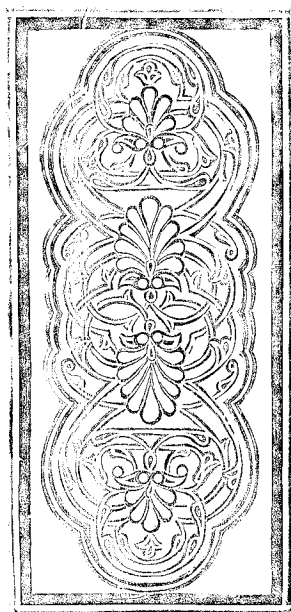


The Workshop 2008 for Protection of Cultural Heritage at Tashkent in Uzbekistan

17- 29 October 2008



**Cultural Heritage Protection Cooperation Office,
Asia/Pacific Cultural Centre for UNESCO (ACCU)**

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Edited and Published by
Cultural Heritage Protection Cooperation Office,
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Nara Prefectural Government “Horen” Office Ground Floor
757 Horen-cho, Nara 630-8113 Japan
Phone: +81-(0)742-20-5001
F A X: +81-(0)742-20-5701
E-mail: nara@accu.or.jp
U R L: <http://www.nara.accu.or.jp>

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Preface



Navoi Opera and Ballet Theatre

Preface

The Cultural Heritage Protection Cooperation Office, Asia/Pacific Cultural Centre for UNESCO (ACCU) was established in August 1999 with the purpose of serving as a domestic centre for promoting cooperation in cultural heritage protection in the Asia- Pacific region, and will celebrate its 10th anniversary this year. Since its inception, our office has been implementing a variety of programmes to help promote cultural heritage protection activities, maintaining partnerships with international organizations, such as UNESCO and the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM).

The ACCU Nara's activities include, training programmes for the human resources development, international conferences and symposia, the training of young leaders in cultural heritage protection supported by the UNESCO/Japan Funds-in-Trust, our website for the dissemination of information relating to cultural heritage protection, and the world heritage lectures in high schools. In addition to those, ACCU Nara Office launched two new programmes last year. One is "the local training workshop" which dispatches a group of lecturers from Japan and implements the practical training on cultural heritage protection on sites. The other is the system of "International Correspondent" and we appointed the correspondents from each country, who will periodically send reports on cultural heritage protection in their country.

The Workshop 2008 for Protection of Cultural Heritage at Tashkent in Uzbekistan was the second attempt of ACCU Nara. We were fortunate enough to receive the full cooperation and support from UNESCO Office in Tashkent as a co-organizer. I would like to extend my sincere gratitude to Ms Anna PAOLINI, Head of Office, UNESCO Office in Tashkent; Mr Tursunali KUZIEV, Chairman, Academy of Arts of Uzbekistan; and to all related parties for their cooperation.

The advantages of implementing the local workshop are as follows:

1) A large number of participants from one country can attend the workshop at one time.

ACCU Nara Office has invited a few participants from a single country to the Individual Training Course held in Nara. However, participation is usually limited to two or three researchers. It would be extremely efficient to accept a large number of people from one country at one time for providing opportunities to acquire expertise for the protection of cultural heritage.

2) The working language of the training course is their native language.

As a general rule, the working language used in both group and individual training programmes is English, which sometimes gives difficulty in understanding the content of the training course for some participants from Asia-Pacific region. Not all the participants are fluent in English. In order to resolve

this kind of limitation on the communication, we have decided to use Russian for this workshop in Uzbekistan. We believe that participants can understand the lecture more easily and accurately with Russian interpretation.

When organizing a workshop overseas, the most important part is the selection of the themes of the training course. The preliminary survey should be made prior to selecting the appropriate theme which is most urgently needed for the country. The training programme should also have long-term effect on the protection of cultural heritage after the workshop has ended. In organizing this workshop, we were fortunate enough to receive useful information from Japanese researchers who had been engaged in field surveys in Uzbekistan for years.

I wish ACCU Nara will build on this experience of the local training workshop in Uzbekistan for the next one. Lastly, I would like to express my appreciation to the National Research Institute for Cultural Properties, the Nara Prefectural Government and the Nara Municipal Government for their cooperation in dispatching their officials to our workshop. I am also thankful to the Agency for Cultural Affairs, Japan (*Bunkacho*) for their support.

NISHIMURA Yasushi

Director

*The Cultural Heritage Protection Cooperation Office,
Asia/Pacific Cultural Centre for UNESCO (ACCU)*

I. Intoroduction



Fine Arts Research Institute, Academy of Arts of Uzbekistan

1. General Information

The Workshop 2008 for Protection of Cultural Heritage at Tashkent in Uzbekistan

*- Organized by the Cultural Heritage Protection Cooperation Office, Asia / Pacific Cultural Centre for
UNESCO in Cooperation with UNESCO Office in Tashkent -*

1. Venue and Country

At the International Caravanserai of Cultures, in the city of Tashkent, the Republic to Uzbekistan
[37° A", Yusuf Hos Hojib St. Tashkent 700031]

2. Date

From 20 October (Mon.) to 25 October (Sat.) 2008

[Departure from Japan: 17 October (Fri.); Arrival to Japan: 29 October (Wed.)]

3. Themes

The measured drawing of archaeological artefacts and the photography for documenting artefacts.

- Introduction to Measured Drawing of Earthenware; Practical Training on Measured Drawing of Earthenware (whole and shards of earthenware / design layout / a descriptive method of observed details)
- Ink Rubbing and its Backing
- Photographic Technique of Artefacts (theory and practice)

4. Schedule

As on another sheet: Schedule of the Workshop for Protection of Cultural Heritage at Tashkent in Uzbekistan.

5. Participants

Fifteen researchers, engaging in investigation, research and preservation of cultural properties in Uzbekistan, who belong to research institutes or museums,

6. Language

The main working language of the training course is Russian.

7. Expenses

All the expenses required for the items listed below shall be born by ACCU Nara Office.

- Dispatching a group of instructors from Japan (four personnel from ACCU Nara and four instructors)
- Provision of transportation to the venue, accommodations and daily allowances to the participants
- Preparation of venue for the training
- Procurement of the necessary tools for workshop (for measured drawing and ink rubbing, etc.)
- Employment of the interpreters
- Arrangement to rent a car and a phone
- Publishing the training report

2. Programme Schedule

Date			Morning (9:00-12:00)	Afternoon (13:30-16:30)	Instructor
10	17	Fri.	Departure from Japan	Arrival in Uzbekistan	
	18	Sat.	Meeting with staff of related organizations/institutes		
	19	Sun.	Preparation for the Workshop		
	20	Mon.	Orientation Introduction to Photography of Archeological Artefacts	Photography of Archeological Artefacts I	Sugimoto
	21	Tue.	Photography of Archeological Artefacts II	Photography of Archeological Artefacts III	Sugimoto
	22	Wed.	Introduction to Measured Drawing of Earthenware	Practical Training on Measured Drawing of Earthenware (Whole and shards of earthenware)	Omi/ Tateishi/ Furusho
	23	Thu.	Practical Training on Measured Drawing of Earthenware (Whole and shards of earthenware)	Practical Training on Measured Drawing of Earthenware (How to record design layout)	Omi/ Tateishi/ Furusho
	24	Fri.	Practical Training on Observation of Earthenware: Description method of observed details: clay, firing, color tone, and manufacturing techniques		Omi/ Tateishi/ Furusho
	25	Sat.	Practical Training on Ink Rubbing and its Backing Method		Omi/ Tateishi/ Furusho
	26	Sun.	Clearing Up / Preparation for Departure		
	27	Mon.	Visiting the World Heritage site in Samarkand/ Photography		
	28	Tue.	Visiting the World Heritage site in Samarkand/ Photography	Departure from Uzbekistan	
	29	Wed.	Arrival in Japan		

II. Workshop Journal



International Caravanserai of Cultures, Academy of Arts of Uzbekistan

Friday, October 17, 2008

A group of ACCU staff and instructors departed Kansai International Airport by Asiana Airlines via Seoul Incheon and arrived at Tashkent at 9:30 p.m. local time.

Saturday, October 18

ACCU staff exchanged greetings with Mr Farrukh USMANOV, Director of International Caravanserai of Cultures, Academy of Arts Uzbekistan; and Mr Tursunali KUZIEV, Chairman of Academy of Arts of Uzbekistan. Then staff and instructors started work of preparations: setting up “the classroom” for the workshop and sorting the earthenware to be used as teaching materials.



A preliminary meeting with interpreters



Hanging the banner in the classroom



Meeting with Mr Kuziuev and Mr Usmanov, Director of International Caravanserai of Cultures

Sunday, October 19

ACCU staff and instructors left for Kanka site, a large urban archaeological site located about 80 kilometers southwest of Tashkent. Upon arriving at the site, they observed and took photographs of the shakhristan (town territory) and the citadel site. Mr. SUGIMOTO Kazuki took photographs of the main areas of the site.



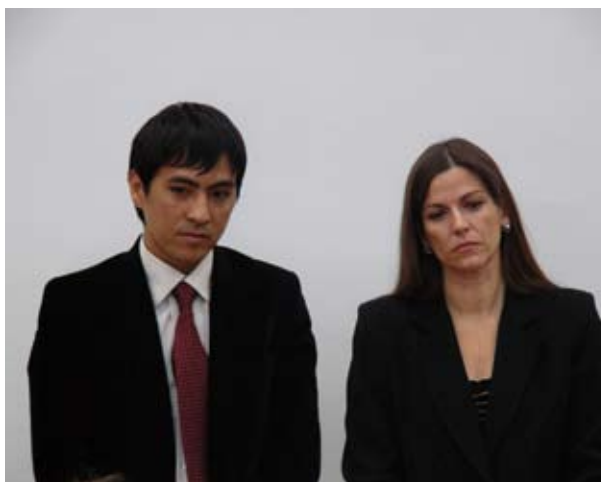
Citadel of Kanka site

Monday, October 20

The Opening Ceremony was held at International Caravanserai of Cultures. Opening addresses were given by Mr Tursunali KUZIEV, Chairman of Academy of Arts of Uzbekistan; Mr NISHIMURA Yasushi, Director of ACCU Nara Office; and Ms Anna PAOLINI, Head of Office, UNESCO Office in Tashkent. Ms Ismailova Jannat KHAMIDOVNA, the Director of The State Museum of History of Uzbekistan and Mr Oqilkhon IBRAGMOV, the Director of the Fine Arts Research Institute, Academy of Fine Arts of Uzbekistan attended the ceremony to congratulate this regional workshop for conservation of archaeological artefacts. After the orientation of the programme, the practical training on "Photography of Archaeological Artefacts" was conducted by using earthenware and coins as the subjects photographed. Mr Sugimoto demonstrated how to set up appropriate lighting for shooting.



All participants and related parties at the opening ceremony



Ms Paolini, Mr Kuziev and Mr Nishimura



Practical training on photography indoors

Tuesday, October 21

Practical training on photography was conducted by using participants as the subjects photographed. Then a lecture and hands-on training on how to take bird's-eye-view photographs effectively were given by using various earthenware excavated from the Kampyr-tepe.



Practical training on photography indoors



Practical training on photography outdoors

Wednesday, October 22

Mr OMI Toshihide lectured brief overview of measured drawing of earthenware. He also lectured on the importance of earthenware in determining the chronological dating of archaeological sites in Japan.



Mr Omi lectured on an introduction to the measured drawing of earthenware

Thursday, October 23

Mr TATEISHI Kenji lectured on measured drawing of earthenware: why it is necessary to take measurements of earthenware. A detailed explanation was given on how to use the measuring tools such as scales, calipers, Mako etc., most of which were new to each participant.



Friday, October 24

Practical training on measured drawing of earthenware was given: drawing cross-sections on grid paper, writing notes onto the earthenware, and measured drawing of earthenware which was restored from fragments. In the afternoon, hands-on practice on how to make ink rubbings of archaeological artefacts was given by Mr. Omi. Earthenware, coins, and relief engravings which were excavated from the sites and stored at Caravanserai, were used as teaching materials by courtesy of researchers and related organisations.





Practical training on the measured drawing of earthenware



Practical training on taking ink rubbings of artefacts

Saturday, October 25

Mr FURUSHO Hiroaki delivered a summary lecture on measured drawing of earthenware and Ms Paolini summarized the whole training workshop. At the Closing Ceremony, she awarded a Certificate of Completion to each participant.



Ms Paolini awarded a certificate to each participant



Ms Iskanderova and Mr Yagodin made speeches on behalf of all participants



A picture of all participants

Sunday, October 26

ACCU staff and instructors left Tashkent for Samarkand, the World Heritage Site in Uzbekistan, for observation and toured major historic monuments and buildings: Registan Square, Tamerlane's Mausoleum, Shakh-i-Zinda Mausoleum, etc.



Registan Square in Samarkand

Monday, October 27

ACCU staff and instructors visited Institute of Archaeology, the Uzbekistan Academy of Sciences and met with three researchers participated in this workshop and Mr Bakhridin BOLIYEV, who had been in Japan for individual training programme in July to August 2008. They had a facility tour of their laboratories and workplaces under the guidance of ex-participants; discussed outcomes of the training session; and gave individualized instructions to those with questions. In the afternoon, they went to Afrasiab Hill and took photographs of the ruined sites.



ACCU staff visited Institute of Archaeology (Samarkand) and had a pleasant reunion with Mr Boliev.



Visiting the conservation laboratory in the Institute



At the mural restoration laboratory in the Institute



Mr Sugimoto, a photographer, took a number of pictures in Samarkand



Afrasiab site



The site museum at the Afrasiab site

Tuesday, October 28

The entire group of ACCU staff and instructors returned to Tashkent and visited Mr Tursunali KUZIEV, Chairman of Academy of Arts of Uzbekistan, to appreciate his cooperation for the successful completion of the workshop before departure. They departed Tashkent at 10:20 p.m. for Seoul Incheon on Asiana Airlines.



Shakhi-Zinda Mausoleum



Mr Sugimoto took photographs of Shakhi-Zinda Mausoleum



Staff and lecturers visited Mr Kuziev to report the successful completion of the workshop and to show their gratitude for his cooperation.

Wednesday, October 29

ACCU staff and instructors departed Seoul Incheon Airport for Kansai International Airport on Asiana Airlines at 10 a.m. and arrived at Kansai International Airport at 11:40 a.m.



Tashkent



Samarkand



Samarkand



Samarkand



Samarkand



Samarkand





Samarkand



Samarkand



Samarkand



Samarkand



Tashkent





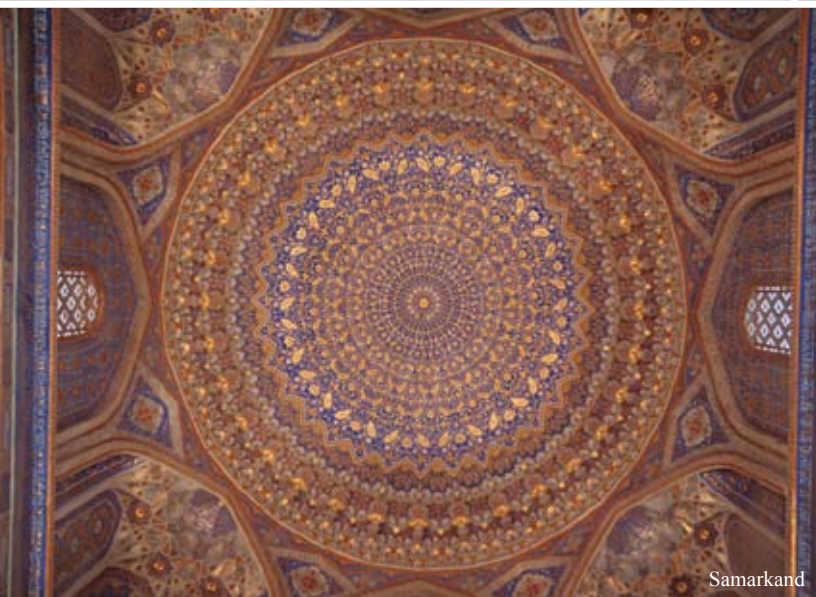
Samarkand



Tashkent



Samarkand





Samarkand



Samarkand



Tashkent



III. Lecturer Paper



International Caravanserai of Cultures, Academy of Arts of Uzbekistan

Surveying and Recording of Archaeological Sites

— Photographic Techniques for Documentation of Archaeological Materials —

1. Why are photographs necessary for recording archaeological artefacts and sites?

Only photographs can record and convey more detailed information to the third party than descriptions and drawings can provide.

- Texture of the artefacts
- Configuration and position of the sites
- Atmosphere and sense of reality of the sites

2. The role of photographs as archaeological records

- Photographs can be faithful records of disappearing archaeological sites.
- Photographic records can be utilized as pictorial data.
- However, we should keep in mind that fragile artefacts may be damaged each time they are photographed in some situations.

3. The general principles for archaeological photography

- We should employ the best techniques and materials available now in order to take high quality photographs with much information.
- We should choose good reproducible media: Film, printing paper, digital media such as CDs.

4. The requirements for the ideal photograph: Large amount of information.

- ① Clear and finely detailed: The photograph should be in focus and free of blurring. Do not skimp on materials used for photography.
- ② Appropriate angle: Resist the temptation to photograph everything in one picture.
- ③ Appropriate density and contrast: Avoid coarse-grained pictures, and too little or too much contrasts. The pictures with too much contrast are too dark and no light parts and we can not distinguish the fine details.
- ④ Excellent reproduction of colours: Make sure the colours are balanced.
- ⑤ Others: Keep the sense of three-dimensionality and proper perspective.

5. Storage of photographs

- Pay due attention to the storage environment of films, printing papers, and CDs.
- The ideal environment for a long-term storage is the room with low temperature, low humidity, and shielded from sun light.
- There should be full consideration for the organized filing system of the photographs for the sake of future utilization: The pictures can be integrated into databases with other information such as drawings of archaeological sites, features, and built structures.

6. Relation with printing

- ① It is needed to take photographs good enough for printing and to serve their particular purpose as records; they will be used in archaeological reports or catalogues.

[The Photographic angle, exposure, lighting, weather, and time of the day]

- ② Many photographs tend to offer a little information; they have poor reproduction of tone, colour, and texture.
- ③ Be aware of the role of the photographs; they are different from drawings and diagrams.
- ④ The amount of the information in one picture will differ according to the printed size of the photograph. One photograph can encompass only limited amount of information, therefore we should plan ahead the use of multiple photographs per artefact or site.

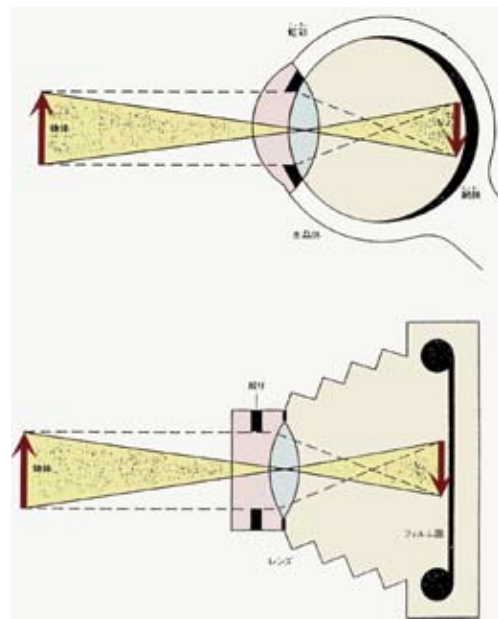
7. Photography in practice

At first, recognize the difference between the archaeological photograph and the surveying map. Right framing, appropriate arrangement of the artefacts and well-suited shooting techniques are required.

- ① Photo sensitizer: Sensitivity of films, and characteristics of printing papers.
- ② Exposure time and lighting: Difference in brightness between the object and the surroundings, the use of artificial light, and how to decide exposure time.
- ③ Basic knowledge of equipment for photography: How to handle the camera, lens, and strobe lamp.
- ④ Facilities necessary for photography: Photographic equipment in both outdoor and indoor, lighting equipment, and a photo studio.
- ⑤ Basic knowledge of development and enlargement: Film development, equipment for development and enlargement.
- ⑥ Equipment for development and enlargement: Darkrooms, equipment for development, and photo enlargers.
- ⑦ Knowledge for the evaluation of photographic images: Density and colour development of a photograph, evaluation with printed image in mind, and the artificial light source.
- ⑧ Knowledge of the printing and the publication: Layout of the pictures and visual effects.

8. Basic knowledge of the camera

The basic structure of the camera: The camera and human eyes.



Human eyes and Camera

- ① The role of the lens; various types of lenses and their characteristics.

[Normal lens, wide-angle lens, super wide-angle lens, fish-eye lens, mid-telephoto lens, telephoto lens, and super telephoto lens]

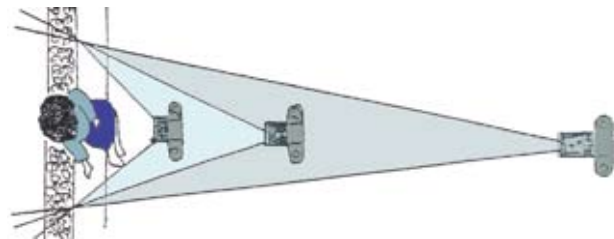
When the lens is changed from normal to others, the range of the photograph and angle of view will change accordingly as well as the sense of perspectives. For example, nearby objects should look larger than distant objects, however this sense of distance becomes out of proportion.

- ② Zoom lens and macro lens

A zoom lens allows for continuous adjustment of focal distance with a single lens. Compared with it, lens with a fixed focal distance is called “fixed focal length” lens. The main disadvantage of the zoom lens is that its design does not allow bright aperture. Macro lens is designed specially for close-up photography for close range objects.

- ③ Focus and focal distance

Both the range of photography and the sense of perspective change according to the types of lens such as wide-angle or telephoto. This is due to the difference in the focal distance of the lens.



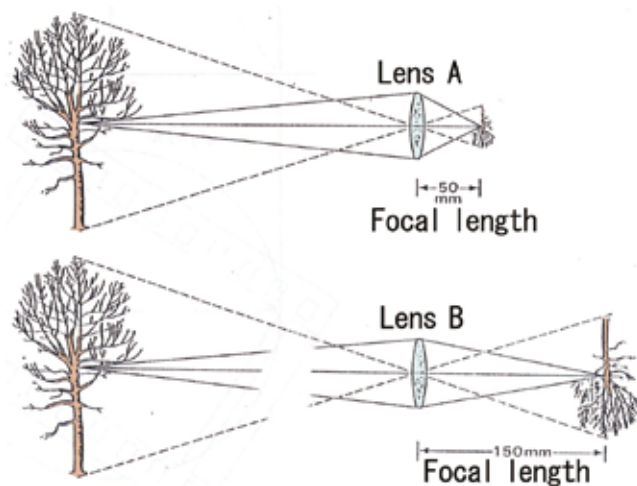
Focal Length and Distance

- ④ Lens-to-subject distance and depth of field

When the subject is brought into focus, the range around the focal plane also appears to be in focus. The range of focus (distance) differs according to the focal distance of the lens; whether the lens is wide-angle or telephoto. The range of distance is called “depth of field”.

- ⑤ Focal distance and an angle of view

If the subject is photographed from the same position, the longer the focal distance of the lens (such as telephoto), the larger the image we get. However, the range of the photograph becomes narrower. Wide-range lens is the opposite: the image is smaller, but a larger range.



Lens and Image Size

- ⑥ Image circle

The lens is circular; therefore, the image formed on the film is also circular. The central portion of this circle is taken out to form the image on the film. The peripheral parts of the image are distant from the centre of the lens and less bright.

⑦ Aperture and shutter speed

The aperture is a circular or polygonal hole made by thin overlapping metal plates. The amount of light onto the film is adjusted by opening or closing these blades. The amount of light can be also adjusted by changing the shutter speed according to the depth of field to be required. When one holds the camera by hands for shooting, choose a shutter speed at which blurring will not occur.

⑧ The shutter

The shutter is kept closed to shield the film from light. The shutter opens only during shooting. There are two types of shutters: The focal plane shutter in front of the film and the lens shutter integrated into the lens mount.

The amount of light allowed onto the film is adjusted by the length of time that the shutter remains open, which is called shutter speed. Numbers such as 1/125 and 1/250 indicate the fraction of one second during which the shutter remains open. When the shutter remains open for long, the shutter speed is referred to as slow. A fast shutter speed means that the shutter is open for a shorter time. When the shutter speed is taken one stage down, the amount of light on the film is halved. For instance, the shutter speed of 1/250 is the half of 1/125. A similar adjustment of light can be made by opening or closing the aperture.

9. The process of photography

1) Image formation

The lens is moved back and forth to form the clear image on the viewfinder (focus adjustment).

2) Recording the image

The amount of light is adjusted (by aperture and shutter speed). Appropriate exposure is needed.

3) Recording media

Monochrome and colour film. CCD(Charge Coupled Device, which is corresponding to a film in a camera. It converts optical information into digital data.)

4) Film development

The image recorded onto the film by shooting does not become visible until it is developed. This is called “a latent image”. The film needs to be developed to yield a visible image which is called “a negative”. In the negative, the light and dark areas are the inverse of the original object. With colour film, the colours are also inverted.

5) Printing

In this step, the negative film with brightness and colours being inverted is processed with photoenlargers and printers to reproduce the image of the original object.

Differences of “depth of field” by apertures(35 mm Camera)



50 mm F:4



50 mm F:11.5

Pictures taken by different focal length lens from same location (35mm Camera)



135 mm



90 mm



50 mm



35 mm



28 mm

Исследование и фиксация археологических памятников

- Техника фотографии для фиксации археологических материалов -

1. Почему фотография нужна для фиксации археологических артефактов и памятников?

Фотография может передать сведения, которые трудно зафиксировать письменно или чертежом: 1) Фактура материалов, 2) Форма и расположение материалов, 3) Атмосфера и чувство присутствия материалов.

2. Роль фотографии как археологической фиксации

- Фотография тщательно фиксирует исчезающий археологический памятник.
- Но надо иметь в виду, что некоторые артефакты портятся при каждой фотосъемке.
- Нужно сохранить фиксацию, которую можно использовать как изобразительный материал.

3. Основные принципы археологической фотографии

- Применяя лучшие методики съемки и фотоматериалы данного времени, необходимо снимать высококачественные фотографии археологических артефактов и памятников, т.е. с большим количеством информации.
- При съемке фотографии и ее сохранении, надо выбирать средства (фотопленку, фотобумагу, электронные носители, как компакт-диск) с высоким качеством воспроизводства.

4. Что нужно для съемки идеальной фотографии: большое количество информации

- 1) **Четкость и тщательность:** фотография должна быть в фокусе и без трясений. Нельзя скупиться на материалы для фотографии.
- 2) **Подходящий угол зрения:** Нельзя снимать большое количество предметов в одной фотографии.
- 3) **Подходящий тон и контраст:** Нельзя снимать грубые, бледные, слишком плотные или мало-контрастные фотографии. Если фотография слишком контрастна, то светлые места в ней исчезают. А если фотография слишком плотная, то невозможно изобразить детали.
- 4) **Хорошее воспроизведение цветов:** цвета должны быть сбалансированы.
- 5) **Стереоскопичность и перспектива**

5. Хранение фотографии

- Надо обращать внимание на условия хранения фотопленок, фотобумаги,

электронных носителей, как компакт-диски.

- Для долгосрочного хранения фотоматериалов, идеально, хранить их при низкой температуре, низкой влажности и без доступа света.
- Необходимо приводить фотографии в порядок, имея в виду, их дальнейшее использование в базе данных с планами памятников, раскопанных мест и др.

6. Фотография для печати

- 1) Необходимо снимать фотографии с учетом их применения, т.е. для печати в отчетах или каталогах. Для этого, надо иметь в виду следующие факторы: угол зрения, экспозицию, свет, погоду, время.
- 2) Часто встречаются фотографии, в которых мало информации, т.е. которые не воспроизводят тон, цвет и фактуру материала.
- 3) Нужно правильно понимать роль фотографии. Существуют отличия от чертежа.
- 4) Количество информации в одной фотографии зависит от размера фотографии для печати. Одна фотография может передать ограниченное количество информации, поэтому надо предполагать использование нескольких фотографий для одного артефакта или памятника.

7. Фотография на практике

Прежде всего, надо понимать разницу между археологической фотографией и чертежом. Для фотографии нужны подходящая композиция, расположение объекта съемки (артефакта и др.) и подходящие приемы съемки.

1) Светочувствительность

Светочувствительность фотопленки, свойства фотобумаги.

2) Экспозиция и освещение

Разница яркости между объектом и фоном. Использование искусственного света.
Способ решения экспозиции.

3) Как использовать фотоаппарат и другие принадлежности

Способ использования фотоаппарата, объективов, фотовспышек и др.

4) Необходимое оборудование для фотосъемки

Оборудование для фотосъемки на открытом воздухе и в закрытом помещении.
Аппараты для освещения. Фотостудия.

5) Проявление и увеличение фотографии

Проявление фотопленки. Приборы для проявления фотопленки и увеличения фотографии.

6) Приборы для проявления пленки и увеличения фотографии

Темная комната. Приборы для проявления пленки и увеличения фотографии.

7) Знания, необходимые для оценки изображения фотографии

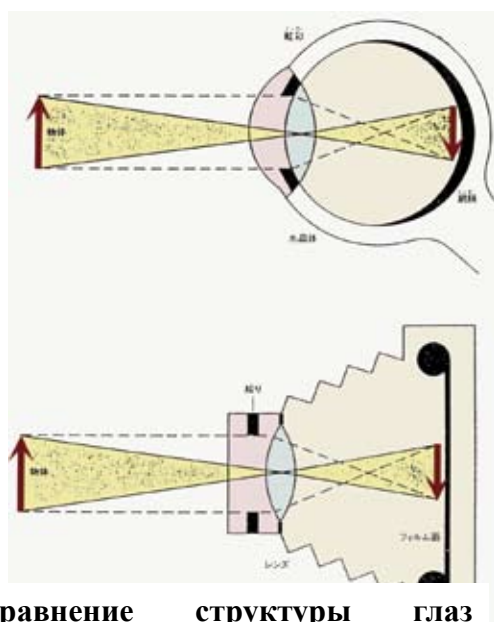
Оценка плотности светотени и проявления цветов. Предварительная оценка фотонегатива, предполагая, как будет выглядеть фотография в печатаном виде. Источник света при оценке фотографии.

8) Знания о печати и издании

Расположение фотографий. Визуальный эффект.

8. Основные знания о фотоаппарате

Основная структура фотоаппарата. Сравнение структуры глаз человека с фотоаппаратом.



Сравнение структуры глаз человека с фотоаппаратом

1) Функции объектива; разные виды объективов и их свойства

Разные виды объективов: нормальный объектив, широкоугольный объектив, сверхширокоугольный объектив, объектив «рыбий глаз», средне-телеобъектив, телеобъектив, сверх-телеобъектив.

При замене нормального объектива на другой границы фотографии, т.е. угол зрения, изменяются. Перспектива фотографии тоже изменяется. При использовании нормального объектива находящийся ближе объект должен быть большего размера, чем находящийся дальше объект. Но при использовании другого вида объектива такое ощущение непропорционально расстоянию.

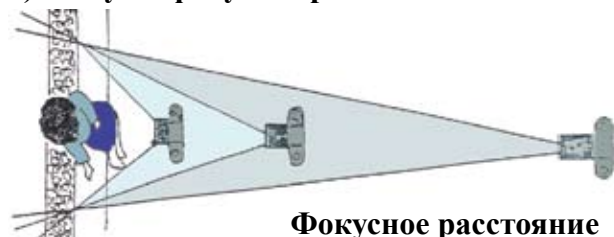
2) Панкратический объектив и макро объектив

Панкратический объектив может непрерывно менять фокусное расстояние. А объектив, фокус которого является неподвижным, называется «объектив с фиксированным фокусным расстоянием».

Панкратический объектив из-за своей конструкции имеет недостаток: величина диафрагмы ограничена и не может дать достаточную яркость.

Макро объектив специально сконструирован для крупноплановой фотографии, снимающей крайне близкий объект.

3) Фокус и фокусное расстояние



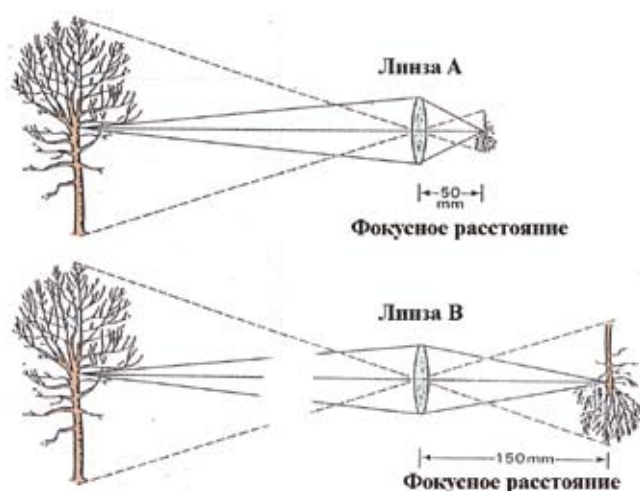
Границы съемки и ее перспектива изменяются в зависимости от вида объектива, например широкоугольный объектив или телеобъектив. Так как

каждый объектив отличается фокусным расстоянием.

4) Фокусное расстояние и глубина резкости

Когда изображение одного объекта стало в фокусе, то и изображения других объектов, которые находятся в области перед и позади находящегося в фокусе объекта, резко видны. Глубина такой области зависит от фокусного расстояния объектива: какой объектив используется, широкоугольный объектив или телеобъектив. Она называется «глубиной резкости».

5) Фокусное расстояние и угол зрения



При съемке одного и того же объекта из одного того же места телеобъективом, т.е. фокусное расстояние объектива длиннее, полученное изображение увеличивается. Но тогда границы снятой фотографии уже. При съемке широкоугольным объективом, наоборот, изображение меньше, а границы фотографии шире.

Виды линз и размер изображения

6) Круг изображения

Форма линзы объектива является круглой; поэтому изображение, которое образуется на фотопленке, тоже круглое. На фотопленке срезана лишь центральная часть этого круга. По краям изображения количество света меньше, так как расстояние от центра линзы больше.

7) Диафрагма и скорость затвора

Диафрагма является круглым или многоугольным отверстием, сделанным из тонких лежащих одна на другой металлических пластинок. Количество света попадающего на фотопленку через объектив регулируется открытием и закрытием этого отверстия. Также количество света можно регулировать скоростью затвора. Соотношение диафрагмы и скорости затвора необходимо установить с учетом того, что «глубина резкости» изменяется в зависимости от степени диафрагмы.

При съемке с фотоаппаратом в руках, должна быть выбрана такая скорость затвора, чтобы не происходило трясения.

8) Затвор

Обычно затвор закрывается, чтобы защитить фотопленку от света. Он открывается лишь при съемке. Существует два вида затвора: шторный затвор, который находится перед фотопленкой, и линзовый затвор, который вставлен в объектив.

Количество света, попадающего на пленку, регулируется временем раскрытия затвора. Это называется скоростью затвора. Числа $1/125$ или $1/250$ обозначают доли секунды времени открытого затвора. Если затвор открыт дольше, то скорость затвора медленная. А высокая скорость затвора обозначает, что затвор открывается короче.

Если скорость затвора уменьшить на порядок, то количество света, попадающего на фотопленку, станет в два раза меньше. Например, скорость затвора $1/250$ равняется половине скорости $1/125$. Похожее регулирование света можно производить открытием или закрытием диафрагмы.

9. Процесс фотографии

1) Образование изображения

Объектив двигается вперед и назад для образования четкого изображения на видоискателе (фокусирование).

2) Фиксирование изображения

Количество света регулируется диафрагмой и скоростью затвора. Нужна подходящая экспозиция.

3) Средства фиксирования изображения

Черно-белая фотопленка или цветная. ПЗС (прибор с зарядной связью, CCD), который имеет ту же функцию, что и фотопленка. ПЗС превращает оптическую информацию в цифровую информацию.

4) Проявление фотопленки

Зафиксированное на фотопленке изображение не видно до проявления фотопленки. Оно называется латентным изображением. После проявки получается видимое изображение, которое называется негативом. На негативе светлые и темные места оригинального объекта показываются наоборот. На цветной фотопленке цвета тоже показываются наоборот.

5) Печать фотографии

Печать — это воспроизведение объекта, показанного на негативе в противоположных светотенях и цветах, при помощи фотоувеличителя и принтера в оригинале.

Разница «глубины резкости» в зависимости от диафрагмы (35 мм камера)



50 mm F:4



50 mm F:11.5

Примеры фотографий, снятых из одного места, используя линзы разных фокальных расстояний (35 мм камера)



135 mm



90 mm



50 mm



35 mm



28 mm

IV. Participants' Reports



Timur Museum



Sayipjan Tilabaev

Institute of History

Academy of Sciences of Uzbekistan [Tashkent]

I am Sayipjan Tilabaev and I work for the Institute of History of the Academy of Sciences of Uzbekistan. I participated in the workshop on cultural properties protection from October 20 to 25, 2008. It took place at International Caravanserai of Cultures and was organized by Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO [ACCU Nara] and the UNESCO Office in Tashkent. Participants in the program were researchers, graduate students, archeologists and numismatists specialized in the ethnic history of Central Asia. At this program, we shared our experiences in researching historical properties. We also analyzed and photographed archaeological artefacts, and measured artworks and historical materials.

In the classes, I learned about the skills and professionalism of the world of archaeology, and the technological progress of modern archaeology. I was particularly moved by the experiences and knowledge of the lecturers from the Nara Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO. In this seminar, I learned how to record archaeological artefacts, measure unearthed artefacts, photograph historical materials and record historical objects in detail. The classes conducted by the lecturers of ACCU Nara will be very beneficial to my future research activities. I learned many new things. What I learned will be useful towards archeological, numismatic and historical research in Uzbekistan, and research into the cultural heritages of mankind and their protection.

UNESCO and their offices worldwide are doing a great job researching the histories of the world's ethnicities and researching and preserving historical sites. I pray for their success in their future activities. I was very happy that this program was offered in Uzbekistan. And, I would like to thank the lesson organizers for this. I strongly hope that this kind of program can be implemented on a regular basis.



Muhtor Shamsiev

Institute of History

Academy of Sciences of Uzbekistan [Tashkent]

I am Muhtor Shamsiev and I work for the Institute of History of the Academy of Science of Uzbekistan. I would first and foremost like to express my appreciation to all of the organizers, UNESCO, the lecturers, the experts who came from Japan, and Mr NISHIMURA Yasushi, Director of the Cultural Heritage Protection Cooperation Office. It was an honor to have been selected to participate in this international training program. It was very urgent because I had been busy for preparations for the jubilee of our beloved city, Tashkent.

I learned much in this program and it was an honor to do so. The content of the program was very interesting and practical. It gave me the opportunity to take photographs, ink rubbings and measuring artefacts. I particularly liked measuring artefacts. It was difficult work, but that also made it interesting. Measuring demanded much attention, but when finished and looking at what I produced, I felt very content with myself. I also had a rewarding experience and learned useful things, therefore I want to convey them to my colleagues and apply them in the field. The tools that the Japanese researchers used in the training program were the latest and practical. They shorten the work time and open up the possibilities for deeper, more detailed research. I was very happy after training with Mr SUGIMOTO Kazuki. I learned a great deal both the theory and practice of photographing of artefacts, and the practical work gave me new experiences and taught me much. I would also like to mention the Mr OMI Toshihide class on ink rubbings. I was able to try out a very interesting field of study.

Suggestion:

I would like this kind of training workshop to be conducted at excavation sites since we have many cultural heritage in Uzbekistan.



Timur Ochilov

Institute of Archaeology

Academy of Sciences of Uzbekistan [Samarkand]

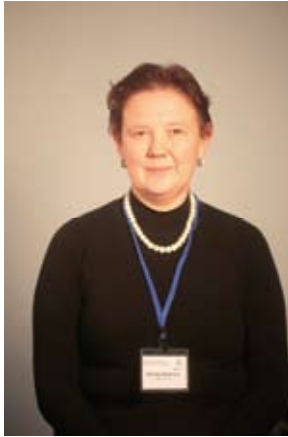
I work at the Department of Important Cultural Properties in the Institute of Archaeology. My work responsibility is to photograph the archaeological artefacts and objects brought to our institute from various sites. This is because photographs are important elements in preparing cards and models of archaeological artefacts, and publishing information and reports of our institute.

Therefore, participation in this workshop was very useful to me. I learned many interesting things and gained many practical experiences for my job from the lecturers, especially concerning the photography of archaeological artefacts and the field of ink rubbings consisting of various figures and patterns. Unfortunately, the time allotted to photographing artefacts was short. I also enjoyed the class on measuring earthenware, because I do not need to do this in my work, and it was the first experience for me to try it. I can already do surveys from a professional perspective and can prepare tables of earthenware for publications.

In conclusion, I hope as follows:

- That seminars will be held periodically.
- That seminars will be longer.
- That diverse themes will be offered, especially on making cards of archaeological artefacts, and how to use the latest equipment, programs and techniques for archiving artefacts, archaeological objects and data.

Finally, I would like to express my sincere appreciation to the lecturers and organizers for holding such a wonderful workshop and for being so considerate and generous to us. I pray for everyone's good health and success with their endeavors, as well as the development of the Nara Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO.



Marina Reutova

Institute of Archaeology

Academy of Sciences of Uzbekistan [Samarkand]

I work for the Artefacts Preservation Department of the Institute of Archaeology. Our work is not only about restoring artefacts but also recording them. Therefore, this training workshop which I participated for the first time was very useful to my work. One of the important stages of my work is the photographing of archaeological artefacts. Photographs provide us with useful information when we restore paintings, sculptures and other materials. In the photography class taught by Mr SUGIMOTO Kazuki I learned many new and useful techniques. I want to apply this experience to my work. Another very useful class was the introduction to ink rubbings. In my work, I have to record pictures carved into rocks, of which we have many in Uzbekistan. With advanced methods and tools, we can capture the content and style of paintings in a very accurate and easy to understand manner.

In the class, I tried measuring for the very first time. It was of course difficult to do. But, the lecturers explained every aspect of the procedure in a very simple and pleasant fashion. In conclusion, I want to express my appreciation to the seminar organizers for providing us with this wonderful training program. To achieve this, the organizers dedicated a lot of effort and shared the experiences of their precious work. I wish this kind of seminar were held more often in our country. It will prove very useful towards efficiently recording our invaluable archaeological artefacts. We have a large number of such artefacts in the museums of Uzbekistan and our Institute of Archaeology. I thank the organizers of this workshop.





Margarita Kondrikova

Institute of Archaeology

Academy of Sciences of Uzbekistan [Samarkand]

Our work is to collect, manage and preserve unearthed artefacts. The task is not easy and requires a lot of work. In the training program, I learned many new ways to manage archaeological artefacts by the lecturers from Japan who were very kind. What interested me in particular were the methods for measuring and categorizing artefacts. The class on ink rubbings was also interesting. Everything was done on a high level. I would like to express my appreciation to the organizers of the program and especially to the lecturers Mr SUGIMOTO Kazuki, Mr OMI Toshihide, Mr TATEISHI Kenji and Mr FURUSHO Hiroaki.





Ilhom Ubaydullaev

Institute of Archaeology

Academy of Sciences of Uzbekistan [Samarkand]

I am a graduate student at the Institute of Archaeology of the Academy of Science of Uzbekistan. It was an honor to participate in this training program as the first step in my career in archaeology. That is because I compiled numerous experiences, in these classes, that will serve my work in the future. I say this because the ability to measure and photograph unearthed artefacts is necessary for archeologists. Therefore, this first-ever training program for me has been very valuable to my work in many ways.

In this program, I learned many new methods for managing archaeological artefacts. The lecturers from Japan were very kind. Everything was taught on a very high level. I am indebted to all of the organizers, and especially the lecturers, Mr SUGIMOTO Kazuki, Mr OMI Toshihide, Mr TATEISHI Kenji and the Nara Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO. I was particularly interested in the measured drawing and categorizing of artefacts. I also found the class on ink rubbings interesting.





Jassor Gofurov

Institute of Archaeology

Academy of Sciences of Uzbekistan [Samarkand]

I am doing graduate studies at the Institute of Archaeology of the Academy of Sciences of Uzbekistan. I was very fortunate to be amongst the fourteen researchers chosen to participate in training under the theme of documentation of archaeological artefacts. I gained many experiences that will be useful for me in my work, therefore I feel like it was the first step in my career. As an archaeologist in the making, I must know how to manage and measure archaeological artefacts, and how to photograph and record archaeological objects. For this reason, the training program was very important to my work. In this training program, I learned and experienced many new methods to manage archaeological artefacts. The instructors from Japan were highly-trained professionals and also very kind. Everything was done on a high level. I thank the organizers of this program and especially the lecturers from the Nara Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO.





Vadim Yagodin

Institute of History, Archaeology and Ethnography
Academy of Sciences of Uzbekistan (Karakalpak)

I want to express my sincere feelings of appreciation to the considerate lecturers. They were very kind to convey their work experiences to us in such detail. I also would like to thank the organizers for such a high level training program. I work as a restorer. I am particularly involved with the restoration of mural paintings. I also restore earthenware, coins, textiles and wooden objects besides taking photographs for documentation and writing reports. For that reason, this training program was very important for me.

It was very interesting to learn and compare the work techniques of our colleagues in Japan. I was particularly interested by the methods of measuring and categorizing earthenware. This is because they differ from the methods we use. The class on ink rubbings was also very interesting. The method of photographic recording was similar to that I use, but it was interesting in every aspect. I was especially drawn by the use of auxiliary lighting to photograph artefacts. What I learned will be useful towards doing higher quality work in the future.





Aysulu Iskanderova

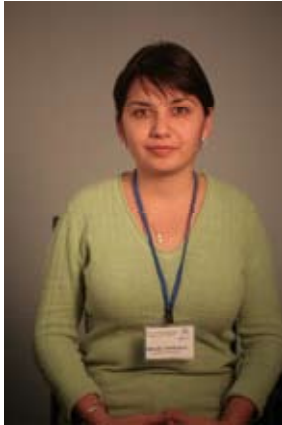
Institute of History, Archaeology and Ethnicity,
Academy of Science of Uzbekistan (Karakalpak)

I work for the Division of Archaeology and Ethnography, the Archaeology Department of the Institute of History, and collect archeological, anthropological and ethnic artefacts in collaboration with the Aral Sea Museum of History. In my work, I am involved with recording archaeological artefacts and building a database of that information, as well as archaeological research into the Aral Sea area.

I wish to express my deep appreciation to the lecturers and organizers of this training program. They conveyed the experiences of their work to us and provided us with high level training. I learned many new and useful things about photographing archaeological artefacts in the photography class taught by Mr SUGIMOTO Kazuki.

The method used by Japanese archeologists Mr OMI Toshihide, Mr TATEISHI Kenji, and Mr FURUSHO Hiroaki, to measure unearthed artefacts was much different from the approach we use. I greatly value what I have learned in this program. What aroused my interest in particular were the methods used to measure and categorize artefacts. Similarly, the class on ink rubbings was also very interesting.

I wish to thank the seminar organizers for this wonderful opportunity to study. They dedicated much time to doing this and brought a great deal of their work experiences to the program. It would be great if this kind of seminar could be held more frequently in my country. It would be tremendously useful towards the efficient recording of archaeological artefacts housed in our local archeological institute and the museum storages



Dilzoda Alimkulova

Fine Arts Research Institute

Academy of Arts of Uzbekistan [Tashkent]

An international workshop on cultural properties protection was held in Tashkent in 2008 by the Nara Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO. Tashkent is the second city to have this international professional workshop and I was fortunate to participate in the program.

First of all, what I must point out is that the training was top-rate, as it was conducted by lecturers from the center involved in all of the major aspects of archaeology. Mr FURUSHO Hiroaki, Mr OMI Toshihide, Mr SUGIMOTO Kazuki, and Mr TATEISHI Kenji, shared the secrets of their skills and their professional experiences with the participants from Uzbekistan. I studied a variety of subjects over the six days, but what I found particularly important were the classes on archaeological artefact photography (theory and practice) and practical training in ink rubbings.

I hope this workshop will be the unforgettable event both on the history of Japan and the cultural and ethnic history of Uzbekistan.





Sunnatulla Panjiev

Fine Arts Research Institute

Academy of Arts of Uzbekistan [Tashkent]

I am Sunnatulla Panjiev and I participated in the workshop on cultural heritage protection in Tashkent. The program was organized by the Nara Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO and cosponsored by the UNESCO Office in Tashkent.

Classes were taught on the themes of measuring archaeological artefacts and photographing artefacts for documentation. I greatly appreciate what all of the lecturers did. For one week, they showed us the secrets of their skills and shared the experiences of their professions. I particularly appreciated training in the theory and practice of photography centered on archaeological artefacts. The lecturers were Mr NISHIMURA Yasushi, Mr NAKAI Isao, Mr SUGIMOTO Kazuki (photography), Mr OMI Toshihide, Mr TATEISHI Kenji, and Mr FURUSHO Hiroaki, Mr KINOSHITA Wataru and Mr YAMASHITA Tsutomu. I sincerely thank all of them. I hope that this kind of workshop can be offered again.





Akmal Ulmasov

Fine Arts Research Institute,
Academy of Arts of Uzbekistan [Tashkent]

I work as a painter and restorer for the Research Department of Fine Arts Scientific Research Institute and teach at the National Institute of Fine Art & Design named after K. Bekhzad. The preservation of cultural properties is not only a local issue but an even more important global issue of all mankind. Rapid urbanization, climate change, environmental problems and human activity are all having a negative impact on cultural properties. For those reasons, the time has come for mechanisms of cultural properties preservation. In that interest, the workshop staged in Uzbekistan has stimulated the preservation of tangible culture. This project was cosponsored by the Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO and the UNESCO Office in Tashkent.

Program: Themes important to Uzbekistan were selected for the workshop program. I have always been interested in archiving, photographing and measuring archaeological artefacts as an important element of the archaeology. In addition to that, the project demonstrated its significance by having 14 experts from different regions partake. During the one-week period, participants compiled theoretical and practical experiences in their fields of specialty.

Impression: I was happy to learn how to date and identify sites through studies of unearthed artefacts. And, I was able to digest the content easily owing to the careful detailed explanations of our lecturers and the very seasoned interpreters we had.

Conclusion: The workshop was very successful and deeply meaningful, and I am quite satisfied with it. And, thanks to this workshop, we were able to get to know each other and share our wisdom.

Acknowledgments: I would like to express my appreciation to the organizers, lecturers, interpreters and all of the others who were involved with this training program. I want to thank in particular Mr NISHIMURA Yasushi, Director of the Asia/Pacific Cultural Centre for UNESCO and Ms Anna Paolini, Director of the UNESCO Office in Tashkent. I wish everyone the best of health, success and happiness.

Supplement: I would like to suggest the themes for the following workshop programs.

- Tracing using CAD (computer-aided design) programs
- Restoration and preservation of clay figures, mural paintings, manuscripts, etc.
- Creation of artefact databases and subsequent archiving and entry



Anastasia Krol

State Museum of the History of Uzbekistan

Academy of Sciences of Uzbekistan [Tashkent]

My name is Anastasia Krol. I am employed as a restorer by the Museum of the History of Uzbekistan. I took part in the training program sponsored by the Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO and the UNESCO Office in Tashkent.

Thanks to this program, I was able to practice photographing, recording and measuring archaeological artefacts. I learned about the history and methods of artefact management in Japan. From these experiences, I am certain that we can apply the methods learned under the Asia/Pacific Cultural Centre for UNESCO to artefact management in Uzbekistan.





Otabek Aripdjanov

State Museum of the History of Uzbekistan

Academy of Sciences of Uzbekistan [Tashkent]

I would like to express my appreciation to the Cultural Heritage Protection Cooperation Office of the Asia/Pacific Cultural Centre for UNESCO for holding this workshop. I very much enjoyed taking part in it in Tashkent. For six days, staff and lecturers from the Asia/Pacific Cultural Centre for UNESCO taught us about photographing and measuring artefacts, and ink rubbings of decorations.

I am involved with archaeology; therefore I want to apply what I learned during the program to measuring and photographing artefacts. Japanese method of measuring earthenware, bone and metal objects, was very effective and valuable. That is because sizes and contours of measured objects must be accurately reported. I would like to thank Mr FURUSHO Hiroaki, for his very interesting class on categorizing Japanese earthenware, as well as Mr SUGIMOTO Kazuki, and especially Mr OMI Toshihide and Mr TATEISHI Kenji. It is very important for researchers of Uzbekistan to acquire these practical techniques and methodologies for archeological work.

I would like to thank the Asia/Pacific Cultural Centre for UNESCO for giving me the opportunity to participate in this workshop. I hope that workshops on the restoration, preservation and cleaning of archaeological artefacts will be held more frequently in the future.

V. Appendix



State Museum of the History of Uzbekistan, Academy of Sciences of Uzbekistan

1. Participants

■ **Institute of History, Academy of Sciences of Uzbekistan [Tashkent]**

Sayipjan Tilabaev

Muhtor Shamsiev

■ **Institute of Archaeology, Academy of Sciences of Uzbekistan [Samarkand]**

Timur Ochilov

Marina Reutova

Margarita Kondrikova

Ilhom Ubaydullaev

Jassor Gofurov

■ **Institute of History, Archaeology and Ethnography [Nukus]**

Vadim Yagodin, *Restorer*

Aysulu Iskanderova

■ **Fine Arts Research Institute, Academy of Arts of Uzbekistan [Tashkent]**

Dilzoda Alimkulova,

Sunnatulla Panjiev

Akmal Ulmasov

■ **State Museum of the History of Uzbekistan, Academy of Sciences of Uzbekistan [Tashkent]**

Anastasia Krol

Otabek Aripdjanov

■ **International Caravanserai of Cultures [Observer]**

Bakhadir Madaminov

2. Lecturers

OMI Toshihide

Senior Researcher

1st Archaeological Research Division
Archeological Institute of Kashihara, Nara Prefecture
1 Unebi-cho, Kashihara, Nara 634-0065 JAPAN
Tel: (+81) 744-24-1101
Fax: (+81) 744-24-6747



SUGIMOTO Kazuki

Archeological Photographer

Photographic Data Section,
Department of Planning and Coordination,
National Research Institute for Cultural Properties, Nara
2-9-1 Nijo-cho, Nara 630-8577 JAPAN
Tel: (+81) 742-30-6838 (Photographic Data Section)
E-mail: higeji@nabunken.go.jp



TATEISHI Kenji

Group Leader

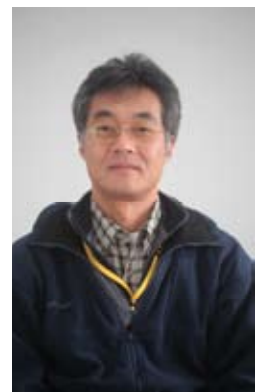
Heijo Palace Site Exhibitions
Association for Commemorative Events of
the 1300th Anniversary of Nara Heijo-kyo Capital
757 Horen-cho, Nara City 630-8113 Japan
Tel: (+81) 742-26-2010 Fax: (+81) 742-23-2500
E-mail: tateishi-kenji@1300.jp



FURUSHO Hiroaki

Lecturer

Department of History, Faculty of Letters
Komazawa University
1-23-1 Komazawa, Setagaya-ku
Tokyo 154-8525 Japan
Tel: (+81) 3 3418 9110
E-mail: furusho@komazawa-u.ac.jp



3. Interpreters

Mariya KOBIIAEVA

Interpreter (Freelance)/ Tourist Guide
Master of Japanese Literature
Tashkent State Institute of Oriental Studies



Ekaterina SLAVINA

Student
Department of Japanese Language
Tashkent State Institute of Oriental Studies



4. Collaborators

■ **UNESCO Office in Tashkent** [Co-organizer]

Anna PAOLINI, *Head of Office*
Sanjar ALLAYAROV, *Staff*

■ **National Commission of the Republic of Uzbekistan for UNESCO**

Alisher IKRAMOV, *Secretary General*

■ **Academy of Arts of Uzbekistan**

Tursunali KUZIEV, *Chairman*
Jaloliddin MIRTADJIEV, *Vice-Chairman*
Akbar KHAKIMOV, *Main Scientist Secretary*

■ **International Caravanserai of Cultures, Academy of Arts of Uzbekistan**

Farrukh USMANOV, *Director*

■ **Fine Arts Scientific Research Institute, Academy of Arts of Uzbekistan**

Mahmud ISRAILOV, *Director*
Oqilhon IBROHIMOV, *Former Director*
Mavlyuda YUSUPOVA, *Former Director*
Olim BEKOV, *Deputy Director on Sciences*
Edvard RTVELADZE, *Chief of Department*

Jangar ILYASOV, *Senior Researcher*
Konstantin SHEYKO, *Tokharistan Archaeological Expedition*

- **Institute of Archaeology, Academy of Sciences of Uzbekistan**
Shakirdjan PIDAEV, *Director*

- **State Museum of the History of Uzbekistan**
Jannat ISMAILOVA, *Director*

- **General Office of Scientific-Production for Preservation and Utilization of Objects Cultural Heritage**
Server ASHIROV, *Head Inspector*

- **Embassy of Japan in Uzbekistan**
HIRAOKA Tsutomu, *Ambassador*
TAKAHASHI Masakazu, *First Secretary*

- **National Research Institute for Cultural Properties, Tokyo**
YAMAUCH Kazuya, *Head of Regional Environmental Section*

- **Japan Institute for Studies of Cultures of Afghanistan**
MAEDA Kosaku, *Director*

- **Department of Historical Heritage, Kyoto University of Art and Design**
HAGA Mitsuru, *Professor*

5. List of Staff Members, ACCU Nara

NISHIMURA Yasushi, *Director*
NAKAI Isao, *Director of International Cooperation Division*
KINOSHITA Wataru, *Associate Director of International Cooperation Division*
YAMASHITA Tsutomu, *Chief of International Cooperation Section*

Cultural Heritage Protection Cooperation Office, Asia/Pacific Cultural Centre for UNESCO (ACCU)

757 Horen-cho, Nara 630-8113 JAPAN

Office Phone: (+81) 742-20-5001 Office Fax: (+81) 742-20-5701

URL: <http://www.nara.accu.or.jp> E-mail: nara@accu.or.jp



Group Photo at the opening ceremony (20 October 2008)



MEMORANDUM OF UNDERSTANDING

Between
UNESCO Office in Tashkent
and
Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO

The Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO (hereinafter referred to as "ACCU Nara Office") has decided to conduct the training course at Tashkent in the Republic of Uzbekistan as part of its cooperation for cultural heritage protection in the Asia-Pacific region. The main themes of this training course will encompass the measured drawing of archaeological artefacts and the photographic technique for documenting artefacts.

The purpose of this Memorandum of Understanding between UNESCO Office in Tashkent and ACCU Nara Office is to establish a mutual understanding concerning the implementation of the training programme as noted below.

1. Date and Venue

Date: 20 October (Mon.) to 25 October (Sat.) 2008

Lecture Hours: Morning 8:30 – 11:30
Afternoon 13:30 – 16:30

Venue: International Caravanserai of Cultures, Tashkent

2. Participants

Fifteen researchers, engaging in investigation, research and preservation of cultural properties in Uzbekistan, who belong to research institutes or museums. Those participants are finally decided by ACCU NARA Office based on the recommendation by UNESCO Office in Tashkent.

3. Training Curriculum

- Documentation of Archaeological Artefacts
- Measured Drawing of Earthenware (whole and shards of earthenware/ design layout) and a descriptive method of observed details
 - Ink Rubbing of Earve Tiles (an ink rubbing and its bucking)
 - Photography of Archaeological Artefacts (theory and practice)

4. ACCU Nara Office's Responsibility for Implementation

- Despatching a group of instructors from Japan
- Preparation of the venue for the training
- Procurement of the necessary tools for the workshop
- Employment of the interpreters
- Provision of lunch to the participants
- Provision of daily allowances to all participants
- Provision of travel allowances and accommodations (including breakfast) to the participants living outside Tashkent

All the expenses required for the items listed above shall be borne by ACCU Nara Office.

5. Cooperation of UNESCO Office in Tashkent for Implementation

- Selection of fifteen participants as mentioned above in item 2, in consultation with relevant organisations in Uzbekistan.
- Providing ACCU Nara Office with possible assistance for the implementation of the training programme


6. Language

The main working language of the course is Russian.

IN WITNESS WHEREOF, both ACCU Nara Office and UNESCO Office in Tashkent hereto have executed this Memorandum of Understanding in duplicate by placing their signatures, and each party shall keep one copy of the originals.

27 August 2008


NISHIMURA Yasuaki
Director
Cultural Heritage Protection Cooperation
Office, Asia-Pacific Cultural Centre for
UNESCO,
757 Horan-cho Nara 630-8113 Japan


ANNA PAOLINI
Head of Office
UNESCO Office in Tashkent,
95, Amir Temur Str. 700084 Tashkent
Uzbekistan

