copy of Friedrich Hinkel’s research archive was formally handed over to Sudan’s National Corporation for Antiquities and Museums (NCAM). The archive will form the foundation of an urgently needed national register of monuments in Sudan.

Thanks to generous funding by the Qatar Sudan Archaeological Project (QSAP) and the German Federal Foreign Office it has been possible to make Dr. Friedrich W. Hinkel’s valuable archive available for research purposes. The German Sudan researcher built up an archive on the archaeology and construction history of ancient Sudan over nearly 50 years, from 1960 until his death in 2007, and it reflects his research and his work on preserving the cultural heritage of the country. In 2009 the material was handed over to the German Archaeological Institute. In cooperation with NCAM and with the CoDaArchLab at the University of Cologne 34,000 photographs, 12,000 transparencies, over 500 topographical maps, 4,000 drawings, 20,000 file cards and 288 collections of scientific material have been digitized and made accessible to researchers online via iDAI.world.

The first visit to Sudan by a president of the Federal Republic of Germany since 1985 is a sign of solidarity and support for the further transformation of the country.
This terracotta horse’s head is a so-called acroterion which crowned the roof of the South Temple at Kalapodi in Greece over 2,500 years ago. The Athens Department of the DAI has been excavating at Kalapodi since 1974. The ruins of two temples standing next to each other have been exposed there. The South Temple has several construction phases that furnish evidence of cultic use going back to Mycenaean times. Old investigations at the site proposed that Artemis was the chief divinity worshipped at the sanctuary. However, current research assumes Apollo was worshipped there. In 480 BC, the South Temple was destroyed by the Persians. The horse’s head was among artefacts that became buried in the ground. Reconstructing its original appearance was difficult in view of the fact that large parts of it were missing. Therefore the scientific illustrator Oliver Bruderer digitized the existing fragments using the structure-from-motion technique and pieced the head together virtually. There and there minimal remains of surface pigment provided clues as to the orientation of individual parts in this ancient “3D puzzle”. Archaeological expertise was used to model the missing parts after contemporaneous depictions and then they were added digitally. The result shows the horse head acroterion as visitors to the temple at Kalapodi may have seen it in antiquity.

Reinstallation of the National Archaeological Museum in Cherrchell, Algeria

About two thousand years ago the ancient sea port of Caesarea Mauretaniae, situated on the north coast of what is today Algeria, was where the Mauritanian kings resided for 65 years. Finds of the highest quality from that period of prosperity and from the following centuries under Roman rule are housed at the National Archaeological Museum in Cherrchell. The collection of artefacts is without parallel in North Africa. The finds were, however, in a poor state of repair largely as a result of two earthquakes in the 1980s. The German Archaeological Institute has been working on the refurbishment and reinstallation of the museum since 2008 with funding from the Cultural Preservation Programme of the Federal Foreign Office. The project has been implemented in close cooperation with the National Archaeological Museum in Cherrchell, the Ministry of Culture in Algiers and the Rome Department of the DAI. The objective of the project is the completion of the entire permanent exhibition of the museum. In collaboration with Algerian colleagues, the works of sculpture have been restored and additionally mounted on new plinths that can absorb the impact of seismic shocks in the event of an earthquake. The project is intended to raise interest in the museum among the local population in a sustainable way, hence to increase visitor numbers, and also to make enhancements to the museum’s website. In the interest of capacity building, regional specialists were given professional training in the restoration of statues and re-mounting them on new plinths as well as in museum education and outreach, while students have been involved in reorganizing the exhibition. The labelling of all the objects and the signage throughout the museum are now in French and Arabic. Other languages will be made digitally available via QR code. In addition to the classical form of exhibition, the museum can also be visited virtually. Questions, requests and suggestions by the inhabitants of Cherrchell were taken on board in designing the museum, developed in collaboration with the museum of industry in Lauf (Germany). The aim is to increase an appreciation of the archaeological exhibits and their historical and cultural significance as part of Algeria’s cultural heritage.

Explore the museum using the virtual 3D model: https://skfb.ly/6u79y

For more information: http://www.musee-cherchell.dz/
The Corona pandemic forces all of us to rethink and to find new ways and forms of working, researching and communicating. Even though most of the DAI’s staff is working from home and the possibility of doing excavations and field research projects is very much reduced, that doesn’t mean no research is being done. ARCHAEOLOGY WORLDWIDE has interviewed members of the DAI’s staff about how they have fared over the past few months at the Institute’s various locations, and how they are planning for time ahead. We present their responses here.
The building archaeologist DR. MORITZ KINZEL was elected Second Director of the ISTANBUL DEPARTMENT in spring. He reports from his home office in Copenhagen: “4 pm, Istanbul time – the small images of all the staff are flickering on the computer screen – the daily tea-time briefing of the Istanbul Department… Since the Corona crisis began and we decided to have our staff work from home, from March onwards, we have kept this daily meeting. It has helped us all put some structure in the otherwise peculiarly timeless mobile working day. Reducing the distances in sleeping, eating and working to a minimum has the charm of life in a monastery – albeit without the aspect of still contemplativeness, surrounded as you are by the whirl of family life. There’s only digital communication instead of person-to-person conversation. Using the various online tools has definitely shown that there will be no real need for certain business trips in future, but it’s also shown how important it is to meet people in person if a working relationship of trust and cooperation is to develop. My start as Second Director couldn’t have been more unreal. My family and I had to be connected to the library and the archive remain closed to the public, and thus robbed of their essential purpose. I am grateful to the Madrid team for its commitment, to the DAI’s Head Office for all sorts of help, to the German Embassy in Madrid for important advice, but most of all I thank our President for all the support in these difficult times… which are not over yet.”

The Spring tours, the specialist courses, workshops and conference participation planned by the department had to be cancelled. As an alternative we have at short notice set about digitizing and processing departmental photographic archives with image sets from Syria. As part of the Stewards of Cultural Heritage project, these new image holdings were then supplemented with the stories and memories of Syrian refugees in Turkey. In addition to that, the online seminars Discovering Greek & Roman Cities by the Institute of Classical Archaeology at Kiel University (ICAU) was translated into Turkish on the initiative of our department and of the Archaeological Department at Celal Bayar Universities (Menemen). All these projects have been transferred into the digital sphere remarkably well so far. Even so I’m really looking forward to a real cha[i] (tea-time meeting) at our department as soon as possible.”

Remote but still close up!

FABIOLA HEYNEN was one of the first to complete REMOTE PRACTICAL TRAINING arranged by the DAI, a six-week course where she got to know all about the institute’s media and public relations work.

“Every week there were courses for us on all kinds of topics from the sphere of media and public relations. Always in the form of video conference, which meant that the contributing speakers could be all over Germany, as we were students. During the sessions we learnt about the history of the DAI, for example, and had an opportunity to talk with the President Friederike Fless in person. And we were able to learn from people with relevant expertise in science journalism and the communication of science. Then we had tasks to work on, like writing blog and social media posts, as well as long-term projects, for instance the conception of a newsletter. What was perfect was the great flexibility, with us being in charge of our own time management. In one week I could be designing a website at my desk in Vienna, and in the next week I could be curating pictures from a sofa in Cologne. The six-week-long practical course was an ideal opportunity for me to acquire some specialist training in a period in which, thanks to Corona, studying was sometimes difficult. And I’ve also made contacts with some other young archaeologists – contacts of course.”

At the same time the quantity of the DAI’s e-resources is being constantly increased: https://www.dainst.blog/DAI4all/dai-e-resources/

The DAI’s libraries put nearly one million books on a wide range of specialized subjects at its users’ disposal. The libraries hold not only physical volumes but also a number of electronic media like e-books and e-journals. In response to the current situation, the libraries are offering a special service for the global scientific community, the e-library service list (https://www.dainstblog/DAI4all/elibrary/). The list contains links to many Open Access sources and temporarily available resources in the archaeological sciences as well as classical and ancient studies, all accessible without financial or licensing hurdles. The list is available in several languages and is being constantly added to.

E-learning formats like the iDAI tutorials (https://tutorials.idai.world/) offer courses on archaeological field work, preserving cultural heritage or museum management. The tutorials are free of charge and available in several languages. In cooperation
The remote workshop as a medium was unknown to me when the lockdown in mid March brought several research trips in the Orient to an end. Well tested during crises, digital communication channels with colleagues in the host countries have existed for a long time already. Organizing everyday life during lockdown was more difficult in many countries than in Germany. Even so, and despite frequent power cuts and the unreliability of the internet, intensive discussion is still possible in the evenings about common projects. Regular events with many attendances can only be organized in a reduced way, but individual work is progressing, though it is limited to work that can be done on the computer. The staff of the Orient Department are privileged, as almost all of them have a work laptop and unhindered access to the DAI servers. All that was required was the support of the dedicated IT Department of the DAI, and the librarian, who came with a pragmatic solution to providing us with literature. So as things stand, scientific work can go ahead virtually without restrictions thanks to telecommuting, video conferences, lectures and podcasts. But we do miss the practical work, the fieldwork, and direct contact with colleagues and local friends."

with international partners, the DAI also produces massive open online courses, so-called MOOCs. One example is ONLAAH Online: Learning on African Archaeology and Heritage. The tutorials and MOOCs are being made available so that people interested in archaeology can acquire new knowledge on their own initiative. Specifically to help students of the archaeological sciences in these difficult times, the DAI has additionally developed a number of online workshops, which students can take part in remotely. They are available on a range of subjects and have proved to be very popular. The students have learned about research data management, publicity work, and the specialist archives at the DAI or have helped out on a web-based geoinformation system on the topography of Pergamon. Instructional input has come from DAI personnel and from external specialists. Workshop participants also worked with great enthusiasm on the DAI’s contribution to the Long Night of Ideas, a virtual programme of events organized by the Federal Foreign Office, for which they developed interactive methods of disseminating information about the history of archaeology. At the Long Night of Ideas, which was held this year in virtual form for the first time, the DAI presented its Ground Check programme with a focus on “archaeology and climate.” There was also a digital podium discussion entitled Archaeology of the Future for a Future of Cultures, at which the President of the Institute spoke with the directors of DAI offices at different locations on the topic of “Crisis in antiquity – coping, resilience and ‘new normality’.” Both events are still available for viewing online, along with virtual explorations of the digital world of the DAI. https://www.dainst.blog/lange-nacht-der-ideen/videos/

WHAT DO ARCHAEOLOGISTS DO WHEN THEY CAN’T DIG? Ongoing excavations have had to be halted, field research projects postponed. The Corona crisis has caused severe disruptions to the work the DAI’s researchers carry out. In many situations it has been possible to find good, pragmatic solutions. A large part of the work of an archaeologist is anyway done at home in the office or in the library, as excavation finds and features are evaluated and the results are published. Mayke Wagner, Scientific Director of the Eurasia Department and head of the Beijing Branch, had been planning a summer school on building archaeology with the Palace Museum in Beijing and the TU Berlin. “It’s such a pity that our collaborative project to provide specialist training for young building archaeologists cannot take place this year,” he says. To maintain contact with our partners, we’re going digital and are preparing an exhibition which compares European and Chinese technological history – here we’re specifically comparing timber building techniques. The exhibition will initially be digital and consist of 3D reconstructions of timber buildings,” Wagner says.

“Here in Berlin we were just able to go ahead with our Ground Check project and host the international workshop Archaeology in East Asia. Bridge Building to Natural Sciences at the beginning of February. Only our colleague Professor Long from Ningbo (China) couldn’t attend – at that time he was no longer permitted to travel. But our partners from Japan, Taiwan and Russia were able to come. The meeting also served the purpose of planning field research projects. We did that, though with flexible time frames and a Plan B for this year. Building on the preliminary work and the samples taken in the previous year, we were then able to do a switch over to doing laboratory work and evaluating the samples in Berlin.”

For more on the project Ground Check in Northeast Asia: Climate Change and Nutritional Culture since the last Ice Age go to https://www.dainst.blog/bridging-eurasia/groundcheck-in-nordostasien-wandel-vom-klima-und-ernaehrungskulturen-seit-der-letzten-eiszeit/

VIRTUAL LONG NIGHT OF IDEAS, 2020 – The DAI took part in this Federal Foreign Office initiative on 19 June in a discussion entitled “Archaeology of the Future for a Future of Cultures.” Dr. Jörg Linzmann, Second Director of the KAAK, spoke about “Archaeology and Climate – The Ground Check programme of the DAI in 2020” (German/English). His talk can be viewed online: https://www.dainst.blog/lange-nacht-der-ideen/videos/
In mid March, events came thick and fast in Athens. Every day there was a host of new COVID-19 infections. While in absolute numbers they weren’t high in relation to other countries, they certainly were when measured in terms of the capacities of the Greek health system. On 13 March we closed our library to members of the public and two days later we made it possible for our staff to work from home. The processing campaign at Olympia was called off from one day to the next and all the participants were sent home, most of them to Germany. Some employees of the department went back to Germany to work from home, though most of them stayed in Athens, as the staff at the German Embassy in Athens incidentally did as well. Throughout the lockdown the department was never completely closed, however. There was a skeleton staff in place the whole time. In Greece it was possible at all times to get an authorization to leave confinement for the purpose of work in the city of Athens. And as many central sections of the Greek ministry of culture remained regularly staffed also, we tended in fact to have more to do than less. Communication was effected either by e-mail, telephone or video conference. 

“Discontinuing the field work was a disaster for us, there’s no other way about it,” says Stephan Seidlmayer, First Director of the Athens Department. “What Egyptologists do then? They do their homework: sorting old excavation documentation, writing metadata for digitized data, preparing manuscripts for publication – it’s not as though there’s nothing to do. Still, a discipline that’s so deeply rooted in our own living history is really hard hit if it’s prevented from browsing in analogue libraries. For the country. But the crucial thing is that we’re able to leave the crisis behind us again at some point.”

In early March, the DAI was quick to set up its own platform for video conferencing, communication functioned very well here too, with colleagues in Greece and in Germany. To give trainees the chance to see how we operated, in spite of the difficult circumstances, and also to give them an occupation while they were confined within their own four walls, we set up a virtual training course about the archive and the history of the institute. The ten participants worked through various tasks and presented their progress for consideration to the organizers in the department in weekly consultations. I’m delighted that we got very positive feedback from the participants!

In addition to that, we have made a series of video recordings of lectures by departmental staff available for a wide audience via digital media. And since archaeologists, as we know, do not only excavate, many researchers at the Athens Department were able to use the time to continue working on research projects and the publication of their findings, which requires concentration and peace and quiet. On top of that we have worked on third party funding applications and in general there has been a great deal to do organizing crisis management measures.”

PROF. DR. KATJA SPORN is director of the ATHENS DEPARTMENT. Here she looks back over an eventful few months: “In mid March, events came thick and fast in Athens. Every day there was a host of new COVID-19 infections. While in absolute numbers they weren’t high in relation to other countries, they certainly were when measured in terms of the capacities of the Greek health system. On 13 March we closed our library to members of the public and two days later we made it possible for our staff to work from home. The processing campaign at Olympia was called off from one day to the next and all the participants were sent home, most of them to Germany. Some employees of the department went back to Germany to work from home, though most of them stayed in Athens, as the staff at the German Embassy in Athens incidentally did as well. Throughout the lockdown the department was never completely closed, however. There was a skeleton staff in place the whole time. In Greece it was possible at all times to get an authorization to leave confinement for the purpose of work in the city of Athens. And as many central sections of the Greek ministry of culture remained regularly staffed also, we tended in fact to have more to do than less. Communication was effected either by e-mail, telephone or video conference. 

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“The Athens Department was able to reopen the excavation at Kalapodi in central Greece in summer 2020. Photo: Sporn

DR. CHRISTOPH RUMMEL is a researcher at the Frankfurt-based ROMANO-GERMANIC COMMISSION (RGK), which has now made many of its activities accessible via the internet: “In early March, the RGK operated largely as normal, but then events unfolded rapidly: staff had to break off official trips, be they directors or student assistants, and return to Germany from abroad. Some went directly into voluntary quarantine, while most of the others began working from home. Since then the RGK extends far beyond its main base in Frankfurt am Main – from the Baltic Sea to the Black Forest and from Hamburg to Saxony. The First Director had been heading the RGK from the research unit in Budapest since the middle of June; the Second Director has been holding the fort in Frankfurt, where the tireless crisis management group is coordinating the activities of the commission, which has been restructured into alternating A and B teams so as to limit contacts as much as possible. As a result the staff have been meeting online via video conference considerably more often. The current situation has fundamentally transformed the commission’s work: field research projects were interrupted and called off, important conferences like the annual meeting of the European Association of Archaeologists (EAA) are taking place either virtually (https://www.e-e-a.org/EA2020virtual) or not at all, and the RGK’s role as a hub in a Europe-wide and worldwide archaeology network has had to be relocated to the virtual world – as have many of our activities: the discussion group for theoretical archaeology, jointly organised by the RGK and the NGAM in Mainz as part of the Verbund Archäologie Rhein-Main (VARM) is now being held online (https://varm.hypotheses.org/1888). The public evening lectures that are organized by the Friends of the RGK (https://www.facebook.com/freunde.rgk/) are now, after a break, being filmed in a recording studio and made available through the DAI’s YouTube channel (https://www.youtube.com/user/dainat). Recorded conference papers of RGK research staff have also been uploaded to this platform. This ‘digital lecture series’ has been advertised on our Facebook page.

The Unit for Survey and Excavation Methodology (RePfMG) and the renowned library are two cornerstones of the RGK. Both have been severely affected by the current situation. As most fieldwork projects had to be suspended, the RePfMG staff are busy developing new technologies and devices for archaeological field research as well as new storage and archiving strategies. They also produced a film introducing the technologies and methods they currently employ: https://www.youtube.com/watch?v=GE7o3WaoWUs. The library, a key research facility not only for RGK staff but also for researchers in the Rhine-Main region and far beyond, remains closed for obvious reasons. A bitter pill, not just for the commission. But we are making the most of the opportunity that all the books should be in the right place, and have begun a major exercise in library stock-taking: all of the 190,000 plus books, from A to Z, are being individually inspected – of course in a way that complies with the distancing and hygiene regulations that are in force. The Editorial Office of the RGK has proven to particularly resilient in the current situation. It continues to operate more or less as normal, as most of its work had gone digital long before the pandemic hit. A new volume of the Limersforcungen series dealing with the fortifications of the Roman legionary fortresses at Mainz has just been published (https://www.daimst.org/limersforcungen/); another monograph and both of the RGK’s journals are online. The RGK may be closed to the public, but behind those locked doors we continue, almost as before. Our work has changed somewhat, but it certainly has not gotten any less.”

Camera, Sound, Action! The digital lecture series organised by the association of Friends of the RGK – ‘FREUNDE DER ARCHÄOLOGIE IN EUROPA E.V.’ – is introduced by the chairwoman, A. Wilcke. Photo: Brieß

EVERY SINGLE BOOK IS INSPECTED BY HAND in the RGK library, which holds more than 190,000 volumes. Photo: Studio
**PROF. DR. CHRISTOF SCHULER** is First Director of the COMMISSION FOR ANCIENT HISTORY AND EPIGRAPHY (ÄEIS) in Munich. Looking back, he is pleased how well the commission staff have coped with the crisis. “The first weeks in March, before general restrictions on movement were put in place in Bavaria on Friday the 20th – two days earlier than in the other federal states – were a crazy time which has engulfed itself on my memory. The situation was changing daily, infection rates were shooting up, the first deaths were reported. Bavaria and especially Munich rapidly became Corona pandemic hotspots in Germany. From the 16th of March schools, universities and libraries on the 12th and the 13th, with guests from six countries, and important travel in time. From today’s perspective this step goes without saying, especially Munich rapidly became Corona pandemic hotspots in Germany. From the 16th of March schools, universities and libraries shut were shut in the state. At the ÄEIS we had an international conference on the 12th and the 13th, with guests from six countries, and important interviews were planned for the 16th, which we eventually called off in time. From today’s perspective this step goes without saying, but back then the decision wasn’t easy. Fortunately none of our staff were travelling at the time, so we didn’t have to worry about that. However, seven international scholarship holders at the commission were caught by surprise during the crisis and I’m very grateful for the cool-headedness and solidarity they have shown.”

**DAI AT SCHOOL**

A piece of ancient Egypt to look at in the classroom or a temple to build yourselves? The DAI has put together a set of online learning material for little (and big) explorers to discover: https://www.dainst.blog/DAI4All/category/daimachtsschule/

The learning material includes a series of school books on East Asian archaeology. In one of the books kids can learn all about the Great Wall of China.

**SMALL GROUP, BIG DISTANCE. Christof Schuler (left) at a briefing with his team. Photo: Hanel**

**THE AROUND THE COLOSSEUM, normally one of Rome’s busiest tourist hotspots, was deserted in spring. Photo: Colombi**

**PROF. DR. ORTWIN DALLY** is director of the ROME DEPARTMENT of the DAI. In Italy, very stringent restrictions came into force at an early date: “On 9 March the DAI Rome had to close provisionally in accordance with a directive of the Italian government. We had seen this coming: the number of people who had contracted COVID-19 in Upper Italy had been rising continuously and very rapidly since January. The government was initially planning a lockdown for especially hard-hit regions in Upper Italy. But once this plan became publicly known and some people had left the region, the decision was taken very swiftly to order swingeing restrictions to freedom of movement across the whole country. This strict phase of lockdown then lasted three months here. It was not until the beginning of June before we could reopen the institute on an internal level, though not for the large numbers of readers that we normally have in the library. Even now, in summer, on average 50% of the staff are on the premises, following a rotation principle. Total closure meant that all of us were only allowed to leave our apartments in exceptional cases, that is to go shopping and for occasional inspections of the institute, which had to be supported by a letter from the ambassador, given the many inspections in the city.

All other top-ranking cultural institutions in Rome shared the same fate as us. Museums, archives, libraries as well as all 37 of the over-whelmingly European academies and research institutes within the Unione Internazionale degli Istituti di Archeologia, Storia e Storia dell’Arte in Rome had to close completely. And with that, from one day to the next, not only was all the hustle and bustle on the streets of Rome gone, but also the personal discourse, an outstanding feature of the DAI. In Italy, very swiftly to order swingeing restrictions to freedom of movement across the whole country. This strict phase of lockdown then lasted three months here. It was not until the beginning of June before we could reopen the institute on an internal level, though not for the large numbers of readers that we normally have in the library. Even now, in summer, on average 50% of the staff are on the premises, following a rotation principle. Total closure meant that all of us were only allowed to leave our apartments in exceptional cases, that is to go shopping and for occasional inspections of the institute, which had to be supported by a letter from the ambassador, given the many inspections in the city.

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Disasters, wars, climate change. Humanity’s cultural heritage is under pressure. It is suffering neglect, damage, destruction. Only if we act together will we be capable of surmounting the challenges and safeguarding cultural heritage in an effective and sustainable way. The key to this is working together internationally, building on research and experience, sharing knowledge and making it digitally accessible, and developing structures that are sustainable.

A joint effort can get things moving. Transferring heavy blocks in Yemen.
Photo: Wagner
DIAGNOSIS OF THE CRISIS

When an illness reached a point at which its outcome was decided, the ancient physician Galen used the term *krisis*. For him the situation makes it possible for us to make an informed decision about how to influence or even steer the outcome. There are lessons to be learned from history. What factors enabled a society or an individual in the past to bounce back (lat. resilire) from a difficult situation – what conditioned resilience? Galen’s diagnostics is suitable for use today, so we can recognize a crisis as it looms and make out its phases, i.e. the turning point of the crisis. On this basis it is possible to exert an influence on its future course and take the right measures.

Over the years the German Archaeological Institute, acting in concert with numerous national and international partners, has built up knowledge and structures for tackling crises that have affected cultural heritage particularly dramatically around the world in the very recent past. Deliberate destruction, damage by warfare and the natural environment, but also building and rapid urbanization causing entire cultural landscapes to disappear are just some of the challenges to which responses need to be found. The experience gained in this area in recent years has led to the founding of a growing network of experts – the Archaeological Heritage Network (ArcHerNet) – and to the creation of a programme to investigate the effects of climate change on cultural heritage (Ground Check). It has also given rise to a sustainable plan for the future which aims to set up a mechanism to provide rapid assistance for cultural heritage in crisis situations.

KNOWLEDGE FOR PREVENTION AND COPING

In 2016, the wide-ranging expertise of different institutions was brought together in the Archaeological Heritage Network so as to be able to tackle the current challenges in preserving cultural heritage and safeguarding cultural assets. With the project “Zero Hour – A Future for the Time after the Crisis” the focus initially lay on the region which was particularly affected by the so-called Islamic State’s acts of destruction and by war, notably Iraq, Syria or Yemen. The aim of the project was to pool German expertise and then to build up the necessary skills with partners in the countries concerned. This was done by training courses on the documentation and protection of historic buildings carried out in the states neighbouring Syria and also by retaining Syrian refugees as stonemasons in Jordan. The Iraqi-German Expert Forum (IGEF-CH) was set up and proved to be a particularly effective format.

Professional staff from the Department of Antiquities of Iraq attend an introductory course dealing with theoretical and practical questions of heritage conservation in Germany, after which they work independently on projects in Iraq. They are individually supervised and supported remotely. There is then a joint discussion of the results one year later. Up to 15 Iraqi experts receive this form of specialized training each year. Building up skills should of course not be limited to the days or weeks for which a training course lasts, but should be available on a permanent basis, which presupposes sustainable formats and structures. To this end the iDAI.world portal was set up to provide open access to resources. These resources include translations of important international standards and online courses that offer training, for instance, in how to use the most modern, but also traditional methods of...
What prompted the Conference of National Cultural Institutions to launch its SiLK initiative was a series of disasters that occurred in Germany, including the flooding of the Elbe (2002), the fire in Weimar’s Duchess Anna Amalia Library (2004) and the collapse of the Cologne municipal archive (2009). The ArcHerNet-supported translation of the guidelines makes the important results of this initiative available now to collections and museums throughout the Arabic-speaking world. It is accompanied by specific projects such as the one in progress in the National Museum in San`a, Yemen. After attending training in Germany, museum staff are carrying out on-site documentation and safeguarding of the unique collection on South Arabian culture. The project is being overseen from Germany by Iris Geißler of the DAI’s Orient Department. The problematic security situation in many countries in years past has spurred the development of innovative project structures, and in the process international collaboration has assumed a whole new shape. Physical work on site and on the objects is combined with digital formats. The latter only function because there is lacking in many parts of the world.

In consequence the DAI is systematically digitizing its archives and preparing the data for rapid, long-term exploitation. The largest archive on the archaeology of Sudan, compiled by the Berlin building archaeologist Friedrich Hinkel, has been digitized with assistance from the Qatar Sudan Archaeological Project, and a copy has been given to the Sudanese authorities. That archive now forms the basis of a digital register of the country’s heritage, within a data infrastructure that has been designed to be extendable.

Like all research institutes, the German Archaeological Institute has been affected by the Corona pandemic. Since the DAI’s mission according to its statutes – to conduct research in the archaeological sciences and ancient studies globally – implies physical presence and in situ activity, new ways of collaborative work needed to be found. The wealth of experience we have in crisis regions has helped us, in the present situation, to adapt projects and workflows to the new conditions and to virtualize them. A combination of digital forms of communication and collaboration with very concentrated phases of in situ work currently describes the working realities of partners and DAI staff. This rapid switch has been possible thanks to the many years of good cooperation in the host countries. It’s only when we know each other’s work circumstances and ways of operating that analogue and digital documentation methods, for example, can be shared remotely.

It’s important to note, here, that the new digital formats are not (yet) an equal-value substitute, especially when it comes to projects and training courses, which for good reasons are conducted in a hands-on way. More approaches to online tutoring and ways of working with instructional videos can and should be tried out, and promoted, and feedback formats are needed as well. Currently there is great demand for tutorials that were developed on the basis of various capacity building projects in the framework of “Zero Hour” and other training programmes. In the future there needs to be more investment precisely here, in digitizing work processes. That is because, to tackle crises, systematically gathered and rapidly accessible information is paramount, especially for cultural heritage. Digital registers of objects held in museums and digital registers of monuments in whole regions are key instruments here. But often these are still lacking in many parts of the world.

Documentation as well as training in the processing and management of digital data. Demand for these online formats has risen by 70% during the Corona pandemic. Sharing know-how that is needed for the protection and preservation of cultural heritage and making it accessible internationally will remain one of the core tasks of the DAI and ArcHerNet, along with creating forums in which experts from Germany and the host countries can come together. In the process we are making a practical response to global calls for “open science.” This year, for instance, we have made the following two important documents available for readers of Arabic: a handbook on building survey methodology as well as guidelines for the protection of cultural property (SiLK) that have been drawn up by the German Conference of National Cultural Institutions (Konferenz Nationaler Kultureinrichtungen, KNK). The SiLK guidelines – permanently available and maintained thanks to the support of the Federal Office of Civil Protection and Disaster Assistance (BBK) – support museums and collections with recommendations on risk assessment and disaster prevention. Just how important such assessments and practical recommendations are became clear in the discussion following the devastating fire in the National Museum in Rio de Janeiro in September 2018. One of the most frequently asked questions then was whether the scale of the disaster could have been minimized if better safety measures had been in place.
**KULTURGUTRETTER**

To protect and preserve cultural heritage in all phases of a crisis effectively and sustainably, the essential requirements are well-prepared and readily available digital information as well as well-trained and competent decision-makers. Here it is imperative to build on the successes of the “Zero Hour” project. While we are well-positioned when it comes to crisis prevention and subsequent rehabilitation, there is still no mechanism in Germany that makes it possible to render assistance worldwide when a crisis is at its height. For this reason, a project entitled KulturGutRetter ("cultural heritage rescuers") was launched in 2019. The scheme provides a mechanism for rapidly delivering assistance for cultural heritage in crisis situations.

DAI and ArcHerNet have discussed how to develop an international mechanism to save and safeguard acutely endangered cultural assets with the Römisch-Germanisches Zentralmuseum – Leibniz Research Institute for Archaeology (RGZM), the German Federal Agency for Technical Relief (THW) and many other partners. The intention behind it is to bring the expertise that exists in Germany together in a team of experts that can act quickly in the event of a crisis to provide assistance in securing, preserving and if need be salvaging objects and buildings.

The first rescue module for documenting, cleaning and boxing involves the development of basic standards. The rescue module is being trialled in a joint project with the National Museum in Khartoum. The project further offers assistance in constructing a restoration workshop in Sudan, the first of its kind and a permanently available and effective facility for protecting cultural assets. The KulturGutRetter mechanism represents an attempt to utilize the positive experience from previous projects and the demonstrably well-functioning models and formats established in them, and to improve them in terms of (more) universal deployability.

The mechanism is based upon existing modules such as the development of digital teaching material and the compiling of a digital register of monuments. But it features an extra layer of remote sensing capability and also a systematically expanded network of full-time and voluntary experts possessing a wide range of skills that are deployable and fit for purpose in the event of a crisis. For this to work, regular training courses at home and abroad are necessary. The teaching formats and materials for such courses are currently being developed by means of analyzing and exploiting existing experience such as that acquired in the Iraqi-German Expert Forum on Cultural Heritage.

**PHOTO: ArcHerNet / Diagram: Kallas**

**“You can only protect what you know.”** A brochure on the German Archaeological Institute’s restoration and reconstruction projects has been published by the Division of Building Archaeology. Available in German and English: https://www.dainst.org/publikationen/broschueren

**BUILDING ARCHAEOLOGY AND HISTORIC MONUMENT CONSERVATION AT THE DAI**

The Division of Building Archaeology was founded at the Head Office of the German Archaeological Institute in 1973. Research into ancient buildings at archaeological sites has a longer tradition, however reaching back into the 19th century. From the outset the Division focused on building archaeology and the conservation of ancient monuments. This tradition of research-based cultural heritage preservation will be reflected this year by a new personnel appointment at the Division of Building Archaeology. In addition to the long-standing pillar of historical building archaeology a second pillar will be erected: the protection and preservation of buildings of historic importance around the world, in conjunction with the coordination of both the Archaeological Heritage Network and the DAI’s advisory committee on monument preservation and site management.
From the Hanging Gardens of Babylon to the “land where the lemon-tree flowers”...
Down the ages and across geographical regions, gardens were not only functional, for growing fruit and vegetables, but were also recreational, places of leisure and refuge within urban space, delighting the senses with colour, scent and sound, and evoking memories of distant lands – much more, therefore, than a spot of greenery.

On the following pages, researchers at the DAI take you on a journey through the gardens of the past.
Anyone who has struggled through the crowds on the Roman Forum in Rome these days breathes a sigh of relief when the chance comes to turn off to the Palatine Hill. Once up there they stroll through a spacious park among the ruins of the palaces of Rome’s emperors. Even in classical times efforts were made in the city of Rome to embed the history of its own grandeur in an architecturally enhanced landscape. There was for instance a hut – probably of wood, clay and straw – that was identified as the house of Romulus, the city’s mythological founder. Right next to it the future emperor Augustus erected the Temple of Apollo, one of the first buildings of the city of marble. The contrast was probably eloquent testimony to the cultural and material rise of the time.

The Flavian Palace’s huge banqueting hall, the Cenatio Iovis, was flanked by semi-circular courtyards that each enclosed an ornamental fountain. These provided a cooling effect and created atmosphere through sound and the play of light on the most precious materials. In the adjacent Domus Augustana there was a sunken garden over ten metres deep in the main storey of the palace. In the Flavian phase this garden was equipped with a central pool with a small island that could only be reached by a bridge. The island was presumably used for especially private and exclusive banquets with the emperor.

In the Flavian period another hanging garden was to be found in the Domus Severiana in the south-east corner of the palace complex. Sited on top of two-storey substructures, the sky garden was dominated, not by plants, but by a large pool. Here, high above the city, one could gaze out over an expanse of water. One can well imagine what an impression such spectacular creations had on visitors. The prerequisite for this kind of artificially created natural landscape was a comprehensive knowledge of civil and structural engineering. We are endeavouring today to reconstruct that knowledge.

The projects are also both generating new data about the integration of gardens and rural motifs in the different complexes of buildings. On the Palatine, landscape was seen as part of the historicity and sanctity of the site. From the wall paintings we know that the Palatine Hill of the primordial past was imagined to be a bucolic landscape of rocks and meadows. Maybe for that reason various gardens were incorporated into the architectural ensembles on the Palatine, necessitating though they did elaborate civil engineering. For instance the porticoes of the Flavian Palace’s huge banqueting hall, the Cenatio Iovis, was flanked by semi-circular courtyards that each enclosed an ornamental fountain. These provided a cooling effect and created atmosphere through sound and the play of light on the most precious materials. In the adjacent Domus Augustana there was a sunken garden over ten metres deep in the main storey of the palace. In the Flavian phase this garden was equipped with a central pool with a small island that could only be reached by a bridge. The island was presumably used for especially private and exclusive banquets with the emperor.

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By modern standards, the ancient world must have been a grim and cruel place, where people often found themselves defenseless in the face of wars, natural disasters and pandemics. A different world is shown in images that are preserved above all from the houses of the Roman imperial period (1st–4th century AD): happy and life-affirming images with idyllic evocations of nature. Are they an expression of temporary good fortune, or did they construct an alternative world amid the hardships of everyday life and thereby contribute to the resilience of classical societies? This question has been investigated by archaeologists on two DAI research projects – in Pompeii (Italy) and Pergamon (Turkey).

The city of Pompeii – whose history is replete with natural disasters – is frequently cited as a prime example of resilience. The best known stress test for the city before it was buried by the eruption of Vesuvius in AD 79 was the earthquake that struck in AD 62. Among the ruins of the city only the acute observer can make out how many walls, wall decorations and architectural elements date from the period of reconstruction after the high-magnitude earthquake. In the Casa dei Postumii – a richly appointed house in the centre of the city – much of the rear portion of the complex had to be rebuilt. Dating to this phase is a garden surrounded by columns (i.e. a peristyle), onto which three large rooms and five small ones opened. The walls of the peristyle were decorated with elegant paintings on a black ground. The white stuccoed columns with yellow plinths subtly mediated the transition into the light-flooded ambience of the garden. Today not much can be discerned of how splendidly colourful the ensemble once was. A cork model made around the time the house was excavated – in 1860 – is therefore an important source of information for researchers today. Remains of the original plantings were not observed during the excavation of the peristyle, but the modern design of the garden gives a convincing impression of the combination of architecture and nature. At other sites, detailed reconstructions of the flora have been possible on the basis of the cavities in which the roots grew and botanic macroremains, supplemented by contemporary depictions. Of the peristyle's ancient furnishings, two fountain structures and a round marble table have survived. One fountain system consisted of a fountain above a marble slab, the other of a statuette of Eros with a pitcher and a flight of small marble steps which the water went cascading down. The most ingenious feature was the water nozzles embedded in the stucco of the columns, out of which arcs of water sprayed at chest height and fell into the drainage channel of the peristyle. The most ingenious feature was the water nozzles embedded in the stucco of the columns, out of which arcs of water sprayed at chest height and fell into the drainage channel of the peristyle. From the surrounding rooms one could enjoy both the sight and the sound of three water features that gave the garden its special ambience.

Places of refuge – Nature in the ancient city as a source of resilience?

The idyllic artificial landscape at this house was undoubtedly a place of refuge for its occupants and guests, beguiling them with sensual pleasures in a town whose public spaces offered little in the way of greenery. It would be going too far, however, to interpret the designs of gardens like the one at the Casa dei Postumii as a direct reaction to the disaster of the earthquake of AD 62. What is easily conceivable, though, is that spaces for relaxation and recreation had a positive effect on the Pompeians’ perseverance in challenging times, even though of course enjoyment of such sources of resilience was restricted to the inhabitants of big houses and their social circle.
A SHADY RESTING PLACE – A NATURAL SHRINE IN URBAN Pergamon

In the ancient city of Pergamon (Pergamum) on the west coast of Turkey, a team of researchers from the DAI has recently made a discovery that provides a graphic illustration of how nature could be integrated in the urban fabric in a much less exclusive manner.

On the west slope of the acropolis mountain there is a steep, stepped street ascending to the main entrance of the theatre complex. At one point on the way a tall, steep crag on one side catches the eye. Only on closer inspection does one notice that the face of the crag has been artificially worked in places, widening the road out into a kind of small public square. The function of the ensemble is revealed by a small niche in the rock face and a rectangular worked patch on the ground, which we interpret as a podium on which a simple altar stood. The niche, meanwhile, is thought to have held a small image of a deity. A low ledge that has also been cut into the rock is the final feature of this simple shrine.

One can well imagine inhabitants of Pergamon frequently stopping at this remarkable spot for a rest on their climb to the theatre, grateful in the summer heat for the many hours of shade the tall crag offered. The relief provided by bountiful nature may have been reason enough for a short prayer or small offering.

Although we cannot date the cult site itself, it belongs to a group of natural shrines that sprang up at various locations on the mountain at the beginning of the 1st century BC and were in use for only about a hundred years. They display close parallels with cult sites in the surrounding countryside that are older in origin. By their emphatic simplicity and rugged, barely modified appearance, the urban natural shrines stood in conspicuous contrast to the magnificent temples and altars of the city and its rulers. The use of natural sanctuaries by cult communities and the veneration of gods that were responsible for fertility and personal well-being will also have offered, on the emotional level, an alternative to the big official cults. The natural sanctuaries came into use at a time when large areas of the city were undergoing development for the first time. This urbanization programme appears to be connected with large-scale changes to the settlement structure of the hinterland of Pergamon. For many people, uprooting themselves from ancestral places of residence and moving to the “big city” – possibly in consequence of violent conflict, such as the Mithridatic Wars – was no doubt a drastic upheaval, if not indeed a traumatic one. It’s an interesting hypothesis that this was precisely the reason for the transplanting of natural cults to the city. At any rate we can be sure that the natural sanctuaries were places of refuge in the architecturally highly developed urban zone, places that promoted a religiously imbued connectedness with the natural environment. This could have helped strengthen people’s resilience in the face of radical upheavals in their lives.

PROF. DR. FELIX PIRSON is First Director of the Istanbul Department and directs research into the ancient city of Pergamon. Photo: Mania

DR. PIA KASTENMEIER is a researcher at the Rome Department. She has been overseeing the Casa dei Postumii project since last year. Photo: Ianniello

https://www.dainst.org/project/4546834
Abd al-Rahman I (first emir of Córdoba), 8th century AD

In 756 AD Abd al-Rahman I, fleeing from the Abbasids, reached the Iberian Peninsula. He made Córdoba into the capital of an Islamic state. He and his loyal followers would dream of the land they had left behind, Syria. Exiles, they tried to turn their new realm into an image of their homeland. Abd al-Rahman I named his palaces after famous examples in Syria: “Damascus,” “Qasr al-Hair” and “al-Rusafa.” Córdoba became a landscape of remembrance. At the same time Abd al-Rahman I laid the foundations of a style of horticulture whose influence can still be traced later in the gardens of the Italian Renaissance.

For a long time the gardens of Islamic Córdoba were only known in any detail from literary sources. They speak of rare flowers and exotic plants. But information about the realities of this dream landscape was scarce. Two projects of the Madrid Department are now putting our knowledge of this horticulture on a new footing.

In excavations the remains of an irrigation system were investigated, including basins, channels and trenches. Archaeobotanical analysis shed light on the plants that once grew in the garden. Among other things the earliest evidence of the white mulberry on the Iberian Peninsula was found – the tree that laid the foundations for independent silk production.

The results of the investigations in the gardens of the villa of Munyat ar-Rummānīya are published in volume 39 of the Madrider Beiträge.

The dream of a garden

“In the middle of Rusafa I saw a palm tree, here in the West, far from the land of palms! I said to it: How like me you are, cut off from all friends and the sons of my house. You have sprung from soil to which you are a stranger, like me, at the ends of the earth and so far from home.”

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At the DAI Orient Department in Berlin there is a bronze bust of a man wearing traditional Arab headdress – the kufiya fastened with an agal. Who does it portray? An outstanding archaeologist from DAI history, perhaps? A notable historical figure? Not entirely. The bust is of Ismael Ibn Jasim. Ismael Ibn Jasim, who passed away in 1966 when over 80 years of age, was all his life very closely associated with the German archaeologists who started excavating in 1898 in the region of ancient Mesopotamia, today Iraq.

In 1898, the newly established Deutsche Orient-Gesellschaft sent the building archaeologist Robert Koldewey to Babylon to conduct research. Ismael Ibn Jasim came to the excavations as an adolescent. In 1902 Koldewey chose the young man as an assistant for his research at Fara (Šuruppak). There Ismael Ibn Jasim also worked with archaeologist Walter Andrae, assisting him until 1913 on the subsequent excavations at Assur, the first capital of the Assyrian Empire. And when in 1912 the first systematic excavations took place at Uruk, city of the legendary King Gilgamesh from the eponymous epic, Ismael Ibn Jasim functioned as the closest Arab assistant to the head of excavations there, Julius Jordan.

In those ten years, in which Ismael Ibn Jasim established himself as an experienced excavation worker, that interest in the cultures of the Ancient Near East, which arose in the 19th century, first peaked. Excavations at the Assyrian capitals of Babylon, Assur and Uruk aroused interest globally and brought to light such famous monuments as Babylon’s Ishtar Gate. Fieldwork at Uruk, which promised to shed new light on the early periods of Mesopotamian history, had to be suspended because of the First World War. Activities could not be resumed until the winter of 1928/1929, after Walter Andrae, now director of the Museum of the Ancient Near East in Berlin, had lobbied hard for it at the Notgemeinschaft der deutschen Wissenschaft. Once again Julius Jordan directed the excavations, ably assisted once again by Ismael Ibn Jasim and now joined by his son Ali Ibn Ismael.

The great personal commitment that made Ismael Ibn Jasim so indispensable to the German archaeologists, is illustrated by the following story that’s told about him. In 1917, when the excavation site at Babylon had to be abandoned because of the advancing British army, the Babylon excavation cash box was entrusted to Ismael Ibn Jasim for safe-keeping. He is said to have returned it after the war with not one pfennig missing. He is also remembered for the help he gave archaeologists when they returned to Uruk after a long interruption occasioned by the Second World War. In spite of his advanced age he managed to get the derelict dig house repaired to the extent that the German team had accommodation ready and waiting when they arrived and were able to start work straight away.

Ismael Ibn Jasim oversaw operations at the Uruk site until he was over the age of 70. Although he couldn’t read or write, he was always scrupulously accurate in the accounts he drew up. He had a remarkable memory, too, and even at a grand old age he could clearly remember events involving Walter Andrae for whom he had a deep respect. Andrae’s private library was incorporated into the holdings of the DAI Orient Department after his death. It is a pleasant chance, and fitting, that a bronze portrait of Ismael Ibn Jasim now gazes down on researchers from all over the world who leaf through Andrae’s books, recalling as it does the close attachment between the two men.
What makes a society resilient? How did earlier communities respond to crises and upheavals? Below, researchers at the DAI give an insight into how people in the past surmounted social challenges and individual stress situations as well as how they dealt with political and economic competition. Whether it’s a matter of climate change, threats from without, or the adoption of new ways of life, it is difficult to discern cause and reaction. This is also true of periods of time which are the subject of archaeological research.

What is certain is that dramatic events can hasten, and steer, processes of change that are already under way.
Major crises and upheavals aren’t only a feature of our own time. Earlier societies experienced epidemics, natural disasters and man-made crises like wars and civil wars too, just like modern societies. And those societies and their members had to take action in response. Today, crisis research is one of the themes of current archaeology, as is the inquiry into the resilience of societies. Resilience is understood as psychological toughness and the ability to get through difficult situations in life without lasting adverse effects.

The physicians of antiquity give us a clear definition of crisis in sequence it is exceptionally difficult to form a clear and exact picture of a crisis and to identify reactions to it chronologically and causally with any precision. To do this for the ancient world is more complicated still. The chronology is normally not so definite that causal connections can be determined in their proper sequence.

A RETREAT INTO THE PRIVATE SPHERE?

Classical era Athens was in many respects a time fraught with crisis. At the beginning of the 5th century BC, a Persian army invaded Greece. Even though the Greek side was victorious in the end, the Persians left cities sacked and rural areas ravaged. The Greek historian Herodotus describes the destruction of the citadel of Athens with its many temples. After a fairly lengthy period, probably of reflection, rebuilding of the temples commenced. No sooner was the Parthenon with its cult image of Athena finished than hostilities broke out between Athens and Sparta, ushering in a long phase of military conflict that led to a siege of Athens by Spartan forces. On top of this came an outbreak of the plague – which was the occasion of their saying that the Peloponnesians had poisoned the reservoirs, there being as yet no wells there – and afterwards appeared in the upper city, when the deaths became much more frequent. […] people in good health were all of a sudden attacked by violent heats in the head, and restlessness and inflammation in the eyes, the inward parts, such as the throat or tongue, becoming bloody and emitting an unnatural fetid breath. These symptoms were followed by sneezing and hoarseness, after which the pain soon reached the chest, and produced a hard cough. When it fixed in the stomach, it upset it, and discharges of bile of every kind named by physicians ensued, accompanied by very great distress. In most cases also an ineffectual retching followed, producing violent spasms, which in some cases ceased soon after, in others much later. Externally the body was not very hot to the touch, nor pale in its appearance, but reddish, livid, and breaking out into small pustules and ulcers. But internally it burned so that the patient could not bear to have on him clothing or linen even of the very lightest description; or indeed to be otherwise than stark naked. What they would have liked best would have been to throw themselves into cold water; as indeed was done by some of the neglected sick, who plunged into the rain-tanks in their agonies of unquenchable thirst; though it made no difference whether they drank little or much. Besides this, the bodies as best they could. (…) By far the most terrible feature in the malady was the emotion which ensued when anyone felt himself sickening, for the despair into which they instantly fell took away their power of resistance, and left them a much easier prey to the disorder; besides which, there was the awful spectacle of men dying like sheep, their bodies as best they could. (…) Nor was this the only form of lawless extravagance which owed its origin to the plague.

(translation: J. M. Dent & E. P. Dutton, 1910)
Much research has been done into how the epidemic originated and what pathogen caused the tragedy in Athens. The fragmentary transmission of classical texts is not the only reason why the pathogen and the means by which the disease spread cannot be determined. Just like in the current situation, reconstructing the origin and spread of an epidemic is simply exceptionally difficult. It is a curious fact that the events as depicted by Thucydides in his historical work contrast so strikingly with the images we find on Attic vases for example. While the history book portrays the horrors of war and sickness, the art of the time is dominated by the so-called Reicher Stil (rich style). Here, the emphasis is on flowing lines. The forms of the body show through the garments the figures wear, as though the material were wet.

A number of vases show scenes from inside the private quarters inhabited by women. The scenes are placed, possibly somewhat muted in mood. The women attire and adorn themselves, spin and weave, or prepare themselves for a wedding. The picture that is presented is the antithesis of what must have been playing out on the streets outside the houses. What we see is a withdrawal into the private sphere; in the passage of time it becomes evident inside the houses too. They are decorated ever more lavishly with mosaics. Not every crisis in the classical world led to a retreat into the private sphere or an aestheticized world of art characterized by consciously beautiful line and form. The classical world also knows altogether different imagery that was produced in a time of crisis.

AN UPSURGE IN VIOLENCE?

The Roman Empire was struck by a pandemic that started c. 165 AD and continued to rage until 180, if not longer. The physician Galen, a contemporary, gave a specialist’s description of the symptoms and the further development of the disease. It was recognizable by fever, diarrhoea and pharyngitis as well as a rash with pustules from about the ninth day. This pandemic, generally known as the Antonine Plague, has proved equally puzzling to scholars trying to identify the pathogen that caused the sickness. It is thought to have been spread by legionaries returning home to their bases after campaigning under Lucius Verus against the Parthians on the eastern fringes of the Roman Empire. At the time, the plague was believed to be divine retribution for the plundering of a temple of Apollo during the campaign. Apollo, while the god of healing, is also a punitive god, whose arrows inflicted sickness and death. Art changed radically around 180 AD. The German classical archaeologist Gerhart Rodenwaldt wrote of the transformation observable in the art of the Antonine period. He described the phenomenon with reference to sarcophagi that depict a story from Greek mythology. In it, Medea, the daughter of the king of Colchis, helps Jason win possession of the Golden Fleece. He then abandons her and gets engaged to Creusa, daughter of the king of Corinth. The spurned Medea takes revenge by giving Creusa a poisoned dress as a wedding present. Creusa dies in agony and Medea completes her revenge by killing the children she had with Jason.
The change in style can be seen not just in sarcophagus iconography but also in scenes that deal with military conflict. From the beginning of the 2nd century AD, Trajan’s Column (erected 112/113 AD) offers a kind of visual reportage from the theatre of war; the focus is on the perfect logistical organization of the Roman campaigns against the Dacians, and on the observance of religious rites, while actual fighting is shown relatively seldom. The column of Marcus Aurelius, erected c. 180 AD, is altogether different. Commemorating the campaigns of Marcus Aurelius against the Marcomanni, the column above all contains scenes of battle, presented not infrequently in the form of orgies of violence. The fighting and killing is depicted graphically and expressively in all its gruesome detail. Enemy captives are slaughtered. The imagery of the late Antonine period is thus a far cry from that of late 5th century BC Athens, equally beset though it was by crises.

On Roman sarcophagi the agonizing death of Creusa is depicted in a fairly composed and calm style around the middle of the 2nd century AD. Just twenty years later, around 180–190, this changes radically. Bodies and faces are now distorted in pain and anguish, the movements are frantic. The garments with their attractive interplay of folds have become loose in the composition, enhancing the drama of the composition as a whole. The expressive images carved on the sarcophagi could be interpreted as reflecting the shared experience of sickness and death, pain and mourning.

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The difficulty scholars face in their analysis is that the mechanisms of origination and transmission of both epidemics cannot be described exactly, and neither can an exact causal connection be established between the events and the art. It is clear, however, that not only one form of expression exists in a given society’s response to a crisis. If we consider the whole range of reactions and artistic expressions, we notice that the themes of carnage either real and legendary, as well as sickness and death can exist side by side with peaceful images such as those from the late 5th century BC. In the late Antonine period, on the other hand, the art seems to portray actual experiences of pain and dying, in abundance and in a graphic visual language. Still, how societies respond to a crisis is not predestined in some deterministic way: instead it is obviously conditional upon a society’s capacity to conceive and take action.
“What does not kill me makes me stronger,” as Friedrich Nietzsche declared in 1888, coining an aphorism for the scientific interest that developed much later in the question of resilience – the ability of people to recover readily from adversity. A collaborative network comprising ancient studies, psychology and life sciences in the Rhine–Main region has recently started investigating resilience factors and challenges. They are looking into how people – individually or collectively – cope with processes and events perceived and conceptualized as challenges, and what factors and/or resources they have recourse to in instances of successful coping.

Since the turn of the millennium, resilience has become a key term that is used in a wide range of different fields. From research – for instance material sciences, (developmental) psychology, health science and social ecology – it found its way into politics, and recently even advertising. Resilience is an analytical category at the same time as a term with normative connotations that is used in practice! Scientists are trying to establish what resources, what resilience factors people use when they withstand hardship. It is hoped that we as individuals and communities will be able to learn to deal positively with the challenges of human life – challenges that are regarded no longer as exceptions but as normality, and yet often have unforeseeable consequences. Critics draw attention to the fact that the resilience discourse tends to promote the idea of self-optimization rather than focusing on the structural problems and their solutions. Recent resilience research, however, goes beyond coping to consider adaptation and transformation. For instance, one of the first pioneering resilience studies, conducted on the Hawaiian island of Kauai in 1955, looked at why some people who as children had been classed as high-risk on the grounds of poverty, family background and illness, nevertheless led a good life.

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This necessitates first and foremost a great deal of translation and methodological foundations. What is the effect on our conceptions of resilience when we no longer apply them to individuals but to collectives, and no longer base them on self-disclosures and metrics, but on practices and materializations? Could early incipient indications of particular human behaviour in evolutionary history also represent evidence of the efficacy of a resilience factor? What effect does a change to a way of life, for example, have on the basis of once performed actions and practices. New aspects come into focus owing to the possibility of examining very different communities and to the archaeological interest in materializations of human-environment relations in space and time. These new aspects can help us recognize other challenges and resilience factors and can also enable us to gauge their significance in a diachronic and intercultural perspective.

This necessitates first and foremost a great deal of translation and methodological foundations. What is the effect on our conceptions of resilience when we no longer apply them to individuals but to collectives, and no longer base them on self-disclosures and metrics, but on practices and materializations? Could early incipient indications of particular human behaviour in evolutionary history also represent evidence of the efficacy of a resilience factor? What effect does a change to a way of life, for example, have on the basis of once performed actions and practices. New aspects come into focus owing to the possibility of examining very different communities and to the archaeological interest in materializations of human-environment relations in space and time. These new aspects can help us recognize other challenges and resilience factors and can also enable us to gauge their significance in a diachronic and intercultural perspective.

In recent decades archaeology, for example, has primarily seen graves and burial sites as places for the display of status, roles or identities, and only rarely as places where death and loss are dealt with. Approaching them from the perspective of resilience research presents us with the possibility of considering not just grief, but also adaptation and transformation within societies. As a result, not only can traditional practices be viewed as indicators of possible resilience factors, but the changing of burial practices or the introduction of new ones can be considered in terms of their complex interactions for communities and their resilience as well. To this end, a case study by Natalia Chub of the RGK reviews several burial sites from the transition from the Final Neolithic to the Bronze Age in the Lechtal valley, south of Augsburg – sites that are especially well-documented archaeologically and also archaeometrically analysed. This study also makes it possible to discuss to what extent, human mobility, for example, generated further challenges that then necessitated additional practices in the event of death.

Another focus of the research network is to explore the significance of specific social groups. Here the challenge can be (remembered) natural disasters or, as in the case study by Paul P. Pasieka – a researcher at the University of Mainz and recipient of a DAI travel grant – stress-inducing changes in power relations. In the context of the so-called Romanization of Etruria between the 3rd century BC and the 1st century AD, the study examines a factor that has received little attention in psychology: the past as a resource. Its significance is demonstrated by the practice of re-using long abandoned burial places or the practice of displaying one’s status by means of objects with purposefully anachronistic designs both in terms of style and themes, as is the case with the Sedia Corsini.
The topic of health and illness has taken on even greater urgency in light of the COVID-19 pandemic than we could have imagined at the beginning of the year. Suddenly we find ourselves confronted with microscopic pathogens, an illness that could potentially take a terminal turn, an infectious disease that has rampaged all over the world. This is a challenge on both the personal and social level.

How did societies in the past deal with matters of health and sickness – in a world “without anaesthetics and aspirin” as the archaeologist and historian of medicine Ernst Künzl put it, in which every wound, every birth could lead to a fatal infection?
A central element of the treatment at the sanctuary was sleeping at night in the temple, which was known as incubation. This was seen as a ritual means of entering into direct contact with the deity and receiving its counsel and aid.

Before being admitted to the incubation hall (adyton), one first had to go through certain purificatory rites (such as sexual continence, abstaining from particular foods, bathing in the sea or in special bath complexes) and make preliminary offerings to different deities. In the adyton patients slept – often separated according to their sex – on a pillow, a blanket or the skin of an animal that had been sacrificed. The lights were extinguished. Healing was either effected immediately during sleep by the god and his retinue appearing in a dream, or was administered on the basis of instructions the god gave in the dream. Written accounts and visual depictions commonly attest healing by laying on of hands, the application of ointment or plasters, or the consumption of healing draughts. After spending the night there, patients paid the fee that was due to the sanctuary and discussed the dream with the officiating priests. Gratitude was shown by a thank offering and by dedications.

From Epidauros some 70 brief accounts of treatment are preserved. Dated to the 4th century BC and known as iamata, they were displayed in the sanctuary and give details about cures brought about by Asklepios during nocturnal incubation:

“Andromache from Epeirus, for the sake of offspring. She slept in the Temple and saw a dream. It seemed to her that a handsome boy uncovered her, after that the god touched her with his hand, whereupon a son was born to Andromache from Abybax.”

“Cleinatas of Thebes with lice. He came with a great number of lice on his body, slept in the Temple and sees a vision: It seems to him that the god stripped him and made him stand upright, naked, and with a broom brushed the lice from off his body. When day came he left the Temple well.”

“Ambrosia from Athens, blind of one eye. She came as a supplicant to the god. As she walked about in the Temple she laughed at some of the cures as incredible and impossible, that the lame and the blind should be healed by merely seeing a dream. In her sleep she had a vision. It seemed to her that the god stood by her and said that he would cure her, but that in payment he would ask her to dedicate to the Temple a silver pig as a memorial of her ignorance. After saying this, he cut the diseased eyeball and poured in a drug. When day came, she walked out sound.”

(epidauros No. 31, 28, 4; translation: E. J. Edelstein & L. Edelstein, 1945)

These reports were probably collected and publicly displayed by the sanctuary personnel. We can assume it was, among other things, a smart marketing strategy. What is certain at all events is that many reports refer to the material contribution that was expected in return for the divine healing. How exactly this dream-induced or “miraculous healing” worked has been much debated. Presumably belief in divine agency played a part, as did the incubants’ expectations and also the role played by the priests. Or as the philosopher Diogenes is said to have succinctly put it: “There would have been far more, if those who were not saved had set up offerings.”

The sanctuary at Epidauros was at any rate highly successful, as can be seen from how frequented it remained for centuries, and by the impressive infrastructure that is preserved at the site. As time passed, along with various types of accommodation for the visitors, bath facilities and banqueting halls were built, plus a stadium and a theatre. Every five years major artistic and athletic competitions were held in honour of Asklepios. All in all it is hard not to imagine the sanctuaries operating much like modern health resorts.
HEALING CULTS IN ITALY?

The sort of evidence known from Greece is absent in pre-imperial Italy. What has been found there is tens of thousands of so-called anatomical votives made of terracotta, which have been viewed in research to date as indicating the existence of healing cults. “These anatomical votives, which can be roughly grouped in the period from the 4th to the 2nd century BC, were for a long time thought to represent the depicted and diseased part of the body, and the deities to which they were dedicated were thought to be healing deities,” explains Velia Boecker, who examined more than 100 sites in Latium where anatomical votives were found for her dissertation.

A major impetus for this interpretation was the interest shown in the terracottas at the turn of the 20th century, initially by doctors and medical historians like Ludwig Stieda and Theodor Meyer-Steinig, who compared them with offerings deposited at Catholic places of pilgrimage and similar shrines. Their chief interest in examining the anatomical votives laid in diagnosing pathological anomalies – the archaeological context of the offerings was not given much consideration for a long time. “As the ancient authors tell us nothing about this votive practice and as the anatomical votives themselves carry no inscriptions except for very few exceptions, little can be said about the individual intentions of the people who deposited them,” says Velia Boecker.

Yet if you look more closely at the sanctuaries where the anatomical votives were deposited, and at the finds that occurred jointly with them, then you get a more complex picture.” For instance, Asklepios, whose cult reached Rome from Epidauros at the start of the 3rd century BC, was barely able to gain a foothold elsewhere in central Italy until the imperial period. There’s also no evidence from this period for night-time incubation as known from Greek cults, as the scholar of religion Gil Renberg was recently able to demonstrate. “The embedding of anatomical votives in healing cults following the Greek model – something that has frequently been assumed till now – is therefore problematic. They probably go back to earlier, indigenous traditions in which new, suitable elements were incorporated. I was able to distinguish two groups in my study. First, there are urban shrines, at which a striking number of female statuettes, female votive heads, uterus and breast votives as well as toys and handicraft implements like loom weights were deposited. These are presumably associated with a predominately female clientele, whose members were seeking support, for example when passing from one phase of life to another. The occasions could have been the menarche, marriage or pregnancy, for instance. In Latium, Juno is particularly frequently the recipient of such votives. Secondly there are extra-urban shrines, often sited on transregional roads, where foot and penis votives occur jointly with cattle figurines. These were probably deposited by travellers like shepherds and tradesmen, who stopped at shrines along the way – similar to motorway chapels today. That men were more mobile than women at this time has been examined in various studies,” Velia Boecker adds.

The deities that were worshipped at these shrines are not known by name from epigraphic sources. On the basis of comparisons with neighbouring regions, a dedication to Hercules seems plausible in many cases. It is not possible to attribute the anatomical votives exclusively to the field of sickness and healing. The divinities which they were dedicated to are likely to have been “helping” rather than “healing” powers, whom people would have appealed to for help in various situations perhaps associated with uncertainty and anxiety, or would have thanked for helping them get through a personal crisis situation.
The transition from Stone Age hunter and gatherer cultures to a productive mode of economy is one of the most important revolutions in human history. Also known as the Neolithic Revolution, it brought with it ground-breaking innovations like sedentism, agriculture and herding. But in equal measure it also brought challenges and new epidemics, as the analysis of skeletons and “ancient DNA” (aDNA) proves.

The change to a sedentary and agricultural way of life in Europe has its origins in Anatolia. From there, more than 8,000 years ago, the new lifestyle spread across the Aegean, throughout the Danubian region, and then further north and west. The innovations driving this were the cultivation of plants and the breeding of animals. Today these innovations are archaeologically attested by settlement patterns, house architecture, and millions of ceramic and bone finds.

Researchers assume that the earliest Central European farmers settled in the Carpathian basin. From there they travelled along the big river valleys – mostly following the so-called Balkan-Danubian route – into the European interior. Archaeobotanists and archaeozoologists have confirmed that they brought with them plants like ancient species of cereals and pulses in an already domesticated form, as well as sheep and goats and even cattle.

The details of this migration are being investigated by archaeology on the basis of finds and features as well as – increasingly these days – by genetic analysis. The possibility of sampling the DNA of human skeletons several thousands of years old along with charred plant remains and animal bones promises exciting revelations. Indeed the results of the analysis of ancient DNA aren’t only of great interest to the scientific community but are also widely reported in the media.

The genetic analyses offer wholesale support for the model that archaeological research has reconstructed, namely that cultivated plants and domesticated animals journeyed with groups of farmers and herdsmen from Anatolia to the north-west.
What still isn’t clear, though, is what induced these people to set off for Central Europe in the first place. There are a number of hypotheses. One of them posits a marked population increase at the beginning of the Neolithic, which was due to more reliable food resources and a consequently higher fertility rate. Another theory holds that negative push factors and positive pull factors brought about migrations. Push factors can be demographic or climatic change, famine, or social tension. Most of the pull factors assume previous contact and exposure: an area with few inhabitants, fertile soils, good climatic conditions and available resources will attract new settlers. Regarding the transition to the agrarian way of life in Central Europe, push factors can largely be ruled out. On the other hand the region between Paris and Kyiv presents several powerful pull factors.

ADVANTAGES AND DISADVANTAGES OF THE NEW LIFESTYLE

There are growing indications that the innovations of the Neolithic also had an ideological dimension. For instance, the domestication of animals not only brought prosperity and greater prestige but it also fundamentally changed how humans related to nature. The transition to the Neolithic way of life with its numerous innovations brought advantages, to be sure, but a host of challenges too. Researchers believe that life expectancy and the quality of life decreased for people in the Neolithic. One example may illustrate this. Farming communities were badly in need of many helping hands on the crop fields. This probably led to mothers ceasing to breast-feed at any earlier point. The higher rate of reproduction, reduced breast-feeding for babies, and worse nutrition – the Neolithic communities mainly ate a kind of porridge – resulted in a lower life expectancy compared to nomadic hunter-gatherer groups, who subsisted on a diet rich in meat and bones, and who may have used a long lactation period as a means of birth control. Their bones were more robust; they lived longer and in better health. But arduous work in the fields and a monotonous diet were not the only difficulties Neolithic people were faced with. For the first time in human history ever greater numbers of humans lived together densely in hamlets or on settlement mounds. Waste, rotting food, and human and animal excrement was disposed of in pits, as is revealed by excavations and phosphate concentrations in settlements. What is not attested by the archaeological record are the masses of flies and rats that these pits will have attracted. Contact with cattle and consumption of their milk brought dangerous “zoonoses” – infectious diseases transmitted from animals to humans and from humans to animals. The consumption of raw milk was a common source of tuberculosis infection before the introduction of pasteurization in the late 19th century. A male skeleton from the Late Neolithic settlement of Alsónyék in south-western Hungary, dated to the beginning of the 5th millennium BC, displays clear signs of the disease. The spine is bent in typical fashion as a result of a tuberculosis infection (Pott’s disease). The unfortunate individual would barely have been able to move by himself. The inhabitants of Alsónyék took care of the severely ill person and finally buried him in a richly furnished grave.

Molecular analysis reveals that several of the individuals buried near to him also suffered from a tuberculous infection. Cattle bones from Alsónyék have been dated to approximately one millennium earlier, the early 6th millennium BC. A recent examination of them indicated that some probably show signs of skeletal tuberculosis. If this is confirmed by further analysis, this would be one of the earliest cases of the disease in Europe.

The research project on the Neolithic site of Alsónyék (https://www.dainst.org/project/1247643) was named one of the ten best archaeological projects worldwide at the 3rd Shanghai Archaeology Forum (SAF) in 2017.

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CHART OF THE GENETIC ANALYSIS OF THE LATEST HUNTER-GATHERER GROUPS AND THE EARLIEST FARMERS/HERDERS IN ANATOLIA.

Fig.: © A. Szécsényi-Nagy

MALE SKELETON FROM THE NEOLITHIC SITE OF ALSÓNÝEK (HUNGARY) WITH SIGNS OF SKELETAL TUBERCULOSIS.

Map: K. Köhler; A. Öztürk, Zs. Réti / Photo: K. Köhler

PROF. DR. DR. H.C. ESZTER BÁNFFY is First Director of the Romano-Germanic Commission (RGK) and head of the Budapest research unit. She directs research at Alsónyék in cooperation with the Institute of Archaeology at the Research Centre for the Humanities, Hungarian Academy of Sciences, Budapest. Photo: RGK

The research project on the Neolithic site of Alsónyék was one of the ten best archaeological projects worldwide at the 3rd Shanghai Archaeology Forum (SAF) in 2017.
North-west Arabia is a region of very low and irregular rainfall today. Arid areas are characterized by the vulnerability of their ecosystems, especially in the case of non-sustainable exploitation. While approximately 80% of the Arabian Peninsula, which in total measures nearly three million square kilometres, is used today as pastureland for sheep and dromedaries, crop farming – largely the cultivation of dates – is limited to about 3% of the land area. Over 85% of water consumption on the Arabian Peninsula is attributed to land cultivation, with five times as much water being consumed as can be replenished naturally by the hydrological cycle. Fossil groundwater resources are tapped by means of deep wells.

This extreme over-exploitation is probably a fairly recent development, beginning in the last few centuries and intensifying since the middle of the 20th century as a result of mobile water tanks that allow the exploitation of previously unusable areas e.g. by nomads.

THE OASIS OF AL-JAWF / DUMAT AL-JANDAL, PRESUMABLY ANCIENT ADUMMATU  

Photo Hausleiter

Throughout the millennia humans have succeeded in creating a living in areas with extreme climates. This has favoured the emergence of complex societies and extensive networks, including trade routes. While the effects of various ecological, social and cultural dynamics can be identified in the archaeological record, only rarely is it possible to detect the long-term mechanisms of recovering from crises. In the arid north-west of the Arabian Peninsula the phenomenon of resilience can now be discerned in greater clarity thanks to new interdisciplinary research.
PREFERRED HABITATS: OASES AND WADIS

How resilient were the natural ecosystems, i.e. deserts and semi-deserts, open mountainous woodland and the natural oases and wadis that developed in north-western Arabia in climatic conditions that were more or less constant from c. 4000 BC onwards? The interdisciplinary research into changes in the Holocene – starting c. 11,600 before the present – in the oases of north-west Arabia which the Orient Department and other international teams have been engaged in for more than 15 years now has furnished some preliminary data on this question.

We shall approach the question from two sides. First, how strongly did natural ecosystems react to natural climatic variations during the Holocene? If the subsequent phases led to the restoration of the original ecosystem, then the system is said to be resilient. The ecosystem of natural oases, if they are fed by groundwater, is resilient. Secondly, how resilient were the anthropogenic ecosystems – in our case the oases that were cultivated and inhabited by humans? Anthropogenic oasis ecosystems come about as a result of human intervention in naturally favourable habitats, which include groundwater oases, wadis, and large depressions that are fed by surface water (Arabic ‘khabar’, ‘qa’). Anthropogenic influence on these habitats consists of a “bundle” of impacts, mainly agriculture, in particular crop cultivation (annuals and perennials, fruit trees) and animal husbandry, in addition to water management and/or the introduction of artificial irrigation.

At present, two main forms of oasis management are identifiable: oasis settlements which were farmed intermittently like Qurayyah, Al-Ula, Rasif, Rajajil or Jubbah, and others that were in continuous operation, like the oasis of Tayma. So far little research has been done into the precise reasons for these divergent developments. Alongside archaeological finds and features, it is above all natural science methods that are supplying data on palaeoclimatic and palaeoecology in the framework of interdisciplinary research initiatives. This allows the decoding of climatic and environmental information that has been stored in the ground for millennia. Continuous local environmental archives in the region are extremely rare, but at the oasis of Tayma the findings relating to environmental history enable us to consider the site now in a larger context, namely that of the eastern Mediterranean area.

Along with a change in the use and function of space, social and cultural modifications can be identified at the oasis. Among these is the discontinuation of the millennia-long practice of building visible, above-ground tombs. The tradition of such tombs goes back to the Neolithic (c. 6th millennium BC) and is now, around 500 BC, replaced by graves cut into the bed rock. Are these indications of a crisis, or are they the consequence of cultural interaction with neighbouring regions?

The historical sources of the 1st millennium BC bear witness to the interest that foreign powers like Assyria and Babylonia had in Arabia. From the 8th century BC onwards, Assyrian rulers not only undertook campaigns in the region to exact tribute, but tried to extend their influence on the regional and long-distance trade networks. The city of Adummatu (presumably today’s Dumat al-Jandal) was the target of attacks by the Assyrians, who looted statues of gods and took them to the Assyrian capital Nineveh. Tens of thousands of dromedaries – an important economic resource as suppliers of meat and milk – were captured in other military actions.

Babylonia’s interest in Arabia culminated in the 6th century BC with the last king of Babylon, Naboindus (reigned 536–539 BC), residing at Tayma and roaming in between the economic centres of the Hejaz for ten years. The statement of Nabonidus that the rulers of neighbouring political entities had sent emissaries in recognition could relate to the enormous political repercussions his stay may have caused. Was Tayma therefore, at least to some extent, a victim of its own participation in far-reaching trade networks?

CRISIS AND RESILIENCE – A MULTI-LAYERED CONSTELLATION

Enquiry into archaeological evidence of crisis and resilience is exceptionally complex and multi-layered. In the case of the Tayma oasis we can observe that political crises had largely ‘quantitative’ effects, yet continuity is nonetheless to be recognized with regard to the economic system, which was maintained. We can, therefore, conclude that the economic exploitation of natural, groundwater-fed, resilient oases was crisis-resistant. Further evidence for this is provided by the results of anthropological analysis of finds and features from a cemetery dating from the end of the period under investigation in the history of the Tayma oasis. The cemetery with 56 graves from the 3rd–2nd century BC extended over the ruins of an early Iron Age temple in the former settlement area.

One explanation for the abandonment and/or disappearance of oases in depressions with seasonal water flow (qa) may lie in their pronounced sensitivity – as is the case with wadi oases. While constantly high groundwater levels meant that Tayma had the buffering capacity to survive through long drought periods, favourable natural habitats of smaller dimensions needed fairly elaborate adaptation strategies. For example, at Qurayyah elaborate irrigation structures and water reservoirs were constructed, both in the Bronze Age and when the site was resettled in Nabataean–Roman times.

ARCHAEOLOGICAL TRACES OF CRISIS AND RESILIENCE

Towards the middle of the 1st millennium BC the oasis of Tayma, which had been continuously exploited for 7,000 years and permanently inhabited since the early Bronze Age (3rd millennium BC), displays a drastic reduction in the size of its settlement. The question is whether crises were responsible for this shrinkage, and if so, which one. The settlement area shrank from more than 70 hectares in the Bronze and Early Iron Ages to just 25 hectares. Where a temple had still stood a few centuries earlier, a cemetery was laid out. The eight hectare irrigation system in the south em part of the walled oasis was abandoned and at least partly built over.

Read more about the environmental history of Tayma in: ARCHAEOLOGY WORLDWIDE 1-2019, pp. 6-17. https://www.dainst.org/dai/magazin-archaeologie-weltweit

In the 4th century BC from Tayma provide evidence of the influence of the powerful dynasty of Lihyan, which was based at Dadan (today al-Ula) some 150 kilometres away. Rock inscriptions in the vicinity of Tayma mention ‘waar’ with Dadan, whereas texts from the settlement name governors of the king of Lihyan at the Tayma oasis. Just like at Dadan, monumental statues dedicated to the king were set up and inscriptions of several Lihyanite kings were placed in or at the temple of Tayma. All this can be interpreted as evidence that the long-standing rivalry between the oasis had been decided in Dadan’s favour. The reason for the rivalry between the two towns probably lay in competition in the lucrative trade in aromatics, in particular the resin of the frankincense tree, Boswellia, of which there is archaeological evidence from the beginning of the 1st millennium BC. Moreover, subsequently the sea route became the dominant trade route, and it would remain so, this change brought Dadan – by virtue of its geographical location – permanent advantages over Tayma. In the Nabataean period (from the 1st century BC) the town of Madain Salih, north of Dadan, possessed its own harbour on the Red Sea.

CRISIS AND RESILIENCE – A MULTI-LAYERED CONSTELLATION

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Bioarchaeological analyses shed light on the oasis’ inhabitants and on how economic crisis and resilience were written in their burial traditions as well as in their bones. Specifically, the taphonomic data show that some graves contained single burials, others up to three individuals. Most graves had however been reopened to make space for further inhumations. In some cases the existing bones were moved, removed or reburied; in other cases cranial bones were left in the grave presumably intentionally. These types of subsequent use and reuse together with or alongside the remains of previous inhumations indicate continuity of a burial tradition and possibly also of cultural identity.

The proportion of male to female adult individuals in the cemetery is even, while juvenile burials were presumably carried out elsewhere. The interred individuals display hardly any environmental or workload-related stress symptoms. The small number of traumas suggests that these people were not exposed to a social or economic crisis. This is confirmed by the very high average age at death, over 50 years of age, which is not attained at this point in time in any other parts of Arabia or the Levant. It can therefore be assumed that the people buried here were members of an elite with a privileged lifestyle. This section of the population of Tayma was presumably wealthy and healthy; they moreover practised customs that defined their identity by continuity with their ancestors. A profile like this is an indication of the economic, social and cultural resilience of the oasis in a period in which the emerging maritime trade routes were leading to a shift in the trade networks of the Arabian Peninsula to coastal areas. Ecological resilience and cultural resilience presumably depend on different factors and do not necessarily go hand in hand. Even so, in Hellenistic north-west Arabia resilient oases appear to have functioned as bases which offered political systems and societies in crisis mode the possibility to survive.

DFG FUNDING AND PROJECT PARTNERS

Interdisciplinary research projects by the Orient Department and the Saudi Commission for Tourism and National Heritage (SCTH) in the settlement of the Tayma oasis was funded by the German Research Foundation (DFG) as a long-term project (www.dainst.org/project/42027) between 2004 and 2018. Since 2020 the Orient Department in association with the Natural Sciences Unit at the DAI Head Office has been studying the region’s funerary landscapes, contacts and mobility in the Bronze Age as part of a DFG project (www.dainst.org/project/462089). Since 2019, climate, vegetation and oases in the ancient and zone are being studied at the FU Berlin in close cooperation with the DFG SPP 2143 Entangled Africa (project 06 DeGreen, www.dainst.blog/entangled-africa/projekt-6-de-greening/).

PD DR. ARNULF HAUSLEITER is a researcher at the DAI Orient Department responsible for the archaeology of the Arabian Peninsula. He has been directing the excavations at Tayma since 2004. Photo: Intilia

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DR. EMMANUELE PETITI is on the research staff of the DAI Orient Department. An anthropologist, he has been working at Tayma and on other projects of the department since 2008. Photo: Petiti
Ko Te Ava Ranga Uka A Toroke Hau. That is the name of the archaeological site which Burkhard Vogt has been investigating for over ten years. It is located in the centre of Easter Island, in the middle of the South Pacific, a good 2,000 kilometres from the nearest inhabited island, almost 4,000 kilometres from South America. Bonn, where Burkhard Vogt is based as director of the Commission for Archaeology of Non-European Cultures (KAAK), lies at a linear distance of more than 14,000 kilometres.

Twice a year Burkhard Vogt travels to Easter Island, and spends about four months in total conducting on-site research at Ko Te Ava Ranga Uka A Toroke Hau. The name of the site translates as: gully in which the body of the girl Uka, daughter of Toroke Hau, was floating. It probably commemorates a historical event, the tragic loss of a family member. At the same time it evokes an extreme weather event, a heavy downpour that turned an otherwise harmless stream into a torrent.

The use and control of water is a big issue in the history of Easter Island, an island known to most people for its colossal stone statues, the Moai. Around the gully of Ko Te Ava Ranga Uka A Toroke Hau, Burkhard Vogt has identified a complex system of channels, dams and basins that were used to control, collect and distribute water from the stream.

It is likely that access to the stream’s water was socially and religiously sanctioned and regulated by taboos. There is much to suggest that the site, together with a nearby waterfall, was in use as a sanctuary from the 13th to the 17th century. The hydraulic installations probably belonged to a monumental and older ensemble of structures which combined death, water and fertility cults and shaped the landscape.

Surface surveys have brought to light further hydraulic engineering features in the vicinity of Ko Te Ava Ranga Uka A Toroke Hau. For the future Burkhard Vogt is planning more systematic surveys of the whole island.

Water management was a core area of Burkhard Vogt’s research work before his excavations on Easter Island. He studied Near Eastern Archaeology, Classical Archaeology and Ethnology at Göttingen and Paris. He took part in excavations in Israel, Iran, Oman and the United Arab Emirates even at the beginning of his studies. After completing his doctorate in 1986 he was stationed for a long time on the Arabian Peninsula at the DAI’s Sana’a station (today branch), direction of which he took over in 1994. While at the outset of his research career he chiefly focused on tombs and temple architecture, his focus changed in the early 1990s and turned towards water management in the ancient world. Particularly in and regions like the Arabian Peninsula water is a scarce resource and water management in societies of the past is frequently associated with technical and social innovations which contributed long-term to the transformation of those societies.
When Burkhard Vogt was elected director of the KAAK in 2000 and moved from Sana'a to Bonn, though the cultural region of his research changed, he remained true to his principal research field. The geographical areas where the KAAK is active lie beyond the boundaries of the ancient world of the Mediterranean, and extend across nearly all of the continents. Central to the commission’s research work are societies of times past and their complex relationships with specific environmental conditions and with the existing resources they made use of. The research questions and methods Burkhard Vogt had specialized in previously were now applied – when he was made director of the KAAK – in various projects on the water supply in Sudan, Eritrea and Yemen. In the latter country he investigated a water channel system from the early 2nd millennium BC in Malayba and additionally the great dam of Marib, which ensured the water supply to the Sabaeans from the 1st millennium BC.

In 2003 he carried out surveys on ancient water management structures in southern Peru. There too, a region characterized by great aridity, complex systems for the supply of water were developed. In 2004 Burkhard Vogt visited Easter Island for the first time and recognized the potential of carrying out water management research there. While various systems for water supply and removal are known on the islands of Oceania, those systems had never been examined from the viewpoint of the history of technology or by means of archaeological excavation. Placing hydraulic installations in a historical and ritual context was absolutely unknown territory prior to his research. Examining this unique assemblage of features on Easter Island and documenting them using the most modern technologies are also a way of helping to protect and preserve them.

Ricardo Eichmann has been director of the Orient Department for almost 25 years. This makes him not only the longest serving director among current incumbents at the DAI, but also the only founding director of a department who is still in office. Throughout his time at the helm he has experienced a lot, moulded the research of the department and put things in place for the future. But if we follow his archaeological career from its beginnings, it is noticeable that its course was decisively influenced by chance on quite a few occasions.

When he began his studies in Pre- and Early History, Classical Archaeology and Egyptology at Heidelberg in 1977, he was primarily concerned with the prehistory of Europe, from the Iberian Peninsula, across central and northern Europe as far as the Black Sea. He took part in his first archaeological digs in Peru, Egypt and Turkey. He first came into contact with the Near Eastern archaeology – which would later be the main focus of his research – in 1980 when Harald Hauptmann was appointed a professor at the Institut für Ur- und Frühgeschichte (today Department of Prehistory, Protohistory and Near Eastern Archaeology) in Heidelberg. Ricardo Eichmann attended Hauptmann’s lectures on the archaeology of Mesopotamia, one of the major centres of cultural development in the Ancient Orient. The region is part of the so-called Fertile Crescent, which is credited with the “invention” of agriculture, animal husbandry and early sedentism. It was there that, in a later phase, increasingly complex and competing political systems emerged that produced very lasting innovations such as writing systems, administration, mathematics, geometry and astronomy.

When Heidelberg University was looking for a student assistant to work at the Uruk-Warka collection which it keeps, Hauptmann put Ricardo Eichmann up for the job. In the collection Eichmann made an inventory and drawings of finds from Uruk, the Mesopotamian city in present-day southern Iraq which is held to be the origin of the Assyrian civilization. This experience served Ricardo Eichmann well when a short time later Rainer Michael Boehmer, director of what was then the DAI Baghdad Department, was in search of an assistant for his field research at Uruk. Boehmer brought Ricardo Eichmann into his team while he was still working on his dissertation. As soon as that was finished in 1984, he took part in archaeological surveys at Ur and saw the ancient “mega city” himself for the very first time. Because of the political situation, campaigns in situ were not possible for some time from 1985 onwards. The Baghdad Department having relocated to Berlin, Ricardo Eichmann spent the following...
From the 1980s field research onsite was only possible with interruptions. From the 1980s field research onsite was only possible with interruptions. The DAI has been active there since 1954. From the 1980s field research onsite was only possible with interruptions. The DAI has been active there since 1954.

URUK-PERIOD ARCHITECTURE.

THE TEMPLE TOWER “URNAMMU ZIGGURAT” AND REMAINS OF URUK-PERIOD ARCHITECTURE. In 1912, German institutions began conducting research at Uruk. The DAI has been active there since

1954. From the 1980s field research onsite was only possible with interruptions. The DAI has been active there since 1954.

Ten years there, working on the stratigraphy and architecture of Uruk, until in 1995 he took up an appointment to teach Near Eastern archaeology at the University of Tübingen.

In 1996, the German Archaeological Institute decided to unite under one roof the research projects that various of its units were conducting in Southwest Asia. Ricardo Eichmann was appointed the first director of the newly founded, Berlin-based Orient Department. With the branches in Baghdad, Damascus and Sana’a assigned to it, the Orient Department took over research projects in Iraq, Syria, Jordan and Yemen. Gathering research units together in Berlin this way brought greater flexibility in what were partly crisis-stricken regions and made it possible to pursue lines of enquiry in multiple countries. This was a reflection of the zeitgeist in the scientific community, the DAI having already moved towards a global archaeology orientation by setting up both the Commission for Archaeology of Non-European Cultures and the Eurasia Department.

The widening of the research perspective is illustrated by the example of Tayma, an oasis town in what is today Saudi Arabia. Ricardo Eichmann commenced excavations there with Arnulf Hausleiter in 2004. A German-Saudi collaborative project at Tayma is investigating the sequence of occupation, social relations, ways of life and water management by people at the oasis as well as its cultural, political and economic relations with the outside world. A web of transregional ties between various societies reaching back to the Bronze Age can be recognized at Tayma. Weapons, jewellery and crops that have been found at Tayma furnish evidence of ties with Egypt, the Levant and South Arabia: a “network of materialities” that vividly reveals the prehistoric entanglement of people interacting with one another over great distances.

The reconstruction of Tayma’s history draws on archaeological and environmental data. Research here sees geoarchaeology, geography, hydrology, ecology, climate research, pollen analysis and archaeozoology working hand in hand. And here, too, close interdisciplinary collaboration is one of the most important developments of the last 20 years alongside technological advances. As Ricardo Eichmann emphasizes, “collaboration involving multiple institutions and fields of study – whether in the DAI research clusters or university and non-university research networks – is necessary to do top-level scientific research efficiently in the future.”

What is fascinating about research into ancient musical instruments for Ricardo Eichmann is that they also represent innovations that had an important social function. While playing replicas of ancient instruments cannot perfectly reproduce the tonality of the originals or aspects of interpretation, it still does provide an audiovisual experience that goes beyond scientific analysis. Ricardo Eichmann has mixed feelings about his impending retirement, even though he welcomes the “freedom of action” it will bring – notably having more time for music archaeological research. But 35 years at the DAI is a long time, and he sums up his feelings with a quote from Arthur Schnitzler: “A farewell always hurts, even if you’ve been looking forward to it for a long time.”

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A special focus of Ricardo Eichmann’s research is music archaeology. This began in the 1980s while he was in Berlin on the staff of the Baghdad Department and was asked by Werner Bachmann, editor of Musikgeschichte in Bildern, an illustrated series on music history published in the GDR, whether he could write an article on Coptic lutes. Over time this led to several articles, a monograph, and an abiding interest in ancient instruments, incorporating them in their respective cultural context and also constructing replicas. In 1998 Ricardo Eichmann founded the International Study Group on Music Archaeology (SIGMA) together with musicologist Ellen Hickmann. Since then he has edited the study group’s regularly appearing series Studien zur Musikarchäologie.

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Roman Scholz walks round the excavation of a Roman villa near Zadar in Croatia, making sure that everything is proceeding as it should. Here, drawings are being made and photos taken; there, excavators are systematically removing earth, and then finds are measured, collected and labelled. As site technician, Scholz deals with all the questions the excavation team has. In the morning he and the archaeologist in charge decided on the excavation plan for the day, the team’s marching orders, so to speak. Now he is checking all the tasks are being performed, and not infrequently he lends a hand himself. He always has camera and note book with him to document the progress of the excavation.
The qualified engineer Roman Scholz is one of five site technicians working at the various departments and commissions of the DAI. Mostly he supervises the field projects of the Romano–Germanic Commission (RGK).

“As a field archaeologist – as site technicians are now known – you need to have an understanding of technology as well as background knowledge in history and archaeology. A talent for organisation and linguistic ability are also important. On top of that you’ve got to be practically minded and in good condition physically, because working in all kinds of weather and with heavy machinery is tough. And occasionally you have to be something of a social worker too…,” Scholz says.

Even though that last sentence was not meant entirely seriously, archaeological digs bring many people together who work in challenging conditions. Mediating between them and dealing sensitively with different cultural characteristics means that the head of excavation needs not just specialized technical knowledge, but also empathy.

For Roman Scholz, precisely this combination of mental and physical work as well as interacting with people is what decided him to study field archaeology and later do a masters in geo- and excavation technology with an optional specialization in field archaeology. In Germany, a study programme at the University of Applied Sciences (Hochschule für Technik und Wirtschaft, HTW) in Berlin is one of the two ways to get a qualification as a field archaeologist.

The other possibility is completing a three-year further training course as a certified field archaeologist at one of the archaeological offices of the federal states, an option known as the “Frankfurt model”.

“Along with the professional training at an archaeological state office, and often in collaboration with other excavating institutions and excavation companies, trainees on the course go through a fixed cycle of modules that give instruction in various fields, including surveying, photography and anthropology. In the third year of the training course all prospective field archaeologists have to carry out a three-month excavation on their own initiative, and submit their documentation of it for evaluation by the RGK.

It is there too that the final oral and written exam takes place,” Dr. Henning Hallmann explains, director of the archaeological office of Lower Saxony, and member of the certification board. The latter is made up of members of the RGK, representatives of the Association of the State Archaeologists and experienced field archaeologists from the state archaeological offices.

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A TYPICAL WORKING DAY

“In the past year I have overseen thirteen field projects in seven countries, including Croatia, Hungary, Spain, Romania and the Czech Republic. I’m travelling for most of the year,” Roman Scholz says when asked about his typical work routine. Part of that routine is surveying, a suite of prospection methods that reveal structures in the ground non-destructively – methods like geomagnetic sounding and flyovers by UAVs with multispectral sensors. On the basis of these preliminary investigations a decision is taken on whether to excavate, and if so where. When preparing for an archaeological dig, personnel, scheduling and logistics all have to be taken into account.

“At the beginning of the dig I set up a grid for measuring and then stake out the excavation sections. During the campaign I am responsible for the documentation: all archaeological features and finds have to be described, photographed and drawn. On small projects I take care of that myself; on bigger ones I direct the teams tasked with that. Every archaeological dig is individual and hard to predict in terms of what direction it will take. If it isn’t clear how a feature should be classified, I discuss it with the colleagues concerned. Then we make a decision about how to proceed,” Scholz says.

“Before we dig any deeper we have to be sure that documentation of the previous day is complete and the data are intact,” Scholz points out. The end of the excavation is followed by processing the documentation and handing it over, with a complete list of all finds and features, to the project director and the cooperation partners or, as applicable, the Antiquities Department of the state in which the dig took place. A field archaeologist’s tasks on completion of an excavation include writing a report that forms the basis of the archaeological evaluation and scientific publication.

Field archaeologists have a big responsibility to bear. By excavating archaeological features we destroy them, and thus it is highly important to plan the excavation methodology in advance and to ensure that documentation of the excavation and the features is comprehensive and detailed. It must be possible subsequently to determine from the documentation exactly what was excavated and how. This is the basis of all archaeological research and scientific work. And for this reason field archaeologists must possess a thorough knowledge of the various excavation, documentation and salvaging technologies and the right methods to be applied when using them. The methods must, furthermore, be adapted to the different regional landscapes and conditions on the ground, targeted so as to generate data in line with the objectives of research, and they need to be continuously further developed. Field archaeologists also need to be familiar with important regulations and laws relating to the protection of historical monuments and health and safety requirements.

MANY DIFFERENT SKILLS ARE COMBINED ON AN ARCHAEOLOGICAL DIG, AMONG THEM SURVEYING, DRAWING AND PHOTOGRAPHY.

DIPL.-ING. (FH) ROMAN SCHOLZ M. SC. has worked at the RGK as a field archaeologist since 2011. He took part in an archaeological dig for the first time in 2001 while he was working at a restoration workshop. From that point he knew he wanted to be a field archaeologist.

GEOMAGNETIC PROSPECTION IS DONE ON FOOT OR BY VEHICLE.

EVERYDAY ARCHAEOLOGY
The Istanbul Department

From the most ancient times to the most recent …

The Istanbul Department was established in 1929 on the DAI’s 100th anniversary. “In few countries of the Earth have the different cultures so frequently succeeded one another, so thoroughly displaced and yet so decisively influenced one another as on the territory of what is today Turkey. So it is the archaeology and history of Turkey, from the most ancient times to the most recent, that the work of the institute will be dedicated to” — to quote the words of the department’s founding director, Martin Schede.

Today the spectrum of research conducted by the department remains very wide. In cooperation with Turkish, German and international partners, projects are carried out that focus on key phases in human history reaching from Anatolian prehistory, through the Ottoman era to the 20th century.

Investigations into the origins of sedentism at Göbekli Tepe lead back as far as about 10,000 BC. Hattusa-Boğazköy, the capital of the Hittites, sheds light on the evolution of Bronze Age empires in the 2nd millennium BC. Research into the classical city of Pergamon is currently concentrating on the transformation of the city and the microregion between the Hellenistic and the Roman imperial periods. Involving multiple projects and spanning different periods, researchers are looking for continuities and discontinuities in the development of the cultural landscape of Anatolia and its relationship with neighbouring regions.

An ever greater role in this is played by regional and transregional networks and the interactions between humans and their environment, in view of which collaboration with the geosciences in the framework of interdisciplinary projects has increased in importance. Building archaeology and Byzantine archaeology, both well-established at the department, contribute to making this multi-period and culturally comparative perspective possible.

A defining feature of the Istanbul Department’s research is long-term commitment to individual archaeological sites. Above and beyond research, the department is for instance carrying out projects on site management and preserving historical monuments at the UNESCO world heritage sites of Göbekli Tepe, Hattusa-Boğazköy and Pergamon. In the process attention is increasingly being paid to integrating the department’s work into the contemporary social setting with the aim of getting stakeholders at the sites in question involved in preserving cultural heritage and through awareness raising measures.

In the 60th year of its existence the department moved into offices in the building of the German Consulate General. There it is able to offer an impressive research infrastructure to scholars from around the world. The department’s library is the biggest specialist library of its kind in Turkey. Its photographic archive holds over 200,000 images, which increasingly can now be researched digitally. The collections contain not only a visual record of archaeological monuments in Turkey, but also historical photos from the late 19th century. The editorial office publishes several series and works annually on the archaeology and cultural history of Asia Minor and neighbouring regions.

With several German and Turkish doctoral students among the staff, with research networks exploring selected topics, and with a training programme for Syrian experts in cultural heritage preservation, the department is committed to aiding the young generation of researchers in a way that takes account of the specific challenges of the Istanbul location.

For an insight into the Istanbul Department’s current research, go to: https://www.facebook.com/daiistanbul and https://www.dainst.blog/

Since 1969 the Istanbul Department has been housed in the building of the German Consulate General in Istanbul.

Photo: D-DAI-IST-2019-B
For 131 years now Archäologischer Anzeiger has been publishing reports on excavations and projects by the DAI and notifications about archaeological discoveries from Prehistory to Late Antiquity. First appearing as a supplement to the yearbook of the German Archaeological Institute, the journal has changed its look several times. Last year, Archäologischer Anzeiger took a significant stride into the digital future: in addition to the printed version, it now appears in parallel in a new, freely accessible digital format. By doing so the journal is setting new standards for an up-to-date form of publishing journals in the archaeological sciences and classical studies.

VENERABLE JOURNAL IN A MODERN OUTFIT:
Since 2019, Archäologischer Anzeiger has also been available digitally in an innovative format.
Image design: T. Lemke-Mahdavi
The “new” Archäologischer Anzeiger is part of a range of open source, online services offered on iDAI.world, the German Archaeological Institute’s digital research environment. Thanks to free accessibility via the portal iDAI.publications, the journal can now be consulted by a much larger readership worldwide than before, thus promoting faster and more effective international cooperation among researchers and academics. Internet access is all that’s necessary to read an article in the journal, from the day it is first published, anywhere in the world, and independently of the reader’s ability to visit well-equipped specialist libraries.

Archäologischer Anzeiger appears twice yearly as a print edition and simultaneously as an open access journal via a responsive viewer format.

Redesigning the Journal

With the redesign of the Archäologischer Anzeiger (AA) the DAI is setting out on a new path both conceptionally and technically. The most noticeable novelty is that the articles now appear in a responsive viewer, allowing the user to view the content on a variety of screen sizes, whether personal computer, tablet or smartphone. Illustrations and notes can be viewed alongside the text, so the reader isn’t obliged to jump back and forth through the article. Therefore, all articles are clearly structured and convenient to read. “The ideas for this entirely new viewer edition come from a creative brainstorming session with colleagues from Scientific Computing,” reports Peter Baumeister, head of the editorial office of the Central Scientific Services, and one of the initiators of the redesign of the AA. “It was clear that we wanted on the one hand to build using an open source software – in accordance with our position on open access to science. On the other hand it rapidly became clear that we would additionally need highly specialized solutions which didn’t exist in ancient studies in that form. We therefore decided to pick the so-called lens-viewer of the consortium elifesciences.org, which comes equipped with important basic functionalities, and to modify and expand it so that journal articles can be very easily integrated with data from iDAI.world. That means we can incorporate research data directly. To support us in this innovative and technically sophisticated concept, we brought a communication design agency on board, which provided a set of services for the project: corporate design and media conception as well as programming and the creation of a workable process chain for handling manuscript data,” Baumeister adds. “The project was a particular challenge conceptionally and technically. On the one hand it was necessary to find the best possible solution in terms of quality standards in both book design and web design for a scientific publication with very heterogeneous content. On the other hand we had to take account of technical programming requirements as well as the content prepared for publication by the editorial office,” says Tanja Lemke-Mahdavi of LMK – Büro für Kommunikationsdesign, looking back on the project. The subscription-only print edition in high print quality continues to exist in parallel and additional PDFs will continue to be made available free of charge. The existing editorial workflow had to be adapted for the output media, of which there are three in all. The operational procedure is explained by Benedikt Boyxen, deputy director of the editorial office: “The submitted manuscripts, after being proofread, are made ready for display in the media for the different editions and the hyperlinking to data in the systems of iDAI.world is done. After that a printable file is made from the documents; this will be the basis of the printed version and of the individual PDFs. The next step is to convert the text for output in the viewer. A check script specially developed for the Anzeiger shows if all content has been structured right, so that it will be displayed correctly in the viewer and so all the links work.”
THE DAI JOURNAL VIEWER AND ITS FEATURES

The innovative DAI journal viewer offers the capability of supplementing the articles with integrated digital supplements or research data in a form that is easy to work with. This means, for example, that digital catalogues, which are an integral component of the articles, are published in structured form in the systems of iDAIworld and then displayed exactly in the intended position in the viewer version of a particular article.

ILLUSTRATIVE AND SUPPLEMENTARY INFORMATION SUCH AS OBJECTS FOR COMPARISON, MAPS, TOPOGRAPHICAL DATA AND SO FORTH CAN BE DISPLAYED AS WELL. READERS CAN LOOK UP OBJECTS MENTIONED IN THE TEXT IN IDAI.OBJECTS/ARACHNE, DOWNLOAD LITERATURE REFERRED TO FROM THE HYPERLINKED DIGITAL LIBRARY CATALOGUE IDAI.BIBLIOGRAPHY/ZEON, AND SITES MENTIONED IN THE TEXT CAN BE VIEWED IN THE GEOGRAPHICAL DIRECTORY IDAI.GAZETTEER BY SELECTING "MAP VIEW".

"THIS INTERLINKING OF INFORMATION AND DATA WITH CURRENT ARTICLES IS ONLY POSSIBLE BECAUSE AT THE DAI WE CAN RELY ON AN OPEN RESEARCH DATA INFRASTRUCTURE WHICH LAST YEAR ACQUIRED A CONVENIENT PORTAL WITH THE IDAI.WORLD PLATFORM. WE WERE ABLE TO DOCK VERY EASILY TO THIS EXISTING ECOSYSTEM OF SCIENTIFIC SERVICES AND SYSTEMS WITH THE NEW ANZEIGER MODEL," PETER BAUMEISTER Explains.


AS AN OPEN ACCESS AND NETWORKED DIGITAL PUBLICATION, THE AA IS AT THE SAME TIME A NEW CENTRAL BUILDING BLOCK IN AN ARCHITECTURE OF RESEARCH DATA MANAGEMENT THAT IS FOUNDED SPECIFICALLY ON THE CRITERIA OF FINDABILITY, ACCESSIBILITY, INTEROPERABILITY AND REUSABILITY.
Large-format illustrated volume brings human history alive

What did Europe's towns look like before the Romans came? Why are deserted medieval settlements a windfall for archaeologists? And how did three-field crop rotation influence the microclimate and biodiversity?

There have been some sensational archaeological excavations in recent years that have given us valuable insight into the lives of our ancestors. The richly illustrated book Spuren des Menschen ("traces of humans") uses archaeological finds to guide us through Europe's multifaceted history from Prehistory through Antiquity and the Middle Ages to contemporary history. Experts from the German Archaeological Institute present the current state of research and offer a unique survey of 800,000 years of human history in Europe.

Eszter Bánffy, Kerstin P. Hofmann, Philipp von Rummel (ed.)
Spuren des Menschen. 800.000 Jahre Geschichte in Europa.
552 pages, 500 mostly colour illustrations
ISBN 978-3806239911
€ 70,–

The volume can be purchased from Theiss Verlag der Wissenschaftlichen Buchgesellschaft:
https://www.wbg-wissenverbindet.de/15363/spuren-des-menschen
OUR COVER PHOTO shows Heracles, or Hercules, one of the most famous heroes in Greek mythology. Various sources relate how Heracles had to carry out twelve labours – known as the dodekathlos. One of his challenges was to pluck the golden apples in the well-guarded garden of the Hesperides. He persuaded the Titan Atlas to do this for him, while he in return bore the weight of the firmament upon his own shoulders. Herakles accomplished the challenge with skill and with the support (in the literal sense) of the goddess Athene, who is seen standing behind him in this relief sculpture.

The depiction of the twelve labours of Herakles adorned the temple of Zeus at Olympia in the 5th century BC. In the same century Athens endured a series of crises. The city was conquered and destroyed by the Persians, fought a long war against Sparta, was besieged, and suffered an outbreak of the plague. How the Athenians coped with these crises, what relevance resilience research has to archaeology, and how infectious diseases spread in the Neolithic – these are the topics of our TITLE STORY. And in our reporting from p. 10 onwards you can read how the DAI has responded to the Corona crisis in the past few months and how challenges can be surmounted by collective action.

Archaeologists today conduct research into all facets of human life. This also includes the effects of climate change on the environmental conditions which people in the past lived in and which they also influenced. Archaeological research provides high-resolution data on the local or regional impact of climatic fluctuations from a long historical perspective. In collaboration with many different disciplines, archaeology can contribute to a gain in knowledge about climate change.

Archaeology and cultural heritage are themselves affected by the ongoing climate change. Global warming with its very different local repercussions entails a wide range of threats to the cultural heritage of the past. As far as preserving cultural heritage is concerned we are faced with growing challenges that can only be overcome jointly, interdisciplinarily, and in networks. A prerequisite of this is taking stock and discussing the challenges collectively.

A conference at which these issues are to be discussed, Ground Check – Cultural Heritage and Climate Change, was originally planned for spring 2020 but will now take place as a series of online events. This series of events organized by the German Archaeological Institute and the Archaeological Heritage Network will address both thematic areas – i.e. research into climate change and its specific local and regional consequences from a long term perspective, and the impact of climate change on our cultural heritage today. It is hoped that the series will promote more intensive international cooperation.
Reinstallation of the National Archaeological Museum in Cherchell

Residence of the Mauritanian kings and Roman provincial capital, Cherchell in present-day Algeria went through a period of great artistic flowering that lasted into Late Antiquity. This is attested by a collection of some 400 sculptures and colourful mosaics that is unequalled in North Africa, and is displayed in the archaeological museum in Cherchell. The museum building, erected at the start of the 20th century and protected as national heritage, was badly damaged in earthquakes in the 1980s along with many of the exhibits.

The German Archaeological Institute has been working on the refurbishment and reinstallation of the museum since 2008 with funding from the Cultural Preservation Programme of the Federal Foreign Office.

In collaboration with Algerian colleagues, the sculptures have been restored and mounted on new, earthquake-proof plinths. Professional training has been provided for regional specialists in the restoration and re-mounting of statues and additional ideas have enriched museum education and outreach. A new exhibition concept has been developed with the involvement of the local population. The collaboration increases an appreciation of the archaeological exhibits and their historical and cultural significance as part of Algeria’s cultural heritage.

Please make a donation to support this and similar projects!