

Society for East Asian Archaeology

6th Worldwide Conference

Program



SIXTH WORLDWIDE CONFERENCE  
OF THE  
SOCIETY FOR EAST ASIAN ARCHAEOLOGY



PROGRAM

Department of Archaeology and Anthropology

National University of Mongolia

Ulanbaatar [Улаанбаатар]

Mongolia 6-10 June 2014

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6th Worldwide Conference, 6-10 June, 2014

Ulaanbaatar [Улаанбаатар], Mongolia

Program

*Conference Organizing Committee:*

Dr. Francis ALLARD, SEAA Vice-President

Prof. TUMEN Dashtseveg, SEAA6 Local Organizer

Dr. Barbara SEYOCK, SEAA Secretary

*supported by:*

Dr. Sascha PRIEWE, SEAA Treasurer

Michael MOOS, SEAA-Webmaster

Prof. PAK Yangjin, SEAA President

Prof. ERDENE Myagmar, SEAA6 Local Team

Prof. ERDENEBAATAR Diimaajav, SEAA6 Local Team

*Contact address:*

Prof. TUMEN Dashtseveg            Дашзэвэг Түмэн

Department of Archaeology and Anthropology

National University of Mongolia

Ulaanbaatar

MONGOLIA

phone: +976-7730-7730-2309

fax: +976-11-328890

email: [tumen@num.edu.mn](mailto:tumen@num.edu.mn)

Археологи-Антропологийн тэнхим

Монгол Улсын Их Сургууль

Улаанбаатар-46

Монгол Улс

*Mobile phone numbers, Ulaanbaatar:*

TUMEN D.: 976-11-99285209

ERDENE M. 976-11-99836827

ERDENEBAATAR D.: 976-11-99185773

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Edited by: Barbara SEYOCK / Francis ALLARD

Layout and Databases: Michael MOOS

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## WELCOME AND INFORMATION

### *Welcome to SEAA6!*

The Society for East Asian Archaeology (SEAA) is pleased to welcome you to the Sixth Worldwide Conference in Ulaanbaatar, Mongolia. The conference is hosted by the Department of Archaeology and Anthropology at the National University of Mongolia.

The SEAA and the conference organizing committee look forward to your participation at what is certain to be an exciting gathering, with sessions, presentations and posters that continue to highlight the growth and depth of East Asian archaeology as a field of study. We wish you all an exciting, productive, and memorable time at the SEAA6 event in Ulaanbaatar!

### *Venue*

The conference venue is in the main building of the National University of Mongolia (see map). The registration desk, poster exhibition, and coffee/tea/lunch areas are located on the second floor, in front of the Round Hall (Room A), where the Opening Ceremony and Opening Session will take place. All sessions will take place in the Round Hall (Room A), and in Rooms B and C (both located on the third floor; see map)

### *Nametags*

You receive your name tag at the registration desk together with this program book. Please wear your nametag throughout the conference as it will also serve as your Welcome Reception and lunch voucher.

### *Excursion*

Our excursion to the Mongolian National Museum will take place on Sunday, 8 June, after lunch. We will meet in front of the university's main building at 14.00h.

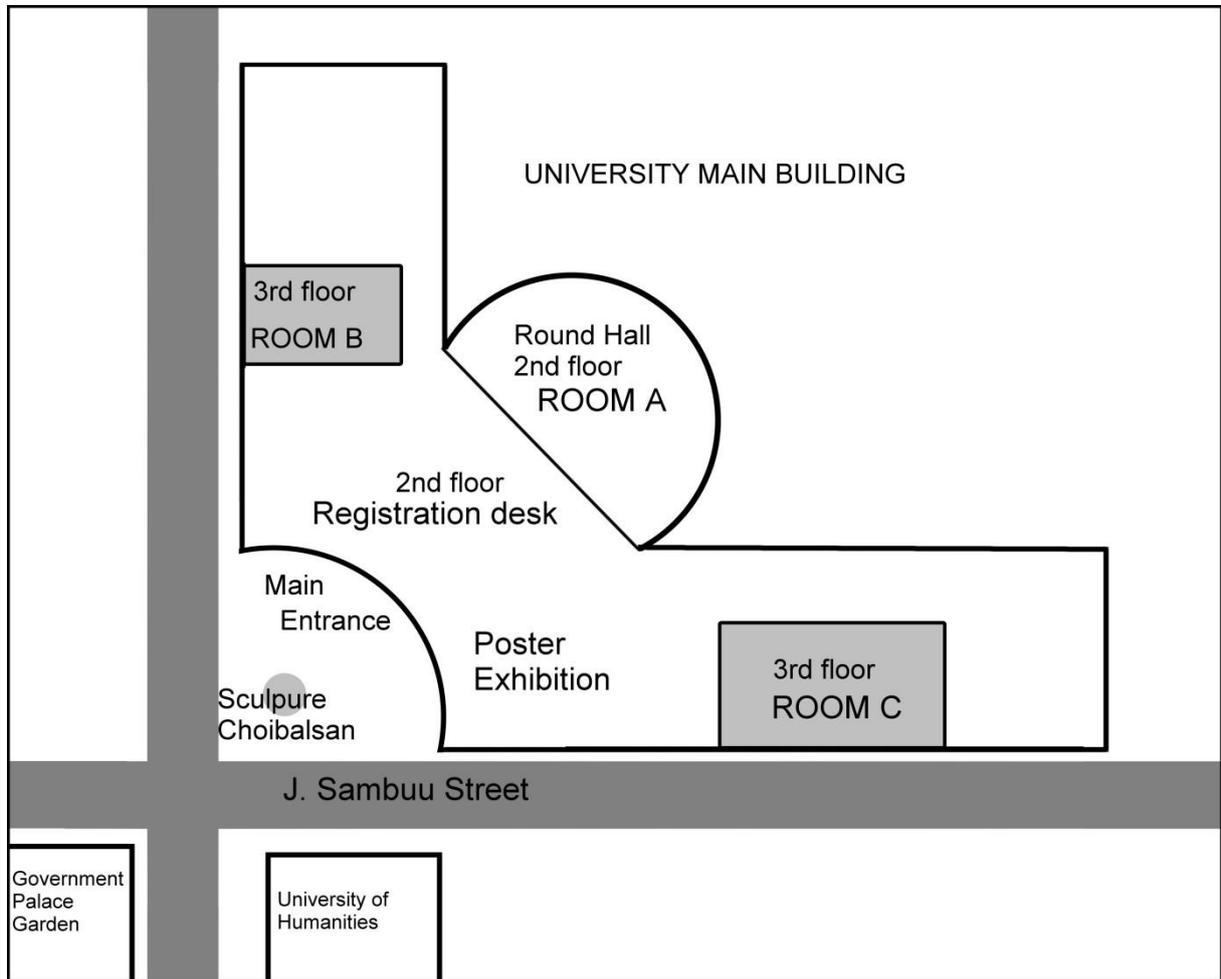
### *Post-conference tours*

The post-conference tours start on Wednesday, 11 June. Please make your booking at the tour registration table in front of the Round Hall (Room A).

*The SEAA6 Conference Organizing Committee*

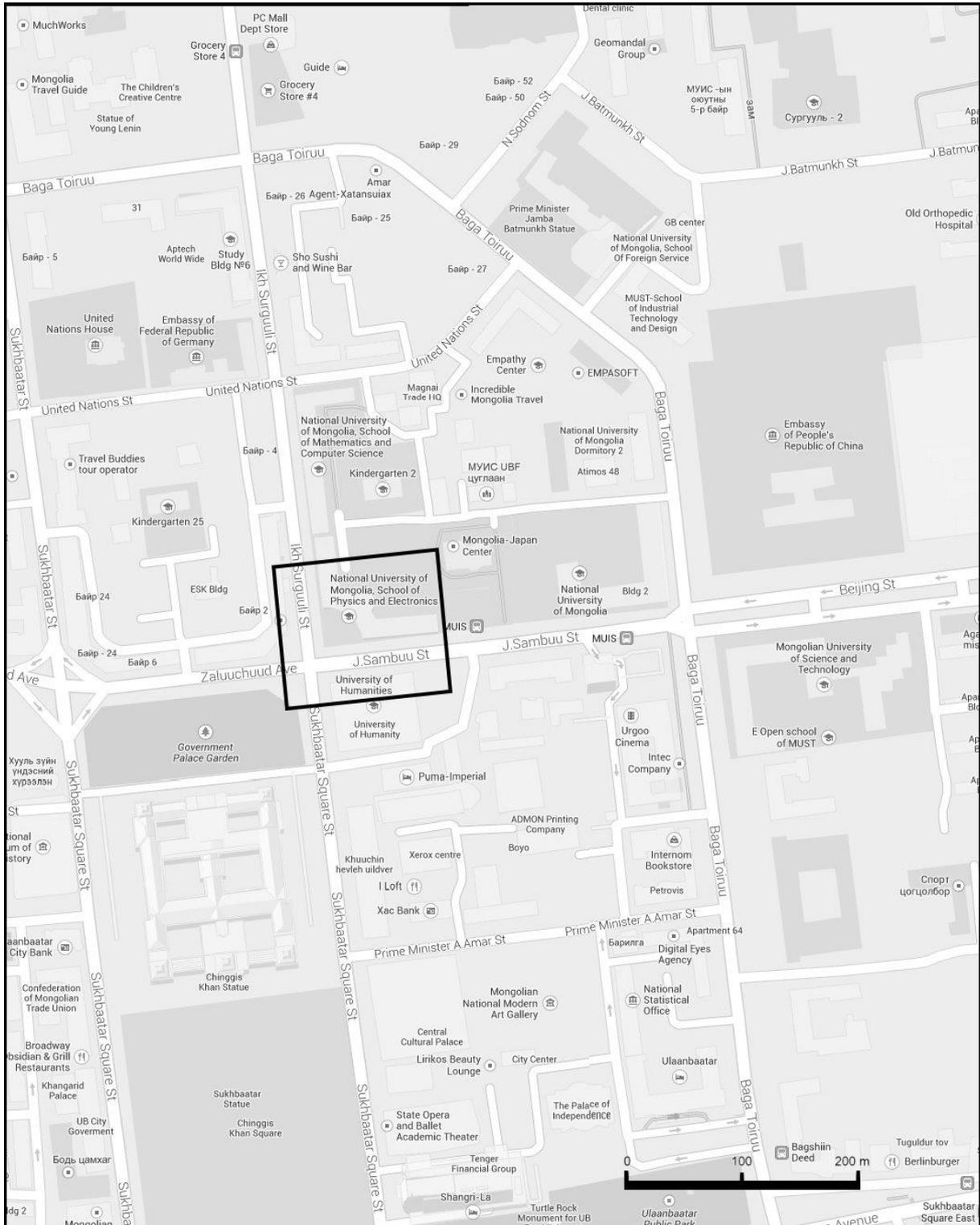


## LOCATION MAP



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## AREA MAP





# Timetable



**TIMETABLE**

<i>June 6, Friday:</i>	
<i>morning</i>	
	Registration Hall, 2. floor
09:00-12:00	<i>Registration</i>
12:00-13:00	Lunch
<i>afternoon</i>	
	ROOM A, 2. floor
13:30-14:00	Opening Ceremony
14:00-17:45	<b>01 Opening Session</b> <i>TUMEN Dashtseveg</i>
18:00	Welcome Reception

<i>June 7, Saturday:</i>			
	Room A	Room B	Room C
<i>morning</i>			
9:00-10:40	<b>02 Archaeology of Mongolia</b> <i>TUMEN Dashtseveg / ERDENEBAT Ulambayar / ERDENEBAATAR Diimaajav</i>	<b>04 The Study of Artifacts: Production, Distribution and Interpretation</b> <i>CHIOU-PENG TzeHuey</i>	<b>03 Surfacing the Past: Field Methods and Techniques of Archaeological Investigations in East and Central Asia</b> <i>CHAN Annie</i>
10:40-11:00	Coffee break		
11:00-12:40	<b>02 Archaeology of Mongolia</b> <i>TUMEN Dashtseveg / ERDENEBAT Ulambayar / ERDENEBAATAR Diimaajav</i>	<b>04 The Study of Artifacts: Production, Distribution and Interpretation</b> <i>CHIOU-PENG TzeHuey</i>	<b>03 Surfacing the Past: Field Methods and Techniques of Archaeological Investigations in East and Central Asia</b> <i>CHAN Annie</i>
12:40-14:00	Lunch		
<i>afternoon</i>			
14:00-15:40	<b>05 New Perspectives of Paleopathology in East Asia</b> <i>FUJITA Hisashi / MYAGMAR Erdene / SHIN Dong-Hoon</i>	<b>06 Chinese Archaeology</b> <i>WILLIAMS James</i>	<b>08 Making Places in Early Korea: Patterns of Space in Households, Communities, and States</b> <i>LEE Rachel</i>
15:40-16:00	Coffee break		
16:00-17:40	<b>05 New Perspectives of Paleopathology in East Asia</b> <i>FUJITA Hisashi / MYAGMAR Erdene / SHIN Dong-Hoon</i>	<b>7: Ritual Practise, Settlements, and Subsistence in North Asia</b> <i>BRODERICK Lee</i>	<b>08 Making Places in Early Korea: Patterns of Space in Households, Communities, and States</b> <i>LEE Rachel</i>

## TIMETABLE

<i>June 8, Sunday:</i>			
	Room A	Room B	Room C
<i>morning</i>			
9:00-10:40	<b>09 Redefining Configurations of Urban Settings: Centers of Social and Economic Activity in the Inner Asian Steppe</b> <i>MILLER Bryan K.</i>	<b>10 Charting the Social Lives of Objects and Goods in China: Perspectives from Archaeology and Art History</b> <i>SUN Yan / ALLARD Francis</i>	<b>11 Starting Over Again: the Early Palaeolithic Research in Japan Today</b> <i>IKAWA-SMITH Fumiko / SATO Hiroyuki</i>
10:40-11:00	Coffee break		
11:00-12:40	<b>09 Redefining Configurations of Urban Settings: Centers of Social and Economic Activity in the Inner Asian Steppe</b> <i>MILLER Bryan K.</i>	<b>10 Charting the Social Lives of Objects and Goods in China: Perspectives from Archaeology and Art History</b> <i>SUN Yan / ALLARD Francis</i>	<b>11 Starting Over Again: the Early Palaeolithic Research in Japan Today</b> <i>IKAWA-SMITH Fumiko / SATO Hiroyuki</i>
12:40-14:00	Lunch		
<i>afternoon</i>			
<i>Excursion (National Museum of Mongolia)</i>			

<b>June 9, Monday:</b>			
	Room A	Room B	Room C
<i>morning</i>			
9:00-10:40	<b>12 The Hunter-gatherer Backbone of the Northeast Asian Bronze Age: Late Paleolithic and Neolithic Adaptations to Northern Latitudes</b>  <i>BARTON Loukas / CLARK Julia</i>	<b>13 Patterns of Craft Production Since Neolithic Times in China Part I</b>  <i>XIE Liye / CHEN Xingcan</i>	<b>14 Advances in Bioarchaeology</b>  <i>ERDENE Myagmar</i>
10:40-11:00	Coffee break		
11:00-12:40	<b>12 The Hunter-gatherer Backbone of the Northeast Asian Bronze Age: Late Paleolithic and Neolithic Adaptations to Northern Latitudes</b>  <i>BARTON Loukas / CLARK Julia</i>	<b>13 Patterns of Craft Production Since Neolithic Times in China Part I</b>  <i>XIE Liye / CHEN Xingcan</i>	<b>15 Trade and Interaction in Northeast Asia Part I: Crossroads of Initial and Early States in Northeast Asia</b>  <i>NAKAMURA Daisuke / SEYOCK Barbara</i>
12:40-14:00	Lunch		
<i>afternoon</i>			
14:00-15:40	<b>18 Ritual Spaces, Images and Artifacts</b>  <i>WRIGHT Joshua</i>	<b>16 Patterns of Craft Production Since Neolithic Times in China Part II</b>  <i>XIE Liye / CHEN Xingcan</i>	<b>17 Trade and Interaction in Northeast Asia Part II: The Yellow Sea Interaction Sphere - Moving Beyond the Texts</b>  <i>LEE Dennis</i>
15:40-16:00	Coffee break		
16:00-17:40	<b>18 Ritual Spaces, Images and Artifacts</b>  <i>WRIGHT Joshua</i>	<b>16 Patterns of Craft Production Since Neolithic Times in China Part II</b>  <i>XIE Liye / CHEN Xingcan</i>	<b>17 Trade and Interaction in Northeast Asia Part II: The Yellow Sea Interaction Sphere - Moving Beyond the Texts</b>  <i>LEE Dennis</i>
18:00	<b>SEAA Membership Meeting (for all SEAA6 participants)      ROOM A</b>		

## TIMETABLE

<b>June 10 Tuesday</b>			
	Room A	Room B	Room C
<i>morning</i>			
9:00-10:40	<b>19 Mobility, Subsistence, and Interaction on the Eurasian Steppes</b>  <i>HOULE Jean-Luc</i>	<b>20 Imperial Silks and Noble Jewels: Aspects of Tang Archaeology</b>  <i>MUELLER Shing</i>	<b>21 Archaeology of Ancient Interactions between Mongolia and Korea</b>  <i>KANG In Uk</i>
10:40-11:00	Coffee break		
11:00-12:40	<b>19 Mobility, Subsistence, and Interaction on the Eurasian Steppes</b>  <i>HOULE Jean-Luc</i>	<b>20 Imperial Silks and Noble Jewels: Aspects of Tang Archaeology</b>  <i>MUELLER Shing</i>	<b>21 Archaeology of Ancient Interactions between Mongolia and Korea</b>  <i>KANG In Uk</i>
12:40-14:00	Lunch		
<i>afternoon</i>			
14:00-15:40	<b>22 Subsistence and Domestication from South to North</b>  <i>WEISSKOPF Alison</i>	<b>23 Production, Distribution and Appreciation: New Aspects on East Asian Lacquer Wares</b>  <i>PRUECH Margarete</i>	<b>24 Archaeology in Asia: History, Practises, and Interpretation</b>  <i>KINGSBERG Miriam</i>
15:40-16:00	Coffee break		
16:00-17:40	<b>22 Subsistence and Domestication from South to North</b>  <i>WEISSKOPF Alison</i>	<b>23 Production, Distribution and Appreciation: New Aspects on East Asian Lacquer Wares</b>  <i>PRUECH Margarete</i>	<b>25 Advances in Application of the Latest Techniques to Eastern Asia Archaeology</b>  <i>JIN ZhengYao / LI Sheng-Hua</i>
<i>18:00</i>	<i>Farewell Reception</i>		





# Sessions



**JUNE 6, Friday afternoon**

Round Hall

13:30-14:00 **Opening Ceremony**14:00-17:45 **01 Opening Session**

Organizer: TUMEN Dashtseveg

TSERENDAGVA Yadmaa: *Recent Studies of the Mongolian Paleolithic*TUMEN Dashtseveg: *Bronze and Early Iron Age Cultural Diversity and Population Migration in Mongolia*ERDENEBAATAR Diimaajav: *Results of the Study of the Xiongnu Royal Cemetery at Gol mod-2*ODBAATAR Tserendorj: *Archaeological Investigations of 6-9th Century in Mongolia*ERDENEBAT Ulambayar: *Archaeology of the Great Mongolian Empire (XII-XIV Century AD)***JUNE 7, Saturday morning****02 Archaeology of Mongolia**

Room A Organizers: TUMEN Dashtseveg / ERDENEBAT Ulambayar / ERDENEBAATAR Diimaajav

09:00-09:20 ANKHSANAA Ganbold, VANCHIGDASH Chuluunkhuu: *Chronology of Rock Art of Mongolia*09:20-09:40 BAYARSAIKHAN Jamsranjav: *Strange New Deer Stone at Zunii Gol Site*09:40-10:00 ODBAATAR Tserendorj: *Archaeological Investigation of Uighur Royal Tombs Called "Durvuljin"*10:00-10:20 ERDENEBAATAR Diimaajav: *Archaeological Study of the Bronze Age Culture in Mongolia*10:20-10:40 VANCHIGDASH Chuluunkhuu, TUMEN Dashtseveg: *Anthropology of Xiongnu*

10:40-11:00 Coffee break

11:00-11:20 BOLDBAATAR Yundebat: *Some Thoughts of Images on Deer Stones and their Interpretation*11:20-11:40 BOLORMAA Sakhia, BAT-ERDENE Sukhbaatar, BYAMBA-OCHIR Tsedendamba: *Archaeological Study of the Xiongnu Cemetery in North Mongolia*11:40-12:00 ERDENE BOLD Lkhagvasuren, VANCHIGDASH Chuluunkhuu: *The Features of Animal Sacrifices in the Xiongnu Cemetery in Elst Ar, Central Mongolia*12:00-12:20 TEYSSANDIER Nicholas, GUNCHINSUREN Byambaa, ANTOINE P., BRAGA José, CALASTRENC G., DISCAMPS E., DURANTHON R., IZUHO M., LKUNDEV G., MENARD C., TSEDENDORJ B., ZWYNS Nicolas: *Archaeological Survey and Upper Paleolithic Assemblages in North-Eastern Mongolia: Introducing the Havstgayt Valley*

12:20-12:40 Discussion

**03****Surfacing the Past: Field Methods and Techniques of Archaeological Investigations in East and Central Asia**

Room C

Organizer: CHAN Annie

- 09:00-09:20 JIA Xiaobing: *Considering Methods and Theories of Island Archaeology: Excavations at Xiaozhushan, Guanglu Island (Liaoning, China)*
- 09:20-09:40 GUSEV Sergey: *Results of Complex Geoarchaeological and Landscape Investigations of Old Whaling Culture Site Un'en'en (Northwest Beringia)*
- 09:40-10:00 MORIYA Toyohito: *A Study of the Utilization of Wood to Build Pit-dwellings from Epi-Jomon Culture to Satsumon Culture in Hokkaido Region, Japan*
- 10:00-10:20 BOURGEOIS Jean, GHEYLE Wouter, DVOMIKOV A., EBEL A., PLETS Gertjan: *Archaeological Field Methods and Techniques for Landscape Archaeological Research in the Altai Mountains (Siberia, Russia)*
- 10:20-10:40 Discussion
- 10:40-11:00 Coffee break
- 11:00-11:20 CHAN Annie, CONG Dexin: *Excavation and Survey Methods for Reconstructing Bronze Age Stone Architecture in the Dzungarian Alatau (Xinjiang, China)*
- 11:20-11:40 GILLAM J. Christopher, GLADYSHEV Sergei A., GUNCHINSUREN Byambaa, OLSEN John W., TABAREV Andrei V. and ZWYNS Nicolas: *Visualizing Time, Space, and Context in Paleolithic Landscapes of Northern Mongolia*
- 11:40-12:00 CHEN Pochan, CHENG Chief-fu Jeff: *Archaeologies of Trail, Road, and Path: a Case Study of Pattonkan Historical Trail in Taiwan*
- 12:00-12:20 ZHOU Hai: *Archaeological Methods and Theories for Investigating Neolithic Cave sites in Guilin, China*
- 12:20-12:40 Discussion

**04****The Study of Artifacts: Production, Distribution and Interpretation**

Room B

Chair: CHIOU-PENG TzeHuey

- 09:00-09:20 CUI Jianfeng, NI Run'an, LIU Guoxiang, BAI Jinsong: *Chemical Analyses of Glass Beads from Mogushan, a Xianbei Cemetery in Hulun Buir of Inner Mongolia*
- 09:20-09:40 OWLETT Tricia: *Shell Tool Production Systems in the Ryukyu Islands, Japan: Raw Material and Manufacturing Technology*
- 09:40-10:00 YOO Yongwook: *A Closer Look at the Handaxe from Imjin-Hantan River Area, Korea*
- 10:00-10:20 ZHUSHCHIKHOVSKAYA Irina, NIKITIN Yuri G.: *Cultural Contexts of First Bronzes in the Southern Russian Far East*
- 10:20-10:40 LEBEDINTSEV Alexander: *Distribution of Metal throughout the Coastal Margins of the Okhotsk Sea Maritime Region*
- 10:40-11:00 Coffee break
- 11:00-11:20 MATSUMOTO Keita: *The Beginning of the Bronze Age in Xinjiang and the Great Wall Region*
- 11:20-11:40 LYONS James Scott: *Iron Knives of the Early Kofun Period: Forms, Production, and Circulation*
- 11:40-12:00 CHIOU-PENG TzeHuey: *Contextualizing Isolated Archaeological Finds: a Case Study of the Rudimentary Kettledrums in Yunnan and the Red River Delta of Vietnam*
- 12:00-12:20 KIZAWA Naoko: *A Study of "Double-sided Comb" in Ancient East Asia: Excavated Examples and their Origin*
- 12:20-12:40 Discussion

**JUNE 7, Saturday afternoon****05 New Perspectives of Paleopathology in East Asia**

Room A

Organizers: FUJITA Hisashi / ERDENE Myagmar / SHIN Dong-Hoon

- 14:00-14:20 FUJITA Hisashi: *Paleohealth of Jomon Peoples in Japan from the Prevalence of Cribra Orbitalia*
- 14:20-14:40 MIJIDDORJ Enkhbayar: *Bioarchaeological Research of Salkhit Site in Northern Mongolia*
- 14:40-15:00 FUJISAWA Shiori: *Paleopathological Study on the Skeletal Remains of Edo Period in Japan*
- 15:00-15:20 ERDENE Myagmar: *Dental Pathologies in the Bronze Age Populations from Mongolia*
- 15:20-15:40 Discussion
- 15:40-16:00 Coffee break
- 16:00-16:20 WOO Eun Jin: *A Case of Dwarfism from the Joseon Dynasty, South Korea*
- 16:20-16:40 KIM Myeong Ju, SHIN Dong-Hoon: *Paleopathological Studies on Korean Human Remains Excavated from 17th Century Lime-Soil Mixture Barrier (LSMB) Tomb*
- 16:40-17:00 LEE Won-Joon, LEE U-Young, GAVAACHIMED Lkhagvasuren, TUMEN Dashtseveg, LEE Kwang-Ho: *Craniofacial Reconstruction from a Skull of a Young Female in Neolithic Age of Mongolia*
- 17:00-17:40 Discussion

**06 Chinese Archaeology**

Room B

Chair: WILLIAMS James

- 14:00-14:20 LIN Kuei-chen: *Settlements on the Chengdu Plain in the Second and First Millennia BC*
- 14:20-14:40 LAI Celine Y. Y.: *An Early Bronze Age Culture in Hunan: Where, When and Who?*
- 14:40-15:00 ZHU Si-mei: *Demographic Research on the Bones of Jinggouzi Site in Linxi County of the Inner Mongolia Area*
- 15:00-15:20 WILLIAMS James T.: *Settlement Patterns During the Iron Age In Zhangwu, Liaoning, China: a View from the Yan Periphery*
- 15:20-15:40 Discussion
- 15:40-16:00 Coffee break

**07 Ritual Practice, Settlements, and Subsistence in North Asia**

Room B

Chair: BRODERICK Lee

- 16:00-16:20 LEBEDINTSEV Alexander: *Formation and Development of the Okhotsk Sea Maritime Cultures*
- 16:20-16:40 TABAREV Andrey, POPOV Alexander N.: *New Data on the Neolithic in the Russian Far East, and its Correlation within the Pacific*
- 16:40-17:00 BRODERICK Lee, SEITSONEN Oula, HOULE Jean-Luc: *Rings of Fire?*
- 17:00-17:20 WEI Jian: *Early Mongol Remains in Archaeological Perspective (7th-12th Century)*
- 17:20-17:40 Discussion

## 08 Making Places in Early Korea: Patterns of Space in Households, Communities, and States

Room C

Organizer: LEE Rachel

- 14:00-14:20 LEE Rachel: *Boundary Making in Mumun Period Households*
- 14:20-14:40 KO Min-Jung, YUN Ho-Pil: *Bronze Age (Mumun Period) Village Organization and Networks: Research from the Western Gyeongnam Region*
- 14:40-15:00 KIM Kwon-Joong: *Changing Patterns of Bronze Age Intra-Village Spatial Organization: Research from the Gyeonggi Region*
- 15:00-15:20 KIM Bumcheol: *Hierarchy, Heterarchy and Individuals: Middle Bronze Age Intra-Community Mortuary Practices in Central-Western Korea*
- 15:20-15:40 Discussion
- 15:40-16:00 Coffee break
- 16:00-16:20 KANG Dong Seok: *Understanding Socioeconomic Hierarchy through the Spatial Analysis of Dolmen Distribution Patterns*
- 16:20-16:40 OH Kangwon: *The Spatial Intersection of Ritual Practice and Power Negotiation: The Early Iron Age Houses of the Wunushan Hillfort*
- 16:40-17:00 LEE Sungjoo, PARK Seongmin: *Changing Spatial Patterns in the Development of Ancient Silla Burials*
- 17:00-17:20 KIM Taehee, SOHN Chul: *The Spatial Organization and Social Landscape of Goguryeo Cemeteries in Jian*
- 17:20-17:40 Discussion

### JUNE 8, Sunday morning

## 09 Redefining Configurations of Urban Settings: Centers of Social and Economic Activity in the Inner Asian Steppe

Room A

Organizer: MILLER Bryan

- 09:00-9:20 BEMMANN Jan H.: *Aspects of Urbanization and Centrality in Nomadic Empires*
- 09:20-9:40 MILLER Bryan K.: *Reconsidering Urban Settings of the Xiongnu*
- 09:40-10:00 FRANKEN Christina: *Architecture of Power in Nomadic Societies: Religious and Profane Architecture in the Old Uighurian Capital Karabalgasun*
- 10:00-10:20 BENNETT Gwen: *Cities for Whom? Liao Administrative and Production Centers in Chifeng, Inner Mongolia, China*
- 10:20-10:40 Discussion
- 10:40-11:00 Coffee break
- 11:00-11:20 KRADIN Nikolay: *Kitan Urbanization of the Mongolian Steppes*
- 11:20-11:40 KHARINSKII Artur: *The "Wall of Chingis Khan": Frontier Fortification of the Liao Empire*
- 11:40-12:00 REICHERT Susanne, POHL Ernst: *Urbanism in the Mongol Empire: Karakorum and its Hinterland*
- 12:00-12:40 Discussion

## 10 **Charting the Social Lives of Objects and Goods in China: Perspectives from Archaeology and Art History**

Room B

Organizers: SUN Yan / ALLARD Francis

- 09:00-09:20 PRIEWE Sascha: *The Fragmentation of Jade along the Late Neolithic Yangzi River*
- 09:20-09:40 SUN Yan: *The Life History of Bronze Willow-Leaf Shaped Swords in Early Western Zhou China*
- 09:40-10:00 HOMMEL Peter: *Gathered and Given: Exploring the Composite Biographies of Bead Assemblages in the Tombs of the Western Zhou*
- 10:00-10:20 ALLARD Francis: *Transformations and Incorporations at the Crossroad: The Case of the Nanyue Kingdom(2nd century BCE) in Southern China*
- 10:20-10:40 Discussion
- 10:40-11:00 Coffee break
- 11:00-11:20 CHEN Pochan: *The Social Life of Salt in Ancient China*
- 11:20-11:40 RUBINSON Karen S.: *On the Road Again: Chinese Mirrors in Afghanistan*
- 11:40-12:00 DU Hui: *Appropriating the Other: Exchange, Material Culture and Colonialism in Taiwan, 1850-1945*
- 12:00-12:20 LINDUFF Katheryn: *Artifacts that Invoke the Aura and Authority of the Ancient*
- 12:20-12:40 Discussion

## 11 **Starting Over Again: the Early Palaeolithic Research in Japan Today**

Room C

Organizers: IKAWA-SMITH Fumiko / SATO Hiroyuki

- 09:00-09:20 IKAWA-SMITH Fumiko: *Introduction*
- 09:20-09:40 KURODA Atsushi, KIKUCHI Kyoichi, KOMUKAI Hiroaki, TAKEDA Yoshio: *Investigation of the Kanedori Site in Iwate Prefecture, Northern Honshu*
- 09:40-10:00 OTAKE Noriaki: *Study of the Palaeolithic Industries of the Takesa-Nakahara Site, Nagano Prefecture, Central Honshu*
- 10:00-10:20 UEMINE Atsushi, MATSUFUJI Kazuto, SHIBATA Masaki: *Recovery of the Old Ground Surfaces at Sunabara Site in Shimane Prefecture, Japan*
- 10:20-10:40 Discussion
- 10:40-11:00 Coffee break
- 11:00-11:20 AKOSHIMA Kaoru, YANAGIDA Toshio: *Continuing Investigation at the Sozudai Site, Northern Kyushu*
- 11:20-11:40 SATO Hiroyuki, HAGIWARA Hirofumi, SHIOZUKA Koichi: *The Lithic Assemblages of the Iriguchi Site, Nagasaki Prefecture, Northern Kyushu*
- 11:40-12:00 WADA Yoshifumi: *Lithic Assemblages from the Lowest Layer of the Ono Site, Hitoyoshi, Southern Kyushu*
- 12:00-12:20 SATO Hiroyuki: *Comments: Recent Research on the Japanese Early Palaeolithic*
- 12:20-12:40 Discussion

**JUNE 9, Monday morning****12 The Hunter-gatherer Backbone of the Northeast Asian Bronze Age: Late Paleolithic and Neolithic Adaptations to Northern Latitudes**

Room A

Organizers: BARTON Loukas / CLARK Julia

- 09:00-9:20 BARTON Loukas: *Microblades, Marginality, and Mobility*
- 09:20-9:40 TABAREV Andrey: *Principal Technological Innovations in the Stone Age of Northern Mongolia, 45-8,000 BP*
- 09:40-10:00 ZWYNS Nicolas: *The Open-air Site of Tolbor 16 (Northern Mongolia): New Results and Perspectives*
- 10:00-10:20 MORGAN Christopher: *From Serial Specialist to Cereal Specialist: Managing Hunting and Husbandry in the Context of the Terminal Pleistocene-Early Holocene Fitness Landscape of North China*
- 10:20-10:40 Discussion
- 10:40-11:00 Coffee break
- 11:00-11:20 JANZ Lisa: *Dune-fields, Wetlands, and Sheep in Mongolia: Finding the Origins of Pastoralism in Pre-pastoralist Societies*
- 11:20-11:40 CLARK Julia K.: *Hunters in a Herder's World: Using Ethnoarchaeology, Historical Data and Cultural/ecological Modelling to Investigate Mixed Hunting-herding Strategies in Northern Mongolia*
- 11:40-12:00 WRIGHT Joshua: *Continuity and Change in the Landscape Networks of Holocene Mongolia*
- 12:00-12:40 Discussion

**13 Patterns of Craft Production Since Neolithic Times in China, Part I**

Room B

Organizers: XIE Liye / CHEN Xingcan

- 09:00-9:20 CHEN Xingcan: *Were Neolithic Rice Paddies Plowed? Functional Analysis of Plow-shaped Tools from Pishan in the Lower Yangzi River Region, China*
- 09:20-9:40 FLAD Rowan Kimon: *Comparing Prehistoric Salt Production and Associated Social Networks in Shandong and the Three Gorges*
- 09:40-10:00 KIKUCHI Hiroki: *The Birth of the Horse Production System during the Zhou Dynasty, China*
- 10:00-10:20 MAKIBAYASHI Keisuke: *Multiplicity of the Farming Tools of Rice Cultivation in Prehistoric China*
- 10:20-10:40 Discussion
- 10:40-11:00 Coffee break
- 11:00-11:20 XIE Liye: *Self-sufficient Household Production of Bone Spades and its Marginal Effects in Early Hemudu Culture, 7,000-6,000 BP, China*
- 11:20-11:40 NIWA Takafumi: *A Transformation of "Multi-production System" in China*
- 11:40-12:00 HUNG Ling-yu: *Technology and Organization of Pottery Production: Ethnoarchaeology in the Upper Yellow River Region, NW China*
- 12:00-12:40 Discussion

**14 Advances in Bioarchaeology**

Room C

Chair: ERDENE Myagmar

- 09:00-09:20 BROSEDER Ursula, BEMMANN Jan, YERUUL-ERDENE Ch., GANTULA J.-O., GRUPPE Gisela, McGLYNN George: *Bioarchaeological Research in the Upper Orkhon Valley: State of Research and Future Prospects*
- 09:20-09:40 GAVAACHIMED Lkhagvasuren, CHOI Jee-Hye, MIN Na Young, HAN Sunghoon, CHOI Jaesung, LEE Si-Eun, LEE Ho Woon, JUNG Eui Do, KIM Sang Kyun, LEE Won-Joon, KIM Jae-Hyun, TUMEN Dashtseveg, LEE Kwang-Ho: *Neolithic Populations of Far Eastern Asia (5,000-7,000 yBP) Carried the Europe-prevailing mtDNA Haplogroups*
- 09:40-10:00 GAVAACHIMED Lkhagvasuren, CHOI Jee-Hye, MIN Na Young, HAN Sunghoon, CHOI Jaesung, LEE Si-Eun, LEE Ho Woon, KIM Jae-Hyun, TUMEN Dashtseveg, LEE Kwang-Ho: *The First Molecular Key to Unveiling the Mysterious Genealogy of Genghis Khan's Family*
- 10:00-10:20 LIU Ming: *Research on Ancient Human Stature in Mid-southern Inner Mongolia, from the Bronze Age to the Early Iron Age*
- 10:20-10:40 Discussion
- 10:40-11:00 Coffee break

**15 Trade and Interaction in Northeast Asia, Part I:  
Crossroads of Initial and Early States in Northeast Asia**

Room C

Organizers: NAKAMURA Daisuke / SEYOCK Barbara

- 11:00-11:20 SEYOCK Barbara: *Memories from Abroad: Han-Chinese and Epi-nomadic Heritage in Korean and Japanese Archaeological Contexts*
- 11:20-11:40 NAKAMURA Daisuke: *Bead Traders and Political Power during the Formation of Early States*
- 11:40-12:00 NAGATOMO Tomoko: *The Innovation of Trade Routes from the 1st Century AD to the 3rd Century AD*
- 12:00-12:20 UENO Yoshifumi: *Chinese Style Items in the Social System of the Early States in East Asia*
- 12:00-12:40 YAMAMOTO Takafumi: *Trade Innovations of Baekje and Silla during State Formation*

**JUNE 9, Monday afternoon****16 Patterns of Craft Production Since Neolithic Times in China, Part II**

Room B

Organizers: XIE Liye / CHEN Xingcan

- 14:00-14:20 HUANG Tsuimei: *Bead-strings with Trapezoidal Plaque from the Zhou Dynasty of China and their Connection with Headsets of the Northern Grasslands*
- 14:20-14:40 OMURA Mari: *Braids Excavated in Xinjiang, China and their Manufacturing Techniques*
- 14:40-15:00 YOSHIDA Yasuyuki: *The Production Technique of Ring Ornaments in the Chinese Neolithic - Bronze Age Period: Insights from Workshop Sites in Northern Vietnam*
- 15:00-15:20 QIN XiaoLi: *The Study of Turquoise Ornaments Technology from Later Neolithic to Early Bronze Age of China*
- 15:20-15:40 Discussion
- 15:40-16:00 Coffee break
- 16:00-16:20 SAGAWA Masatoshi: *Innovations and Adoptions of Roof Tiles across East Asia in Historic Periods of China*
- 16:20-16:40 GUO Qinghua: *Assessing Two Types of Roofing Tiles from Bohai's Shangjing*
- 16:40-17:00 DING Yu: *A Brief Discussion about the Spread of the Technology of Fully Glazed Wares in the Chinese Ceramic Kilns*
- 17:00-17:20 KOZUKI Katsumi: *Cross-cultural Production, Trade and Consumption of the Hizen Ware Bowls with Dragon Pattern*
- 17:20-17:40 Discussion

**17 Trade and Interaction in Northeast Asia, Part II:  
The Yellow Sea Interaction Sphere - Moving Beyond the Texts**

Room C

Organizer: LEE Dennis

- 14:00-14:20 LEE Dennis: *Invisible Borderlands and Silent Frontiers: the Keyhole-Shaped Tombs on the Korean Peninsula*
- 14:20-14:40 GILAIZEAU Linda: *Diplomacy from the Grave: Interactions between Western Japan and the East Asian Continent from a Burial Point of View*
- 14:40-15:00 BARNES Gina: *Inspiration for Combed Decoration on Silla Ware from South China?*
- 15:00-15:20 IM Hyojai, KO Jaewon: *The Gosan-ri Neolithic Site and its Place in Northeast Asia*
- 15:20-15:40 PAK Yangjin: *Interaction between Northeast China and Korean Peninsula as Seen in Bronze Age Pottery*
- 15:40-16:00 Coffee break
- 16:00-16:20 TAMURA Tomomi, OGA Katsuhiko: *Distribution of Lead-barium Glass in Ancient Japan*
- 16:20-16:40 KIM Gyuhoo, KIM Nayoung: *The Characteristics of Lead Barium Glass on the Ancient Korean Peninsula*
- 16:40-17:00 LANKTON James, GRATUZE Bernard, BRILL Robert H.: *What Yellow Sea Interaction Sphere? The Glass Evidence*
- 17:00-17:20 NELSON Sarah: *Discussant*
- 17:20-17:40 Discussion

**18 Ritual Spaces, Images and Artifacts**

Room A

Chair: WRIGHT Joshua

- 14:00-14:20 REINHART Katrinka: *Food, Wine, and Blood: Old Imagistic Religiosity in the Early Bronze Age of Northern China*
- 14:20-14:40 LAM Hau-ling Eileen: *Simulation and Representation: Bi Discs in Han Burial Ritual*
- 14:40-15:00 WEST Erin Elizabeth: *Animal Style Art in the Dian Kingdom: the Religious and the Secular*
- 15:00-15:20 MONTEITH Francesca: *Lotus Spitting Dragons*
- 15:20-15:40 Discussion
- 15:40-16:00 Coffee break
- 16:00-16:20 GUSEV Sergey: *Man's House (Karigi (Canadian Eskimo)-Ka'igit (Asian Eskimo)): the Sacred Place in the Village of Ancient Whalers (Unenen)*
- 16:20-16:40 KOVALEV Alexey: *Composition, Structure and Significance of Deer (Stag) Stone Ritual Sites in Central Mongolia: on the Excavations of Uushigiin Uvur (Ulaan uushig) and Surtiin Denzh Sites in Hovsgol Aimag*
- 16:40-17:00 PERRIN Ariane: *The Image of the Deceased in Koguryŏ Funerary Art: a Comparison between the Ji'an and Pyongyang Regions*
- 17:00-17:20 BRADFORD Rosalind E: *Prometheus: How Fire Came to Japanese Art*
- 17:20-17:40 Discussion

**JUNE 10, Tuesday morning****19 Mobility, Subsistence, and Interaction on the Eurasian Steppes**

Room A

Chair: HOULE Jean-Luc

- 09:00-09:20 HOULE Jean-Luc: *Long-Term Occupation and Seasonal Mobility in Mongolia*
- 09:20-09:40 HSU Yiu-kang (Gary): *The Numbers Speak for Themselves: How Chemical Datasets of Bronze Artefacts can Illuminate the Communication of Metalwork in the Eastern Eurasian Steppe*
- 09:40-10:00 KELSOE Camilla, CLARK Julia, BARTON Loukas: *Technological Investment and Mobile Life: the Logic of Pottery Use in Northern Mongolia*
- 10:00-10:20 LIU Xinyi: *The Structures of Everyday Life: Tran-Eurasian Exchange of Starchy Crops in Prehistory*
- 10:20-10:40 Discussion
- 10:40-11:00 Coffee break
- 11:00-11:20 PAN Ling: *Changes in the Nature of Cultural Exchange between the Northern Area of China and the Eurasia Steppe from the Late Stage of the Warring States Period to the Middle Stage of Western Han Dynasty*
- 11:20-11:40 TAYLOR William, TUMURBAATAR Tuvshinjargal, BAYARSAIKHAN Jamsranjav: *Horseback Riding and Equine Cranial Morphology in the Mongolian Bronze Age*
- 11:40-12:00 TSYDENOVA Natalia: *Cultural Correlations between the Neolithic Sites of the Baikal Region and Eastern Mongolia*
- 12:00-12:20 BRODERICK Lee, SEITSONEN Oula, HOULE Jean-Luc: *The Culture Changes but the Herd Stays the Same: Bronze Age and Xiongnu Subsistence*
- 12:20-12:40 Discussion

**20****Imperial Silks and Noble Jewels: Aspects of Tang Archaeology**

Room B

Organizer: MUELLER Shing

- 09:00-09:20 EHRENWIRTH Rebecca: *Buried in a Square: Tang-Dynasty Tombs and their Structure*
- 09:20-09:40 HUBER C. F. Moritz: *The Aftermath of An Lushan Seen through Archaeological Evidence: a Xenophobic Turn and Stigmatisation of Foreigners?*
- 09:40-10:00 KNALLER Regina: *Silk for Buddha: the Textile Treasury of the Famen Si in Shaanxi Province, P. R. China*
- 10:00-10:40 Discussion
- 10:40-11:00 Coffee break
- 11:00-11:20 KNALLER Regina, HOFMANN-de KEIJZER Regina, VAN BOMMEL Maarten R., JOOSTEN Ineke, HEISS Andreas G., NATSCHLAEGGER Helga, PICHLER Bernhard, ERLACH Rudolf, MEGENS Luc, de KEIJZER Matthijs,: *Yellow for Buddha: Investigation of Colourants and Metal Threads on Silk-Textiles from the Famen Temple, Shaanxi Province, P. R. China*
- 11:20-11:40 MUELLER Shing: *The Silks of the Tang Famen Temple: a Reconstruction of their Deposition in the Crypt and Some New Features in Weaving and Textile Decorations*
- 11:40-12:00 FILIP Sonja: *A Noblewoman's Attire: the Reconstructed Jewellery of Li Chui and Some Thoughts on the Development of Tang Dynasty Adornment*
- 12:00-12:40 Discussion

**21****Archaeology of Ancient Interactions between Mongolia and Korea**

Room C

Organizer: KANG In Uk

- 09:00-09:20 JOO Kyeongmi: *A Comparative Study of Gold and Silver Ornaments of Nangnang and those of the Xiongnu Tombs*
- 09:20-09:40 KANG In Uk: *Adoption of the Floor-heating System (Ondol) in Xiongnu Fortresses and Role of Sedentary People in the Xiongnu Empire*
- 09:40-10:00 CHOI Sungrak: *The Character of the Mound Jar-coffin Tombs in Yeongsan River Basin*
- 10:00-10:20 CHANG Yoon chung: *Comparative Analysis of Animal Sacrifices in the Tombs of Three Kingdom Period and those of the Xiongnu Tombs in Mongolia*
- 10:20-10:40 CHANG Eunjeong: *Comparison of the Burial Practices of the Xiongnu in Mongolia and those in the Altai*
- 10:40-11:00 Coffee break
- 11:00-11:20 YANG Si-Eun: *A Study of Northern Cultural Characteristics in Koguryo*
- 11:20-11:40 JO So-Eun: *Comparative Analysis of the Construction of the Pazyryk Kurgans in the Altai and the Silla Kurgans in Kyongju*
- 11:40-12:00 HAN Jinseong: *Typology and Chronological Sequence of Buckle Plaques of Xiongnu and their Diffusion to East Asia*
- 12:00-12:20 YUN Hyeungwon , EREGZEN Gelegdorj: *Comparative Research on the Hunnu Tombs of Mongolia and the Nangnang Tombs of Korea*
- 12:20-12:40 Discussion

**JUNE 10, Tuesday afternoon****22 Subsistence and Domestication from South to North**

Room A

Chair: WEISSKOPF Alison

- 14:00-14:20 CASTILLO Cristina: *Rice, Millets and Translocation to Southeast Asia*
- 14:20-14:40 LEE Cheng-Yi, CHEN Maa-Lin, DITCHFIELD Peter, LIN Hsiu-Man, LIN Li-hung, LO Ching-Hua, POLLARD A. Mark, TSAI Hsi-Kuei, WANG Pei-Ling: *Paleodiets of the Yuan-Shan People in Taiwan: Evidence from Stable Carbon and Nitrogen Isotopic Analyses of Human Skeletons and Faunal Remains*
- 14:40-15:00 WEISSKOPF Alison, QIN Ling, FULLER Dorian: *From Wet to Dry and Back again: the Ecology of Domesticating and Intensifying Early Rice in the Lower Yangtze*
- 15:00-15:20 HOSOYA Leo Aoi, NAKAMURA Oki, SEGUCHI Shin'ji, SHIBUTANI Ayako: *What did Jomon People Eat in Fact? Chronological Shifts in Japanese Jomon Subsistence Strategies on the Basis of Local Characteristics of North Tohoku Area*
- 15:20-15:40 Discussion
- 15:40-16:00 Coffee break
- 16:00-16:20 SHIBUTANI Ayako, HOSOYA Leo Aoi, NAKAMURA Oki, SEGUCHI Shin'ji: *Plant Food Ways Reflected from Microbotanical Remains and Grinding Stones in Prehistoric Northern Japan*
- 16:20-16:40 YANG Yimin: *Subsistence Strategy of Xiaohe Culture in Early Bronze Age, Xinjiang, Northwestern China*
- 16:40-17:00 FENNER Jack, TUMEN Dashtseveg, KHATANBAATAR Dorjpurev: *Stable Isotope Analysis of Mongol Empire Period Diet in Eastern Mongolia*
- 17:00-17:20 JONES Martin: *The Role of Minor Crops in the Development of Eurasian Agriculture*
- 17:20-17:40 Discussion

**23 Production, Distribution and Appreciation: New Aspects on East Asian Lacquer Wares**

Room B

Organizer: PRUECH Margarete

- 14:00-14:20 BROSEDER Ursula: *Patterns of Consumption, Questions for Production: Lacquer Vessels from Eurasia (100 BCE – 100 CE)*
- 14:20-14:40 PRUECH Margarete: *Han Dynasty Lacquer Boxes in Crimea: Remarks on their Possible Place of Manufacture and Distribution*
- 14:40-15:00 KIESER Annette: *New Aspects on Six Dynasties Lacquer Ware*
- 15:00-15:40 Discussion
- 15:40-16:00 Coffee break
- 16:00-16:20 JUNG Soon-Chim: *Technical Innovation and Material Diversity: Tang Dynasty Lacquer Ware*
- 16:20-16:40 LEE Nan Hee: *A Study on an Early Goryeo Dynasty Lacquer Incense Box Decorated with Flora and Waterfowl Motifs*
- 16:40-17:00 FRICK Patricia: *Simplicity and Reserve: Song Dynasty Lacquer Ware*
- 17:00-17:40 Discussion

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**24**

**Archaeology in Asia: History, Practices, and Interpretation**

Room C

Chair: KINGSBERG Miriam

- 14:00-14:20 STEIN Britta: *The Origin and Development of Japanese Archaeology before 1945*
- 14:20-14:40 KINGSBERG Miriam: *Japanese Archaeology/Archaeology of Japan: Postwar Political Uses of Foreign Pasts*
- 14:40-15:00 BROWN Clayton: *The Role of Antiquities in Sino-American Relations: a Century of Cultural Heritage Management*
- 15:00-15:20 O'DELL Emily: *Memories of the Mongols at Merv: Surveying Archaeological & Textual Accounts*
- 15:20-15:40 DENNELL Robin: *Hallam Movius and the Line that never was*
- 15:40-16:00 Coffee break

**25**

**Advances in Application of the Latest Techniques to Eastern Asia Archaeology**

Room C

Organizers: JIN ZhengYao / LI Sheng-Hua

- 16:00-16:20 LI Sheng-Hua: *Human Settlements and Climate Changes over the Last Ten Thousand Years on the Ordos Plateau*
- 16:20-16:40 MA Jiangbo, JIN Zhengyao, FAN Anchuan, XIANG Taochu, CHEN Fukun: *Lead Isotope Provenance Analyses of Bronzes Unearthed from Tanheli Site in Hunan Province, China*
- 16:40-17:00 FAN Anchuan, JIN Zhengyao, WU Youjin: *Firing Temperature Estimation of Pottery from Jinlianshan and Xueshan Sites at Fuxian Lake, Yunnan Province*
- 17:00-17:20 LIU YingYu, JIN Zhengyao, FAN Anchuan, HUANG Fengchun, HUANG Fang, ZHANGSUN Yingzi: *Scientific Analyses of Bronze Steamers from the Yejiashan Western Zhou Cemetery in Suizhou, Hubei, China*
- 17:20-17:40 JIN ZhengYao: *Reinterpreting the Manufacturing Technique and the Structure of the Early Zhou Bronze Steamers in the Izumiya Museum Collection*

# Abstracts



## 01 Opening Session

*ORGANIZER:* **TUMEN Dashtseveg**

*ROOM:* A

*TIME:* **14:00-17:45, JUNE 6 (Friday)**

TSERENDAGVA Yadmaa

### **Recent Studies of the Mongolian Paleolithic**

Although the study of the Mongolian Paleolithic began in the late 19th and early 20th century, the artifacts were recovered from unclear contexts. Paleolithic artifacts made up only a small proportion of the large amount of material collected by the Central Asian expedition that the Natural History Museum of New York conducted in the Mongolian Gobi desert during the 1920's. Archaeological work over the past 60 years has identified and recovered large numbers of Paleolithic sites and artifacts. Although most sites consist of surface remains, the identification of stratified sites (such as Moiltyn Am, Orkhon-7, Orkhon-1, Tsagaan Agui, Chihen Agui, Tulbur, Rashaan Khad and Dorolj-1, 2) has made it possible to confirm the chronology of Paleolithic artifacts. A distinction can now be made between the Lower, Middle and Upper Paleolithic periods.

TUMEN Dashtseveg

### **Bronze and Early Iron Age Cultural Diversity and Population Migration in Mongolia**

Archaeological investigations in Mongolia have revealed significant cultural diversity and complexity during the Bronze age and Early Iron age. In western Mongolia, cultural variants include the Afanasev culture (2800 - 2500BC), Chemyrchek culture (2500 - 1800 BC), Munkhkhairkhan culture (1800 - 1500 BC), Kheregsuur (or Stone mound or Kurgan) culture (1600 - 300 BC), Pazyryk culture (500 - 300 BC), Chandman (6th – 3rd century BC), as well as the variants associated with deer stones and rock art. These widely distributed cultures and materials have also been found in the Russian Altai, Tuva, Southern Siberia, and northwestern China. At least three cultural variants have been identified in central and eastern Mongolia. These are associated with slab graves (1600 - 300 BC), figured graves (1300 - 1100 BC), and Ulaanzuukh graves (1400 - 1300 BC). The geographic distribution and chronology of these many cultural variants in Mongolia clearly shows that by the time of the Bronze and Early Iron age, extensive population migrations had led to cultural admixture across much of northern and northeastern Asia.

ERDENEBAATAR Diimaajav

### **Results of the Study of the Xiongnu Royal Cemetery at Gol mod-2**

Session  
01

While working in Hanuy valley (Undur-Ulaan Sum, Arkhangai province) in 2001, the Mongolian-American joint expedition was told by a local inhabitant of the presence of an ancient site on a nearby hill. The site, which turned out to be a large Xiongnu cemetery, was mapped and named Golmod-2. A total of 188 Xiongnu burial mounds were identified. These include 98 with a square mound and a ramp ('dromus'), 9 with a circular mound and a ramp, and 81 with a circular mound and no ramp. Excavations were later carried out at the largest of the tombs. Although the tomb had been looted, archaeologists found the remains of chariots (including flower-shaped bronze ornaments associated with the chariot's umbrella). Roman glass cups were found in the mound, as well as in an accompanying mound. Dated to 80 BC, these cups may have reached Mongolia between 50 and 100 AD.

ODBAATAR Tserendorj

### **Archaeological Investigations of 6-9th Century in Mongolia**

Mongolia is one of the few countries with thousands of finds relating to the history and culture of nomadic populations during the 6th – 9th centuries, with field surveys locating hundreds of new sites each year. This archaeological data not only enriches our knowledge of this period, it also includes many artifacts not recorded in historical sources. From the time of the earliest surveys in Mongolia, archaeologists have known of the period's sacrificial idols and the wonderful monuments associated with famous Turkic kings and noblemen. While much work has been carried out by Mongolian scholars, international researchers have also studied and published on archaeological findings dating to the Turkic period. The sites dating to the Turkic or Uyghur period include stone humans, sacrificial idols, settlements, inscriptions, graves, and rock paintings.

ERDENEBAT Ulambayar

### **Archaeology of the Great Mongolian Empire (XII-XIV Century AD)**

Archaeological investigations in Mongolia and its surrounding territory have identified various sites dating to the historical period, including settlements, graves, 'stone men', as well as rock and wooden inscriptions. These different sites (including burial monuments and their anthropological remains) provide valuable and unique information about ethnocultural processes and ethnogenetic relationships among populations living during the historical period. In this paper, I discuss the preliminary results of recent archaeological work at the former capital city of Kharahorum (in the Orkhon valley) and at the settlement of Aurga (in the Kherlen valley) dating to the medieval or Mongolian empire period. I also discuss the results of excavations of Mongolian graves.

## 02 Archaeology of Mongolia

Organizers: **TUMEN Dashtseveg**  
**ERDENEBAT Ulambayar**  
**ERDENEBAATAR Diimaajav**

ROOM: A

TIME: **09:00-12:40, JUNE 7 (Saturday)**

### *Session Abstract:*

In the session will be presented main results of investigation of archaeological cultural monuments from different historical periods (from Bronze age up to Mongolian period) of Mongolia and its surrounding territories.

ANKHSANAA Ganbold, VANCHIGDASH Chuluunkhuu

### **Chronology of Rock Art of Mongolia**

According to studies of rock art in Mongolia and its neighboring areas, its style can be classified as follows: 1. Engraved on the rock surface; 2. Drawn with red ochre; 3. Drawn with black ink. Mongolia's rock art dates from the Stone Age up to the early Medieval period. The rock art images are reflections of the life style of people and their understanding of the natural environment. The rock art painted with natural red dye (red ochre) is more specific and depicts more ancient patterns (dating to the Neolithic period). The images of rock art with red ochre can be classified as follows: 1. Diagonal cross images, found in North Mongolia (Selenge river basin and the forest zone of Mongolia); 2. "X" type images; 3. Rectangular or circular images with points located inside and outside. There are images of a single man or many people holding hands. This type of rock art is mostly located in the steppe zone of Mongolia.

BAYARSAIKHAN Jamsranjav

### **Strange New Deer Stone at Zunii Gol Site**

Deer stones constitute one of the most significant artistic traditions which spread across vast areas of Eurasia, and are among the most prominent monuments of Bronze Age Mongolia. Although many scholars have studied their distribution and proposed semantic meanings since the end of the 19th century, many aspects of these monuments remain enigmas. Many new deer stones have recently been discovered and documented by both international and local archaeological expeditions in Mongolia. Some of these new deer stones have very rare and interesting images, such as frogs, birds (probably ibis or ibis-bill) and other strange animals carved on them, and these images reveal new aspects of culture, ritual and history related to Bronze Age monuments. In this paper, I analyze the images on one peculiar deer stone with strange images from the Zunii gol site of the Hovsgol aimag, documented in 2009 by Mongolian American "Deer stone" project, and consider the monument both in comparison to deer stone images elsewhere and to the ritual contexts of the site.

ODBAATAR Tserendorj

### **Archaeological Investigation of Uighur Royal Tombs Called "Durvuljin"**

Session

02

6-9th century Uyghur royalty funeral structure and funeral customs were not clear until 2006. One of the new archaeological discoveries is called "Durvuljin" which is a type of rectangular-walled Uyghur royal tomb and sacrificial place. Mongolian and Inner Mongolian archaeologist cooperated to excavate and study 6 Durvuljin among the around 40 discovered in the Orkhon valley from "Khara Balgas", considered to be the site of the magnificent Uyghur capital. Chamber tombs were discovered within some of these Durvuljin findings however some of them had no tomb. Usually one tomb was made within a Durvuljin however within the 1st Durvuljin of Khulkhiin am 6 tombs were discovered. Usually excavations of Durvuljin tombs, reveal deceased male, female and children were buried in separate tombs. The eldest found was an around 60 years old male while the youngest was an over one year old child. Together buried with the deceased were found clothes, weapons and ornaments. From viewing the findings from Durvuljin, it is seen that there were items related to nomadic lifestyle but also there were items related to urban civilization. Those findings represent that the Uyghur had wide cultural relations with the Tan Empire and other Central Asian people.

ERDENEBAATAR Diimaajav

### **Archaeological Study of the Bronze Age Culture in Mongolia**

This paper reviews the results of research on the Bronze Age of Mongolia. Different archaeological cultures dating to the Bronze Age have been identified. In western and central Mongolia, these include the Chemurhek, Mongon taiga, Monhkhairkhan, and Deer stone khirigsuur cultures. In eastern Mongolia, archaeologists have identified the Slab burial and Tevsh cultures. The paper also discusses current knowledge about the structure, content and distribution of Bronze Age burials and khirigsuurs. Other topics discussed in the presentation include deer stones, animal remains, as well as cultural connections with regions outside Mongolia during the Bronze Age.

VANCHIGDASH Chuluunkhuu, TUMEN Dashtseveg

### **Anthropology of Xiongnu**

Xiongnu (3rd century BC-2nd century AD) was the first unified nomadic tribes confederation or chiefdom occupied vast territory from Baikal lake in the north to Great Chinese wall in the south and from Altai mountain in the west to Khayngan mountain range in the East. We carry out craniological, osteological and genetic study (mtDNA) of Xiongnu human remains from different parts of Mongolia to investigate the anthropological and genetic structure, and physical characteristics of the Xiongnu population and to address its historical, cultural and genetic relationship with other neighboring nomadic populations from same and subsequent historic period, including modern Mongolians. The results of the study show that Xiongnu population was very heterogeneous and between Xiongnu population and contemporary Mongolians have very close genetic relationship.

BOLDBAATAR Yundebat

### **Some Thoughts of Images on Deer Stones and their Interpretation**

There are many myths about deer in Mongolia, because deer is one of major symbolic animal in nomadic culture. Most of archaeologists conclude that the deer stone is sacrificial monument of totem animal 'Deer' of nomads from Bronze age. Some archaeologists opinion the deer stones may symbolized a warriors and the deer stone looks like a man with earrings and weapons, and images like tattoos. Still there is not special research about spiritual meaning of deer stones.

Deer call starts in September and it continues until late of October. Most of deer image on the deer stone was depicted with its open mouth as a crane's nib, that suggests breeding period of deer. Due to our hypothesis, deer stones with flying deer image from Mongolia and Transbaikalia may symbolize a deer in breeding period. Nomadic people believe that deer call symbolizes not only breeding period; also beginning of a News life of animals (springs birth time of baby animals). Most of religious rituals were done in autumn, because autumn is start of a News life.

BOLORMAA Sakhiya, BAT-ERDENE Sukhbaatar, BYAMBA-OCHIR Tsedendamba

### **Archaeological Study of the Xiongnu Cemetery in North Mongolia**

In the paper we are given main results of excavation of Xiongnu cemetery located in Baruun Mukhdag site, Bulgan Province, North Mongolia. In the cemetery there were found common and noblemen graves (257 graves) from Xiongnu Empire. The both kind of graves from the site were uncommon external construction features in comparison with graves from other sites in Central and East Mongolia. External construction of the graves from the site appear as round shaped stone mound with dromos. Astonishingly, one of the 5 excavated graves was baby's grave. The baby was buried in a vase or jar. It is the first finding that baby was buried in the jar from Xiongnu period. The Baruun Mukhdag cemetery from Xiongnu period with distinguish feature of external construction of graves and baby's burial in jar may show that tribes belonged to Xiongnu chiefdom had different burial tradition and one of them was left the cemetery in Baruun Mukhdag site.

ERDENE BOLD Lkhagvasuren, VANCHIGDASH Chuluunkhuu

### **The Features of Animal Sacrifices in the Xiongnu Cemetery in Elst Ar, Central Mongolia**

In 2011-2012 the archaeological team from Mongolian University of Science and Technology with cooperation Military Museum of Mongolia carried out excavation of Xiongnu common people cemetery in Elst Ar, Dashinchilen soum, Bulgan aimag. In the cemetery there were found 25 graves and 12 of them were excavated. During the excavation of each grave were found a lot of sacrificed different ages cattle and small domestic animals (around 20 animals bone: head, back, lamb bones). Except this case with sacrificed animals in Elst Ar were found a few graves in Mongolia. In other hand, scientifically It seems to us very interesting that many animals with different ages were sacrificed in each grave from the Xiongnu common people grave site.

### **03 Surfacing the Past: Field Methods and Techniques of Archaeological Investigations in East and Central Asia**

Organizer: **CHAN Annie**

ROOM: C

TIME: **09:00-12:40, JUNE 7 (Saturday)**

#### *Session Abstract:*

As archaeological research leans increasingly towards interdisciplinary measures of investigation, owing to advances in visual informatics, geomorphological and biomolecular studies, archaeologists are provided with the means to ‘visualize’ the ancient past with greater accuracy. This progress calls for a more acute attention to how data are collected from archaeological sites based on how research questions are framed. Discerning the relationship between site formation processes and the nature of the archaeological evidence allows us to reconstruct the history and function of site use and detect behavioral variability in time and space.

This panel explores research designs of current archaeological fieldwork in East and Central Asia by considering techniques and methods used in various geographical environments. Presenters will discuss site-specific approaches and strategies tailored to different environmental contexts and the efficacy of their methodologies in reconstructing paleoenvironments, diagnosing the nature of the archaeological deposits, and formulating future research questions.

JIA Xiaobing

#### **Considering Methods and Theories of Island Archaeology: Excavations at Xiaozhushan, Guanglu Island (Liaoning, China)**

One of the difficulties of discerning stratigraphical sequences of prehistoric shell middens is the high degree of fragmentation of mollusc remains. At the site of Xiaozhushan, situated on Guanglu Island off the southeastern coast of the Liaodong Peninsula, determining the chronological order of the 37 stratigraphical layers identified in the 1.6m deep deposit is hindered by the uneven distribution of these layers across the 5000m<sup>2</sup> site area. In light of this, we use the open-area method of excavation instead of the grid system since the latter poses severe limitations on identifying the stratigraphic relationship between anthropogenic deposits and natural accumulation. By incorporating quantitative analysis of mollusc remains, pollen analysis, and geomorphological studies, we adopt a multi-disciplinary approach to reconstruct the depositional history by taking into account the environmental impact (e.g. changes in sea level) on the formation of the site and the extent of human occupation.

GUSEV Sergey

**Results of Complex Geoarchaeological and Landscape Investigations of Old Whaling Culture Site Un'en'en (Northwest Beringia)**

Historical development of the relief in the surroundings of the old whaling settlements Un'en'en is reconstructed on the basis of geomorphology analysis. Morphology and sediments structure of all terrace levels formed in the site's surroundings during Late Pleistocene – Holocene are characterized; information about their chronological position and/or about paleolandscape characteristics for some of them are received.

The surface of the third abrasive sea terrace at the altitude 22-30 m which was inhabited by ancient whalers in the end of the 2nd – beginning of the 1st millennium B.C., originated more than 6000 years ago.

A series of dates (15) mark cultural layer between 2800-3200 years ago. We'd like to mention also several artefacts of Neolithic era (IV-III millennium B.C.) in the cultural layer. This proves that exploitation of marine bioresources happened at climatic optimum. In the end of the second millennium B.C. a permanent settlement of sea hunters with highly specialized marine economics was originated and this was connected with lagoon formation. Probably, the end of settlement function was caused by an earthquake, which caused downfall and talus processes.

MORIYA Toyohito

**A Study of the Utilization of Wood to Build Pit-dwellings from Epi-Jomon Culture to Satsumon Culture in Hokkaido Region, Japan**

The purpose of this presentation is to reveal the utilization of woods, which were used for materials of pit-dwellings from epi-jomon culture (1st century) to satsumon culture (12th century). I analyzed charred woods and raw wood excavated at sites of Hokkaido regions from three viewpoints.

At First, I analyzed the situations of wood materials that had been excavated and construed as roof structure by investigating the distributional pattern of the excavated woods in pit-dwelling at several sites. At Hokkaido, there had been discovered houses burned down, that was phenomenon whenever they were abandoned. And several charred woods could be found under the situations.

Second, we made wood identification by scanning electron microscope and optical microscope for charred woods and row wood excavated at pit-dwellings.

Finally, we compared the result of wood identification with vegetation around each site, which had been suggested by previous analysis of geomorphological process and pollen analysis.

BOURGEOIS Jean, GHEYLE Wouter, DVOMIKOV A., EBEL A., PLETS Gertjan

**Archaeological Field Methods and Techniques for Landscape Archaeological Research in the Altai Mountains (Siberia, Russia)**

For more than 10 years now, Ghent University (Belgium) is, in collaboration with Gorno Altaisk State University, realizing detailed inventories of the archaeological heritage in the Altai Mountains. Several valleys have been intensively surveyed and detailed archaeological maps have realized. The monuments are dating from the late Neolithic to the ethnographic period, and range from funerary monuments to ritual places and petroglyphic sites. The valleys of Karakol, Dzhazator, Sebistei, Yustid and others have been recorded in that way. The inventories and maps are not only of major interest for potential heritage management, but also for understanding the mental structures of the landscapes of these ancient periods. Examples of the valleys of Dzhazator and of Karakol will be presented here.

CHAN Annie, CONG Dexin

**Excavation and Survey Methods for Reconstructing Bronze Age Stone Architecture in the Dzungarian Alatau (Xinjiang, China)**

Furnished by the region's lithology, stone structures of various forms are conspicuous archaeological features of the Eastern Central Asian steppe. They represent areas of habitative and funerary activities and may indicate routes of migration. Archaeological investigations in the Bortala River Valley, which runs along the Dzungarian Alatau, have identified over 200 sites of stone construction. This presentation considers the methods used during three seasons (2011-2013) of fieldwork to achieve the following objectives: 1) determine the spatial correlation between the purported functions of the stone structures and topographic features; 2) establish a chronological typology based on structural characteristics and 3) reconstruct the phases and methods of construction. Sedimentology, radiocarbon dating, and paleobotanical finds from flotation helped establish the chronology and functionality of one of the sites, Adonqolu, and a preliminary regional landscape analysis identified a clear correlation between the functional and geomantic attributes of the structures and the surrounding topography.

GILLAM J. Christopher, GLADYSHEV Sergei A., GUNCHINSUREN Byambaa, OLSEN John W., TABAREV Andrei V. and ZWYNS Nicolas

**Visualizing Time, Space, and Context in Paleolithic Landscapes of Northern Mongolia**

Sites (n=36) dating to the Pleistocene and early Holocene have been discovered along the Ikh-Tulberiin-Gol, Kharganyn-Gol, and Altatyn-Gol rivers of the Selenge-Gol Basin, northern Mongolia. Ongoing excavations and a GIS database provide the context and means to explore the nature of the region's Paleolithic landscapes. Initial results indicate a settlement preference for south- and east-facing slopes with good viewsheds of surrounding terrain. Analysis of local topography identified the location of a significant saddle in the mountainous terrain separating the Ikh-Tulberiin from the Kharganyn and Altatyn rivers. The saddle has archaeological evidence of continued use from early Upper Paleolithic (ca. 40,000 cal. B.P.) to modern times. The Saddle Site also lies nearly due east and within the viewshed of a previously recorded middle Upper Paleolithic cache (n=57 artifacts; ca. 25,000-15,000 cal. B.P.) that is unique to the region, bringing into focus the locational meaning of this significant cultural feature.

CHEN Pochan, CHENG Chief-fu Jeff

**Archaeologies of Trail, Road, and Path: a Case Study of Pattonkan Historical Trail in Taiwan**

This research explores the archaeologies of trail, path, and road by examining physical and cultural features of Pattonkan Historical Trail in central Taiwan. Pattonkan Historical Trail refers to a trail system crosscutting Central Mountain Range constructed and reconstructed in 1875 and 1919 by colonizers, Qing and Japanese Empire for the purpose of controlling the region that had been indigenous Bunun's homeland as well as obtaining mountain resources. In the last 130 years, the trail was built, rebuilt, abandoned, and reused by different groups of people. Today, some part of the trail became popular hiking route in Yushan National Park. We consider the construction, modification, use, and reuse of Pattonkan Historical Trail since the late nineteenth century represent the changing relationship among peoples in the area. Thus, by analyzing how the morphology of the trail has been altered through time, we endeavor to explore the dynamic of colonization in Pattonkan area.

ZHOU Hai

**Archaeological Methods and Theories for Investigating Neolithic Cave sites in Guilin, China**

Limestone caves are the most common type of prehistoric cave in the Huanan region of China. The archaeological deposit in these caves covers a small area but is constituted of complex stratigraphy. To keep intact as much of the archaeological record as possible for future research and public exhibition, we control our excavation to small areas of the site and adopt a multidisciplinary approach to gather the most information possible from the limited excavation areas. Scientific dating methods are employed to determine the stratigraphic relations between layers of deposit. The excavated debris is screened for floral and fauna remains, and the method of flotation is used to recover carbonized paleobotanical remains. These methods have been applied to the excavation of prehistoric cave sites such as Zengpiyan and Dayan. The Zengpiyan Archaeological Park is a testament to the important data we have obtained from these archaeological investigations and the methods applied.

## 04 The Study of Artifacts: Production, Distribution and Interpretation

*CHAIR:* CHIOU-PENG TzeHuey  
*ROOM:* B  
*TIME:* 09:00-12:40, JUNE 7 (Saturday)

CUI Jianfeng, NI Run'an, LIU Guoxiang, BAI Jinsong

### **Chemical Analyses of Glass Beads from Mogushan, a Xianbei Cemetery in Hulun Buir of Inner Mongolia**

Large quantities of glass beads were unearthed from the cemetery of Xianbei people in Zhalainguoer of Hulun Buir city, Inner Mongolia Autonomous Region. The cemetery has been dated to the Eastern Han Dynasty (25-220 CE). A selective group of these beads were chemically analyzed using Ed-XRF. The results reveal that the majority of these beads are made of soda-lime glass, which is thought to be originated from the western world. Among them are also lead-barium glasses and faience beads that possibly originated from the Central Plains of China. The soda-lime glasses include natron glass and wood-ash glass. According to the provenance studies, three possible origins may be related to the wood-ash glass beads. On the other hand, all the beads having a gold foil sandwiched between two glass layers are of natron glass, which likely came from the Roman Empire.

OWLETT Tricia

### **Shell Tool Production Systems in the Ryukyu Islands, Japan: Raw Material and Manufacturing Technology**

This paper explores shell working and shell artifacts from shellmidden sites in the prehistoric Ryūkyū Islands in southern Japan. This study employs a typo-functional analysis of shell tool artifacts from two contemporaneous shellmidden sites and compares them with other sites in the region. Major species of marine mollusca used in the shell industry are discussed in detail. Furthermore, differences between shell tool technologies in the Central and Southern Ryukyu Islands will also be presented. Results of the analysis reveal that manufacturing processes were very simple and largely consist of unretouched molluscan shell objects that were used and quickly discarded. In particular the use of expedient bivalve shell tools will be highlighted.

YOO Yongwook

### **A Closer Look at the Handaxe from Imjin-Hantan River Area, Korea**

Since 1978, several localities have yielded more than two hundred similar specimens across the Imjin-Hantan River Area (IHRA) of the midwestern Korean Peninsula.; it is quite clear that the IHRA can be designated as one of handaxe-abundant regions outside the Acheulian domain of Europe and Africa. The IHRA one, however, features as many different features such as:

1. Its temporal distribution encompass from Middle to Upper Pleistocene, as young as MIS 3.
2. Several simple—not repetitive—percussions are performed on blanks (mostly cobbles), which is responsible for its rather crude (partially bifacial) and unfinished shape (much cortex left).
3. No consideration on thinning and platform preparation is taken in designing and shaping the final product.
4. Its frequency within total assemblage is quite low and rarely coupled with the cleaver, another typical Acheulian tool.

If Acheulian does not implicate simple occurrence of handaxes in global scale, the IHRA handaxe can be termed as an example of "Non-Acheulian" handaxes that did not pervade geographically but persisted temporally in East Asia.

ZHUSHCHIKHOVSKAYA Irina, NIKITIN Yuri G.

### **Cultural Contexts of First Bronzes in the Southern Russian Far East**

The report considers archaeological complexes presenting the stage of first metal appearance in southern part of Russian Far East (Primorye region). Comparative systematization of research materials reveals two basic areas having latitude orientation from continental lands at the west to the seacoast at the east and corresponding supposedly to different cultural contexts of bronze appearance in Primorye region.

Archaeological assemblages of both areas' sites give innumerable direct and indirect evidences of metal and metalworking: bronze items, implements for metal smelting (ceramic crucibles and moulds), stone replicas of bronze buttons, daggers. Temporal frames of sites are from the border of II-I to the mid. of I mil. BC.

The characteristics of pottery technology, morphology and decoration indicate cultural peculiarity of each area. Basing on pottery features we suppose that early bronze complexes of Primorye region have relative cultural links with Bronze Age's cultures of western continental territories (Southern Siberia, Manchuria).

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LEBEDINTSEV Alexander

**Distribution of Metal throughout the Coastal Margins of the Okhotsk Sea Maritime Region**

Session

04

The problem of the appearance of the metal in the Far East is one of the most difficult in the archeology of the region. Researchers ancient past of this region faced with the facts of uneven development of human societies in this part of the Asian continent, caused by natural and historical reasons. Based on the foregoing review of the archaeological record of the appearance of metal in the Okhotsk Sea region, we can conclude that I millennium BC in this region is a transition stage from the Neolithic to the Early Metal. For Northern Okhotsk period from the middle I millennium BC until the middle I millennium AD can be defined Paleometal era and next V - XVII centuries is Iron Age. To the South Sea of Okhotsk early Iron Age has several other frameworks (V century BC - VI century AD, and further there is the medieval period (VII-XVI centuries).

MATSUMOTO Keita

**The Beginning of the Bronze Age in Xinjiang and the Great Wall Region**

Many archaeological materials have been found in the Early Bronze Age in the Xingjinag and the Great Wall region for the last few decades. These materials have been noted to consider the origin of the bronze metallurgy in China. But we can suggest that they also have great significance of studies on forming 'the Northern' including Mongolia which contrasts with the Central Plain in China. This presentation will try to illustrate the interactions of this region in the Eurasian Steppes and the emergence 'the Northern' in the East Asia, analyzing bronze artifacts. As a result, we find two big cultural borders in this area in the first part of the 2nd millennium B.C. And then we point out the change of the quality of interactions in the middle of 2nd millennium B.C. in the eastern Eurasian Steppe.

LYONS James Scott

**Iron Knives of the Early Kofun Period: Forms, Production, and Circulation**

This study of iron knives of the Early Kofun period in Japan clarifies the formal characteristics of this under-researched artifact class and addresses the question of the loci of iron tool production during the Early Kofun period. Close examination of iron knives and their fittings, where possible, unearthed from Early Kofun period elite burial contexts in the Kinki region of Japan established the range of variation for six metric characteristics, and permitted the classification of handles into two types. These observations confirm previous findings on nonmetric characteristics of the blades, while disconfirming earlier suppositions on their size and proportions. Blade forms common to multiple burials could not be confirmed, and some burials contained knives of divergent forms. This suggests local production of knives with little to no circulation of finished goods in spite of a convergence at the start of the Kofun period to single-notched blades.

CHIOU-PENG TzeHuey

**Contextualizing Isolated Archaeological Finds: a Case Study of the Rudimentary Kettledrums in Yunnan and the Red River Delta of Vietnam**

This work explores the production and dissemination of crudely made metal kettledrums discovered in Yunnan and near the Red River delta of Vietnam. Among the examples are fortuitous finds that have been claimed to be late, degenerated versions of the Heger type I drum, the hallmark item of the Dian culture (350 BCE-50 CE) and the Dongson culture (circa 300 BCE-100 CE) of Vietnam. An investigation of the casting techniques, alloy recipes, and lead isotope signatures of the metal materials used to make these kettledrums, nevertheless, points to the possibility that these artifacts were closely related to the rudimentary drums known in the hierarchical societies of c. 700-350 BCE in Yunnan. This work offers new dimensions for studying archaeological finds that lack stratigraphic or contextual data.

KIZAWA Naoko

**A Study of "Double-sided Comb" in Ancient East Asia: Excavated Examples and their Origin**

We would like to take up a kind of combs called "Double-sided comb". This type of combs has teeth at each end. It is known that they had already appeared during the early Roman period, in the Mediterranean and also Egypt. So it's very common cases in these areas though there is not much like this type of combs in East Asia. Therefore they have been little discussed until now. However our recent study shows that similar type of combs has been excavated from China and Korea, too. It is especially in Xinjiang area, China where a lot of similar cases have been found. We suppose that the origin of "Double-sided comb" in East Asia was influenced by the West, such as Central Asia throughout Near East and/or Middle East. This time, we would like to report some cases and discuss a possibility that these combs can be one of the evidences which shows relationships between the West and the East.

## 05 New Perspectives of Paleopathology in East Asia

*ORGANIZERS:* FUJITA Hisashi  
ERDENE Myagmar  
SHIN Dong-Hoo

*ROOM:* A

*TIME:* 14:00-17:40, JUNE 7 (Saturday)

### *Session Abstract:*

Paleopathology is the study of the ancient diseases of the human bodies in the past. However, the number of those engaged in this field of researchers has not necessarily been numerous. In recent years, with the publication of International Journal of Paleopathology, the interest of paleopathology has been increasing year by year. The paleopathologists in Asia have also begun to publish their studies, not only in the Journals of their respective countries, but also in international Journals. This signifies evaluated a great advancement. In the upcoming symposium on the subject of "New Perspectives of Paleopathology in East Asia", the paleopathologists of three countries, Japan, Korea and Mongolia, will be presenting the results of their respective research. We are convinced that this symposium will contribute to the collaboration of paleopathologists in Asian, as well as to further developments of research in this field.

FUJITA Hisashi

### **Paleohealth of Jomon Peoples in Japan from the Prevalence of Cribra Orbitalia**

Cribra Orbitalia has been often utilized as a stress marker of human skeletal remains in physical anthropology especially palaeopathological field. The cause of Cribra Orbitalia is thought to be iron deficiency anemia. The iron deficiency anemia has been occurred under the low nutritional status due to some diseases. It could be thought that the iron deficiency anemia developed in many populations all over the world in pre-modern times. I studied the Cribra Orbitalia on several human skeletal series in Jomon period, which were housed in the University Museum, at the University of Tokyo and National Museum of Nature and Science, Tokyo. I considered the paleohealth on the Japan's Neolithic Jomon people from the prevalence of Cribra Orbitalia. In this conference, the results will be reported.

MIJIDDORJ Enkhbayar

### **Bioarchaeological Research of Salkhit Site in Northern Mongolia**

In this paper we present preliminary results of bioarchaeological research on the human remains found during archaeological excavations in 2011 and 2012 in Salkhit site, Khuvsgul province, Northern Mongolia. In total, 31 graves were excavated and skeletal materials of 23 individuals were unearthed, including 10 males, 9 females and four children and subadults.

Paleopathological examination revealed seven cases of dental caries, two cases of cranial pathology and a case of trauma on postcranial skeleton. High incidence of dental, cranial and post cranial pathologies reflect social situation of that time.

FUJISAWA Shiori

### **Paleopathological Study on the Skeletal Remains of Edo Period in Japan**

There are many previous reports on the study of dental caries in the paleopathology fields. Caries in ancient skeletal remains can provide the information on dietary habits, lifestyles and health of the peoples in ancient times. Today, studies on dental caries are still being actively conducted by some scholars.

We investigated the caries prevalence on the human remains from Kyoto (Fushimi) and Hyogo (Hyogo Tsu) sites in Edo period. There were clearly large differences the prevalence between the sites. In general, caries prevalence is affected by the age and sex. Furthermore, the difference of prevalence is affected by the concept of oral health such as, custom of tooth brushing, dietary intake, of carbohydrate and/or sugar. The culture in that period is thought to be reflect the cause of difference of prevalence of caries. We will report the dental caries prevalence in Edo period, Japan from the various view point such as those described above.

ERDENE Myagmar

### **Dental Pathologies in the Bronze Age Populations from Mongolia**

Dental pathologies – caries and abscess are investigated in cranial materials belonging to different cultures of Bronze Age (1700 to 7-8 c BC) of Mongolia: 44 skulls of 30 males, 8 females and 6 subadults with age ranging from infancy to senile, with total 357 teeth.

A single case of dental caries is observed (2.27% of the sample studied) and the percentage of carious teeth in the total number of teeth examined is 1.68%. Compared to caries prevalence, dental abscess frequency is found much higher (50%), especially among the aged individuals. It is considered that the dental abscess was likely the main reason of ante mortem tooth loss in the populations studied. Significant geographic difference in the distribution of the dental pathologies is observed, and the populations from Western Mongolia seem suffered more with dental diseases than the populations from Eastern Mongolia.

WOO Eun Jin

### **A Case of Dwarfism from the Joseon Dynasty, South Korea**

Achondroplasia is a relatively rare disease. In particular, few affected individuals are known in the paleopathological record from Asian archaeological series. The aim of this research is to report a dwarf skeleton in the medieval population of Korea. Based on dental attrition patterns, the dwarf's age was determined to between 31 and 50 years. The specimen consists of the cranium, mandible, and portions of the postcranial skeleton. The skull is brachycephalic with very pronounced frontal and parietal bossing. The anterior part of the mandible body is relatively high. Both humeri are short and stocky. The deltoid tuberosity and pectoralis major insertions are particularly large and robust. The ulna has a greatly hypertrophied proximal end. The combination of these morphological features accords well with conditions typical of some osteochondrodysplasia. This is the first study to examine on the state of osteochondrodysplasia in Korea.

KIM Myeung Ju, SHIN Dong-Hoon

**Paleopathological Studies on Korean Human Remains Excavated from 17th Century Lime-Soil Mixture Barrier (LSMB) Tomb**

Session

05

Over the past decade, human remains recovered from the Joseon dynasty Lime-Soil Mixture Barrier (LSMB) tomb have been used to study ancient diseases. The multidisciplinary research approach has included various techniques, including simple x-ray radiography, CT imaging, histochemical methods, as well as post-factum dissection. CT images have permitted the identification of aortic atherosclerosis in a mummified 17th century Korean female, while Bochdalek-type congenital diaphragmatic hernia was diagnosed in another mummified individual. Based on macroscopic and radiological analysis, benign bone tumors were found in two skeletons. Although there are reports of similar paleopathological findings in human remains from other parts of the world, few such cases have been reported in Asia. This study thus helps us better understand the types of diseases that affected the lives of people in early Asia.

LEE Won-Joon, LEE U-Young, GAVAACHIMED Lkhagvasuren, TUMEN Dashtseveg, LEE Kwang-Ho

**Craniofacial Reconstruction from a Skull of a Young Female in Neolithic Age of Mongolia**

Craniofacial reconstruction is a technique used to rebuild the living facial appearance onto the skull in an attempt to recognize or identify the individual. This technique is mainly employed in forensic investigation, but also applied to archaeological studies into recreate the faces of paleontological humans and historical important figures. The craniofacial reconstruction in archaeological research can provide the opportunity of investigating physical/cultural-anthropological information during the era from the recreated face. In this study, it was attempted to rebuild the face from a young Mongolian female skull dating back to the Neolithic age (6,000BCE). The face was generated employing computerized three-dimensional modelling method. For more reliable reconstruction, the post-mortem missing portions of the skull were reconstructed first utilizing the computerized modelling software. The results will be discussed with craniometrical analysis and general facial appearance from the same ethnic group in modern times.

## 06 Chinese Archaeology

*CHAIR:* WILLIAMS James

*ROOM:* B

*TIME:* 14:00-15:40, JUNE 7 (Saturday)

LIN Kuei-chen

### **Settlements on the Chengdu Plain in the Second and First Millennia BC**

Tracing the settlement patterns of the Chengdu Plain, including their boundaries and composition, has been difficult. Part of this difficulty has extended from a related problem: how are we to detect a community's social space in which members had regular interaction? The boundaries, even with walls, were uncertain and dynamic, and these settlements can all too easily be confused with autonomous villages shaped by natural environments. On the one hand, sites can be found dispersed on terraces separated by streams. On the other hand, it appears that a range of economic activities, including small-scale pottery production, were able to expand, overcoming the cutoff of landform, and thereby connect independent residential and working units. Their commonality is reflected in similar craft products and manufacturing customs, which suggest, further, settlements' social spheres. Settlements defined in this way are dynamic: the binding force of the networks was uneven among various social groups.

LAI Celine Y. Y.

### **An Early Bronze Age Culture in Hunan: Where, When and Who?**

Recent writings on Shang archaeology have taken notice of the discoveries from the province of Hunan in the mid-Yangtze River valley, which was a region traditionally understood as being peripheral and even subordinate to the Shang. The Hunan bronze bells and large ritual vessels, however, suggest the presence of a powerful bronze-using society, which was strong enough to support the casting of ritual paraphernalia. The present understanding has so far been limited to the patchy impressions gathered from scattered discoveries of individual bronzes; there are many uncertainties about the social structure established in the region. In this paper, I present a thorough analysis of the findings and research collected over the last three decades; and aim to answer three basic questions to identify this unknown yet important group: Where did they live? When did they flourish? And who were they? The answers will fill a major lacuna in the early developments of the Yangtze areas.

ZHU Si-mei

**Demographic Research on the Bones of Jinggouzi Site in Linxi County of the Inner Mongolia Area**

Session

06

A group of graves have been found in Jinggouzi site in Linxi county of the Inner Mongolia area and some bones were unearthed from them. In 2002-2003, Research Center of Chinese Frontier Archaeology of Jilin University and the Inner Mongolia Archaeological Institute began to carry out excavations at this site. The 58 tombs that have been excavated reveal a new archaeological culture of the late Bronze Age, which has already been named the "Jinggouzi type". This article mainly use the demographic method to rebuilt the ancient population status. The results show that the sexual proportion between male and female is 1.5:1, and people mainly died in their babyhood or young adulthood. In order to have a more scientific explanation to this phenomenon, more researches should be done in the further studies.

WILLIAMS James T.

**Settlement Patterns During the Iron Age In Zhangwu, Liaoning, China: a View from the Yan Periphery**

This paper will focus on the subsistence economies of a region in Northeast China where environmental conditions were conducive to specialized mobile herding. This region is also the intersection of historically documented Warring States polities and groups they may have been in conflict with.

The paper will examine the environmental conditions, the demography, and the settlement patterning of human communities during the period from 600 BCE to 200 CE. These patterns have implications on how we understand the frontiers, borders and boundaries of early Chinese states. The interaction of these communities have been the source for historic reconstruction of the region. This paper will provide new evidence which can be used to compliment the historical understanding of the Yan State's periphery.

## 07 Ritual Practice, Settlements, and Subsistence in North Asia

*Organizer:* **BRODERICK Lee**

*ROOM:* B

*TIME:* **16:00-17:40, JUNE 7 (Saturday)**

LEBEDINTSEV Alexander

### **Formation and Development of the Okhotsk Sea Maritime Cultures**

The most ancient centers of maritime cultural adaptation were on the Japanese and Aleutian Islands. Coastal cultures of the Neolithic became the basis for maritime cultural traditions. Okhotsk Sea Cultures flourished in the Paleometal epoch and continued their development and became wide-spread during the early Iron Age. In Okhotsk Sea coast, the most important were the northern and southern maritime adaptation centers. The Tokarev Culture (800 BC- 500 AD) is the most ancient maritime culture over the northern Priokhot'e, and it became the basis for the Old Koryak Culture (500-1700 AD). Western Kamchatka areas are characterized by a level of maritime adaptation due to a complex economy and dominating fishing among coastal natives. The Old Itelmen Culture (I-II millennium AD) had its local variants. A well-developed sea harpooning activities characterized the Susuya Culture (500 BC – 500 AD) in Sakhalin. The Okhotsk cultural community (500-1250 AD) manifested by a number of local cultures.

TABAREV Andrey, POPOV Alexander N.

### **New Data on the Neolithic in the Russian Far East, and its Correlation within the Pacific**

Recent excavations of new sites of Boisman culture (7-4,000 BP) in the coastal zone of the Maritime Region (Russian Far East) is illustrating some aspects of the Middle Neolithic of the region and is proposing some new directions for correlation within the Pacific perspective (cultures with shell mounds, models of maritime adaptation, exploration of wide range of coastal and sea resources, variability of toolkit, and burial practices).

BRODERICK Lee, SEITSONEN Oula, HOULE Jean-Luc

### **Rings of Fire?**

Session

07

Stone circles, sometimes known as hearths, are one of the most frequently occurring Bronze Age Mongolian monuments, appearing in conjunction with khirigsuurs and deer-stones as well as separately. Despite their ubiquity, little is understood about their function or contents - previously best identified as cremated medium mammal - with opinion divided as to whether or not fires were lit within the stone circles.

This paper presents new data which seeks to clarify some of these questions. Between 2010 and 2012 a number of stone circles were excavated in Central and Western Mongolia, principally in association with khirigsuurs but also some from deer-stone complexes. New mapping of large khirigsuur complexes helps to situate the features in the landscape, and so suggest how they fit into people's lives, whilst systematic excavation has shed new light on the despotical circumstances. Finally, zooarchaeological analysis has revealed more precisely the contents of the stone circles.

WEI Jian

### **Early Mongol Remains in Archaeological Perspective (7th-12th Century)**

The history of Mongolia can date back to the ancient Donghu Shiwei tribe, in the 7th century, they lived in the area of the east of the Eergu'Na River, living a semi hunting, semi nomadic clan society life. In recent years, from the Eergu'Na River to the west until the eastern part of Mongolia plateau, we have found a number of Medieval Mongolian period remains such as Hulu Buir West Uzhur cemetery, Qiqian sites and Sher Tara site and cemetery, Au La site group in de Ligrhan Sumu in Mongolia, etc. These observations are of great significance in study of the origin and early history of Mongolia.

## 08 Making Places in Early Korea: Patterns of Space in Households, Communities, and States

*Organizer:* **LEE Rachel**

*ROOM:* C

*TIME:* **14:00-17:40, JUNE 7 (Saturday)**

*Session Abstract:*

The study of space continues to be an important part of archaeological inquiry. The analysis of spatial data, from artifacts to settlements, has brought greater insight into the relationship between the materials we excavate and their social, political, economic, or ideological significance. This session will explore the use and patterns of space in prehistoric and early historic periods in Korea, with emphasis on how these spaces related to or resulted from synchronic and diachronic cultural processes. Papers will consider the significance of spatial patterns in mortuary practices, ritual practices, village organization, and household organization.

LEE Rachel

### **Boundary Making in Mumun Period Households**

Boundaries, both physical and non-physical, serve to define and divide spaces. Boundaries can also be informative beyond their functional properties, as they control access between spatial domains, are symbolic of the activities that occur within, and help order the relationships between those inside and outside of the boundary. Using data from the Gyeongnam region, this paper will present research on how boundary making changed in Mumun Period (Bronze Age) households as sociopolitical complexity increased.

KO Min-Jung, YUN Ho-Pil

### **Bronze Age (Mumun Period) Village Organization and Networks: Research from the Western Gyeongnam Region**

The spaces within village settlements were the locus of many human activities through time. By examining the spatial patterns of these settlements, the activities that once took place can be better understood. Analyses of craft, subsistence, and consumption activities further elucidate inter-village networks. This paper will present research from one of the best documented areas for such analyses, the western region of Gyeongnam Province, where many village settlements from the Bronze Age (Mumun Period) have been excavated along the Nam River. We will discuss the intra-site spatial patterns of the Nam River Valley settlements, which contained houses, production areas, storage features, ritual spaces, burials, and roads. We will also examine the dynamic craft and subsistence activities of the settlements that acted as links among the network of villages in the Nam River Valley.

KIM Kwon-Joong

### **Changing Patterns of Bronze Age Intra-Village Spatial Organization: Research from the Gyeonggi Region**

Session

08

Bronze Age (Mumun Period) settlements varied in their location, scale, organization, and use between the early and late periods (ca. 1500 – 850 B.C. and ca. 850 – 300 B.C., respectively). The spatial patterns of pithouses, production areas, storage pits, ritual areas, and burials can be related to their functions, but Bronze Age village settlements, which became larger and more complex through time, were likely caused by greater socioeconomic changes. Using data from the Gyeonggi region, this paper will present research on what caused changes in the spatial organization of village settlements during the Bronze Age.

KIM Bumcheol

### **Hierarchy, Heterarchy and Individuals: Middle Bronze Age Intra-Community Mortuary Practices in Central-Western Korea**

It has been debated what sociocultural factors caused the variation shown in Middle Bronze Age burials. Some scholars have explored ranking reflected in mortuary practices, affiliating outlier-like burials to sociopolitical elites. Others have looked at more horizontal social divisions, arguing that specific grave goods or treatments represented gender, age, cultural identity, and so on. However, both sides have failed at a holistic characterization of single burials by disassembling the attributes of these individual burials. This paper is primarily concerned with how vertical and/or horizontal cleavages were reflected in Middle Bronze Age mortuary practices, regarding a single burial as an independent symbolic entity. The results of multivariate statistics and spatial analysis for individual cemeteries suggest that two- or three-tiered social hierarchy as well as phratry or moiety might have been important principles of community organization.

KANG Dong Seok

### **Understanding Socioeconomic Hierarchy through the Spatial Analysis of Dolmen Distribution Patterns**

Dolmen is very important archaeological materials that help us to understand degrees of social integration, hierarchical structure of society. It is considered that the construction of these dolmen were intentionally done by economic and political backgrounds and this indicate a distinction of spatial distribution patterns of dolmen.

As a specific example for these hypotheses, first, this study will check the differentiations of structure, size and location of dolmen through the spatial analysis about distribution patterns of dolmen sites in Ganghwado Island in Korea. And through the assumption of site catchment territory of each communities and the estimation of the agricultural productivity, it also attempts to estimate the level of socioeconomic developments of each dolmen society. To sum up, this paper aims to explain that these difference in socioeconomic level became a main reason to form hierarchical structure in dolmen society

OH Kangwon

**The Spatial Intersection of Ritual Practice and Power Negotiation: The Early Iron Age Houses of the Wunushan Hillfort**

The Early Iron Age settlement discovered on the hilltop (about 790 meters above sea level) of Wunu (五女) mountain in Huanren (桓仁), the first Capital of Goguryeo, Northeast China, yielded large numbers of intentionally damaged polished stone daggers. The raw materials of the daggers, probably used and discarded during rituals, were transported from a shale quarry located 50-80 kilometers away. During the 4th-3rd centuries B.C. when the ritual materials were deposited here, several chiefdom-level groups attempted to gain dominance over the Huanren basin and its surrounding areas. In light of the dynamic socio-political environment of the Huanren area, I argue that this ceremonial settlement would have been a very meaningful place for the political and ideological negotiation between chiefs from different groups.

LEE Sungjoo, PARK Seongmin

**Changing Spatial Patterns in the Development of Ancient Silla Burials**

In this presentation, we will demonstrate the use of GIS as a powerful analytical tool in the investigation of ancient cemeteries and their spatial organization. Particularly in the case of ancient Silla cemeteries where a large number of graves were constructed over a period of just a hundred years, GIS can aid in discriminating temporal as well as other variation among the graves. For this analysis, all available spatial and non-spatial excavated data of Silla cemeteries were recorded in GIS. By grouping the Silla burials by period, we will show how the spatial organization of graves changed during the one of Silla's most dynamic period between the 4th and 6th century AD.

KIM Taehee, SOHN Chul

**The Spatial Organization and Social Landscape of Goguryeo Cemeteries in Jian**

Roughly ten thousand mounds in various scale are distributed within the Jian (集安) basin where the ancient state, Goguryeo, constructed its second capital. We have recorded the geographical position of every mound, including its shape and size of occupation area as well as other non-spatial attributes in GIS. The distribution of stone-piled or earthen mounds have been grouped into the five famous cemeteries: Usanha, Sanseongha, Manbojeong, Chilseongsan, and Masungu. The result of this analysis indicates that each cemetery's mound size associations and its spatial distribution show differing patterns. Within individual cemeteries, some extra-large or large mounds are associated with smaller mounds, but in other instances, they are located away from them. In this presentation, we will use several landscape parameters to estimate the monumentality of the extra-large mounds and demonstrate how the size of mounds influenced the spatial organization of individual cemeteries.

## **09 Redefining Configurations of Urban Settings: Centers of Social and Economic Activity in the Inner Asian Steppe**

*Organizer:* MILLER Bryan

*ROOM:* A

*TIME:* 09:00-12:40, JUNE 8 (Sunday)

### *Session Abstract:*

The development of urban centers associated with large scale production, exchange, and habitation are often deemed incompatible with societies that have mobile components, or are engaged in greater mobility related to pastoral production. Nevertheless, numerous steppe societies in Inner Asia have established urban sites equivalent to those associated with settled agricultural groups. The goal of this session is thus to reexamine concepts of urbanism, urbanization and urban settings in relation to societies that have mobile or semi-mobile components. Papers in the session will address economic and social activities that occurred at, or in the vicinity of, permanently constructed urban sites in the steppe. This is important as the broad spectrum of mobilities, seasonal occupations, and pastoral strategies might affect the configurations, functions, and use-patterns of permanent centers. These discussions of permanent sites of pastoral and mobile groups thereby aim to augment broader comparative analyses of urban developments.

BEMMANN Jan H.

### **Aspects of Urbanization and Centrality in Nomadic Empires**

Comparative archaeological debates on urban settings and handbooks on early cities more or less neglect the constructed centers of nomadic empires. Archaeological investigations of nomadic empires and their urban centers present a critical, yet still rare, subject of scientific inquiry in need of inclusion within broader discussions of urban development, political complexity, and greater world history. It is my aim to examine the urban sites of the Xiongnu, Türk, Uyghur and Mongol empire period in Mongolia within the methodological framework of historical archaeology, comparative analyses and empirical urban theory. I will present the actual state of knowledge, discuss the evidence of political landscapes and the city-hinterland relationship (Smith).

MILLER Bryan K.

### **Reconsidering Urban Settings of the Xiongnu**

While scholars have framed discussions of urban centers in Inner Asia around prominent cities of the medieval Uighur, Khitan and Mongol empires, the first walled sites, which appeared during the Xiongnu empire, have yet to be significant components of these discussions. Preliminary investigations of these walled sites and their environs demonstrate evidence of large-scale permanent establishments of ritual arenas, places of habitation, and production facilities. Rather than limit our understanding of urban settings to the features within walls, this paper proposes an application of the notions of extensive and low-density urbanism to steppe pastoral societies in order to understand the earliest foundations of large-scale centers of social, ritual, and economic activity. The valley of Möngönmor't as a whole, in which two contemporary walled constructions as well as dispersed remnants of habitation and workshops, is thus taken to be an entire "urban center" of the Xiongnu steppe empire.

FRANKEN Christina

### **Architecture of Power in Nomadic Societies: Religious and Profane Architecture in the Old Uighurian Capital Karabalgasun**

The German Archaeological Institute has been undertaking intensive research in close partnership with the Mongolian Academy of science in the old Uyghur capital Karabalgasun since the year 2009. The excavations are mainly focused on the so-called temple or palatial city whose walls, up until now, have remained more than ten meters.

First results of the excavation indicate that this was an extremely impressive, tower-like building erected on an artificial platform. The size, the protective solidity of the walls as well as further architectural details suggest an originally essential function in the life of the city. Therefore the actual investigation affects the question of significance and implementation of stately architecture as a symbol of power in nomadic societies. Finally, the conclusion of the work in Karabalgasun forms an interesting supplementation to the results of our investigations in the old Mongolian capital Karakorum.

BENNETT Gwen

### **Cities for Whom? Liao Administrative and Production Centers in Chifeng, Inner Mongolia, China**

Recent research has looked at Liao Dynasty (907-1125) cities in the Shira Murun River Valley in northern Chifeng, Inner Mongolia and suggested that they were constructed as statements of political legitimacy without regard for ecological viability. Liao cities in the southern Chifeng region exhibit numerous contrasts with the northern cities that suggest that different motivations drove their establishment. This paper will argue that cities in the two regions originated from different roots that contribute to differences in their appearance, history of use, and potentially even the populations that inhabited them.

KRADIN Nikolay

### **Kitan Urbanization of the Mongolian Steppes**

Session

09

In Liao Empire the whole territory of Northern China was under the power of the pastoral nomads. Kitans built large cities with gorgeous temples and palaces to house the imperial court and the emperor's officials. In 2004-2012, the fortress settlements and towns of Kitan Liao empire (907-1125) on the territory of Mongolia were surveyed by the Russian-Mongolian expedition. In addition, in 2004-2008 the excavations of Chintolgoi balgas and Khermn denj in 2010-2012 were realized. Block structure of the town's lay out was found in this horizon. Dwellings, stone foundations of the homestead, internal lanes were found inside of the block. A big number of ceramic and tile fragments, other artifacts including works of art, remains of fauna was found during excavation. Was discovered the presence of Bohai people among population of Zhenzhou mentioned in Liao shi is proved by archaeological data. This study was supported by RFBR # 13-06-00660.

KHARINSKII Artur

### **The "Wall of Chingis Khan": Frontier Fortification of the Liao Empire**

The "Wall of Chingis Khan" extends over the territory of three countries — Mongolia, Russia and China. Its length is 731 km. The current height of the "Wall of Chingis Khan" is 0.5–1.5 m and its width measures 5–15 m. Along its northern side is an earth-filled ditch. To the south and southeast of the wall are located several forts. From 2009 to 2013, we conducted a study on the "Genghis Khan Wall" in Russia and Mongolia. During this time 43 forts were examined, 32 of which were of quadrangular shape, 6 of round shape, 4 of round shape with an interior quadrilateral shape, and 2 were of quadrilateral shape with a quadrilateral interior. In 16 forts we found fragments of gray ceramics stamped with comb-patterned decoration. Similar ceramics are well known from Khitan sites in China and Mongolia.

REICHERT Susanne, POHL Ernst

### **Urbanism in the Mongol Empire: Karakorum and its Hinterland**

The importance of Karakorum as capital of the Mongol Empire is unquestioned. From historical sources the city is known for its diverse population of amongst others Chinese craftsmen and Muslims merchants. The excavations of Bonn University from 2000 to 2005 in the city center of Karakorum exposed several workshops with evidence for iron, bronze, bone, glass and precious stones works. However, Karakorum cannot be viewed detached from its surroundings, recent surveys and excavations by the University of Bonn brought to light outlying production sites in the Orkhon valley that call for a new approach to this settlement system. The artifacts, manufacturing techniques and features combined with the historical sources help answer questions on the nature and specialization of production in the city center as well as in the outlying localities in cultural, spatial, and diachronic perspective. This ultimately leads to a characterization of urbanism and economy in a steppe environment.

## 10 Charting the Social Lives of Objects and Goods in China: Perspectives from Archaeology and Art History

*Organizers:* **SUN Yan**

**ALLARD Francis**

*ROOM:* B

*TIME:* **09:00-12:40, JUNE 8 (Sunday)**

### *Session Abstract:*

This session focuses on the topic of the ‘social lives’ of objects and goods in China, a topic that has received a fair amount of attention by scholars in other parts of the world, but practically none in East Asia. Sometimes referred to as the charting of object ‘biographies’ or ‘life histories’, the approach chronicles – as best it can based on available material, contextual and textual evidence - how the function and ‘meaning’ of individual objects and goods (or their copies) change as they move through geographical, temporal and socio-political space. The archaeological and art historical case studies offered here illustrate the many ways in which meaning and function can be intentionally or unintentionally altered, or even in some cases forgotten and then reinvented de novo.

PRIEWE Sascha

### **The Fragmentation of Jade along the Late Neolithic Yangzi River**

This paper illustrates the ways in which jade and other hardstones found in specific mortuary contexts during the late Neolithic (late third millennium BC, about 2000 BC) along the middle reaches of the Yangzi River acquired meanings in their lives, which governed their deposition upon burial. I argue that the differential trajectories of the objects throughout their ‘lives’ converged upon burial. A particular emphasis is placed on the ways some of the jades were deliberately fragmented prior to burial.

SUN Yan

### **The Life History of Bronze Willow-Leaf Shaped Swords in Early Western Zhou China**

Willow leaf-shaped sword is a distinctive type of bronze weapon of the Western Zhou period (mid. 11th c. to 8th c. BCE). The Yu lineage cemetery in Baoji, western Shaanxi, has yielded the largest number of such swords in the Western Zhou period. Swords of the same kind have also been reported in other cemeteries of the Western Zhou but in very limited numbers. By examining sword's placement in tombs and their association with other mortuary goods, this paper proposes that the original social and cultural meaning of the sword have been altered by the receiving communities when the sword was introduced from the Yu to other communities during the Western Zhou period.

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HOMMEL Peter

**Gathered and Given: Exploring the Composite Biographies of Bead Assemblages in the Tombs of the Western Zhou**

Session

10

The origins and significance of an extraordinary interest in colourful beads, which appears suddenly during the Early Western Zhou period, has received considerable attention in recent years. Though relatively well-studied as a phenomenon, the specific composition of these sets is complex and needs to be examined in more detail.

This paper focuses on a well-known assemblage from Liulihe. It examines the varied character of its beads and plaques and considers their probable histories, both in the general context of bead use among the Western Zhou, and the specific context of the tomb in which it was found. Taken as a whole, the composite biography of such assemblages can perhaps tell us something more about both the individual who wore it into death and the use of beads among the Zhou, reinforcing and perhaps embellishing existing stories woven from the study of other materials and other contexts.

ALLARD Francis

**Transformations and Incorporations at the Crossroad: The Case of the Nanyue Kingdom (2nd century BCE) in Southern China**

The Nanyue kingdom was established in 204 BCE by Zhao Tuo, a Qin general who remained in southeast China following the Qin's defeat. Zhao Tuo and his successors ruled from the capital of Panyu (present-day Guangzhou) until 111 BCE, when Nanyue was forcefully incorporated into the Han empire. Interestingly, a number of Nanyue's artifacts and behavioral elements originated from outside the kingdom, not only from Han dynasty China to its north, but also from more distant regions (e.g. Africa) reached by travel along maritime routes. Some of these non-local artifacts and ideas were incorporated unaltered (in some cases as exotic goods whose original function was likely lost), while others were altered to reflect local tastes. This paper reviews the evidence for these varied 'object biographies', both at Panyu (the location of the Nanyue palace and one royal tomb) and in other areas where Nanyue is believed to have exerted some control.

CHEN Pochan

**The Social Life of Salt in Ancient China**

Salt has been a major financial resource in China since the Han Dynasty. For this reason, many scholars argue that the production and distribution of salt was one of the most important factors in the emergence of Chinese civilization. According to recent archaeological research, oracle bones, bamboo slips, cloth manuscripts, terracotta bricks, ancient texts and ethnography, this article demonstrates the role of salt in ancient Chinese civilization. However, it also argues that the social meaning of salt transformed from that of a prestige good to a more general commodity from the prehistoric period to the Han Dynasty. Only after understanding how people used and regarded salt, can we further discuss its influences on contemporary cultures and states.

RUBINSON Karen S.

**On the Road Again: Chinese Mirrors in Afghanistan**

Six individuals, a male and five females, were buried at the site of Tillya Tepe, today in northern Afghanistan, in the 1st century CE. Three of the females were buried with Chinese mirrors of Eastern Han cosmic mirror type. This paper will examine why these mirrors might have traveled so far, together with other objects and goods and even technologies that properly called China home in this period.

DU Hui

**Appropriating the Other: Exchange, Material Culture and Colonialism in Taiwan, 1850-1945**

Lying silently in scattered museums, Taiwan's aboriginal objects tell a story about the island's aborigines and also about themselves. Starting in the 19th century, these objects were transferred to museums and other public spaces outside Taiwan. In this presentation, I trace the social lives – and propose a biography – of its aboriginal objects, illustrating their use in depicting a world about 'others' and creating an arena of intertwined powers. In this complex network, aboriginal objects obscure the opposition between things and humans, as well as between the West and the East. They become tools of civilizing projects, footnotes to the story of colonial expansion, devices used by Chinese struggling with the outcomes of decolonization, and the means for aborigines to recover their traditional culture and construct a self-identity.

LINDUFF Katheryn

**Artifacts that Invoke the Aura and Authority of the Ancient**

Session

10

Transmission of an ancient object, even those intentionally snatched from their archaeological contexts, presumably satisfied the urge to possess, legitimate or create status. The reuse or remaking of ancient objects to fuel the elites' taste for the ancient in China began at least as early as the Shang as witnessed in the collection of jades in the Tomb of Lady Hao at Anyang. Perhaps a collector herself, Fuhao took to her grave carved jades of previous periods as well as some modeled after earlier pieces. During the Western Han Dynasty replication of objects was institutionalized by the government. This process continued especially in the Song, Ming and Qing Dynasties when collections of ancient bronzes were formed on a regular basis. Transmission took three forms: reuse of an ancient original; reworking of the ancient object; remaking of the ancient model. The biographies of bronzes will be the focus of this paper.

## 11 Starting Over Again: the Early Palaeolithic Research in Japan Today

*Organizers:* IKAWA-SMITH Fumiko

SATO Hiroyuki

*ROOM:* C

*TIME:* 09:00-12:40, JUNE 8 (Sunday)

*Session Abstract:*

The exposure in 2000 of the "Fujimura scandal" led to nullification of over 100 "Early" and "Middle" Palaeolithic assemblages, that had been tainted by fraudulent activities of an amateur archaeologist, Shin 'chi Fujimura. The event had a profound negative impact on palaeolithic research in Japan, but work has been going on, recently with added vigour. While the overwhelming majority of some 14,000 Palaeolithic assemblages in Japan date to the period after about 40kya, there are a small number that appear to suggest earlier arrivals of hominins in the Archipelago. Among these are from the sites where investigation had begun before Fujimura appeared on the scene and remained untainted by his activities, and others that were newly identified during the last decade. The session attempts to bring the recent findings from these "controversial" sites, presented by the principal investigators themselves, to the international gathering of scholars for their own evaluation.

IKAWA-SMITH Fumiko

### **Introduction**

The session presents the first-hand accounts of on-going investigation at six representative sites, where lithic remains have been recovered from strata clearly older than 40,000 years. As an introductory background for the presentations, a brief account of the history of Palaeolithic research in the Japanese Archipelago is presented, beginning with the Iwajuku excavation of 1949, followed by the rapid increase in the number of Palaeolithic sites in the Archipelago, and the circumstances leading to the exposure in 2000 of the fraudulent manufacture of extraordinarily early "archaeological" sites by Shin'ichi Fujimura. While the subsequent examination of all the sites where Fujimura took part in excavations resulted in nullifying the purported evidence at about 100 localities, there remain some 14,000 "untainted" Palaeolithic sites, the overwhelming majority of which date to post-40,000 period. We present examples of the "Early Palaeolithic" of Japan today for the evaluation by the International audience.

KURODA Atsushi, KIKUCHI Kyouichi, KOMUKAI Hiroaki, TAKEDA Yoshio

**Investigation of the Kanedori Site in Iwate Prefecture, Northern Honshu**

Session

11

The Kanedori site, located in Tono City, Iwate Prefecture in the northern Honshu, was discovered by Yoshio Takeda in 1984. The excavation in 1985 revealed that it contained cultural remains dating back to the Middle Paleolithic. The 2nd and 3rd excavations were conducted in 2003 and 2004.

Three cultural layers have been identified at Kanedori. Cultural layer II, dated to  $23,580 \pm 450$  14C yrs. B.P (Gak-13090), contains stone tools of the Incipient Jomon or the Late Paleolithic. Cultural layer III, with 14C date of  $46,480 \pm 710$ .B.P (IAAA-81798), yielded a bifacially modified pebble tool, a large discoidal core, a chopper, and some small tools. Cultural layer IV is assumed to date to early Middle Paleolithic times, as it contains, along with a biface, a chopping-tool, choppers, scrapers, and a few other small tools, particles of several horizon-marker tephra, including those of the Aso-4 Tephra attributed to an eruption of about 85-90ka.

OTAKE Noriaki

**Study of the Palaeolithic Industries of the Takesa-Nakahara Site, Nagano Prefecture, Central Honshu**

The excavations at the Takesa-Nakahara site revealed 4 artifact clusters, which were, in terms of artifact morphology, manufacturing techniques and lithic materials, assigned to two distinct industries. Industry I of the Takesa-Nakahara site is characterized by amorphous flakes that were used with very little modification, and are made of lithic materials that were obtained from the sources within 30 to 40 km of the site. Takesa-Nakahara Industry II, on the other hand, includes edge-ground axes, and flake tools made of obsidian procured from sources as much as 100 km away.

Takesa-Nakahara Industry I is one of the oldest assemblages in Japan, which have been recovered at only a handful of sites, while assemblages similar to Takesa-Nakahara Industry II, dating to the early phase of the Late Palaeolithic in Japan, have been known from more than 700 sites.

UEMINE Atsushi, MATSUFUJI Kazuto, SHIBATA Masaki

**Recovery of the Old Ground Surfaces at Sunabara Site in Shimane Prefecture, Japan**

This presentation will show a method to research all excavated materials in sedimentology of site, not observe some of them in isolation from their context. Sunabara Site yielded 37 stone artifacts in total with pebbles from 2 cultural layers which date back to c.110 - 120 ka (MIS5d-5e) by the topography and tephrochronology. These artifacts can be classified as scraper, chopping-tool, bec, flake, chip, hammer-stone, core and chunk. We recovered 3 old ground surfaces in the fluvial sediment which has sun-cracks, trace fossils and a carbonized leaf. Most of the artifacts and pebbles occurred just on their old grounds, showing different distribution on each ground. In addition, their random imbricated structure, the trace fossils and the limonite pipes do prove that the unearthed materials are in situ. These sedimentological data could not be explained by conjecture that these materials were produced by natural agency.

AKOSHIMA Kaoru, YANAGIDA Toshio

**Continuing Investigation at the Sozudai Site, Northern Kyushu**

The Sozudai site was first excavated by the late Prof. Chosuke Serizawa in 1964. Lithic artifacts were evaluated as the Early Paleolithic of Japan in comparison with continental industries such as Choukoutien. Tohoku University Museum and Dept. of Archaeology continued investigation of the site and re-excavated it in 2001 (6th term) and 2002 (7th and 8th term). The assemblage mainly made of quartz rhyolite and quartz vein consists of choppers, chopping tools, bifaces, pointed tools, notches, burins, scrapers, etc. Small tools including fan-shaped scrapers and "proto-burins" are noteworthy. Many tools were made of peripheral secondary retouch. Heavy duty tools account for less than 10%. Bipolar technique and alternate flaking are common features. Stratigraphy, assemblage composition, and technological characteristics all testify the authenticity of Serizawa's original results, as well as bringing new insights into the period at least older than 50,000 ybp, based on tephro-chronology.

SATO Hiroyuki, HAGIWARA Hirofumi, SHIOZUKA Koichi

**The Lithic Assemblages of the Iriguchi Site, Nagasaki Prefecture, Northern Kyushu**

The Iriguchi site is located on a 15m. riverine terrace on Hirado Island, off northwestern Kyushu, facing the Asian Continent. On the terrace are a number of Early as well as Late Palaeolithic assemblages. We report on the Layer 4 the assemblage, recovered from a reddish clay layer, probably formed during a warm period, and on the Layer 3b assemblage, from the upper most part of the reddish clay and just above it. The Layer 4 was dated by the TL method to  $103,000 \pm 23,000$  BP, and the lower part of 3b Layer to  $90,000 \pm 11,000$  BP. Most of the artifacts, made from angular pebbles of agate, were found in relatively concentrated clusters, and some of the pieces could be conjoined. They include trapezoids, boat-shaped tools, various scrapers, flakes and cores.

WADA Yoshifumi

**Lithic Assemblages from the Lowest Layer of the Ono Site, Hitoyoshi, Southern Kyushu**

Session

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Investigation by the archaeologists of the Hitoyoshi City Board of Education, conducted during the road construction in 2001, at the Ono-C, Ono-D, and Ono-E sites in the Ono site group, revealed that lowest stratum of all the three sites, consisting of reddish-brown clay, contained a large number of lithic artifacts. The stratum has been dated by the OSL method to 69,300 ± 13,900 BP.

The C site assemblage includes wedge-shaped artifacts, burins, choppers, small scrapers, anvil, in addition to a cluster of cobbles, while denticulates, drills, notched pieces, and handaxes, were presented at the D site, and small notched scrapers and axe-like tools at the E site. The assemblages are composed predominantly of small tools, with some large tools with marginal retouch. They share general characteristics with the Layer 5 assemblage of the Sozudai site, which appear to date to about the same age.

SATO Hiroyuki

**Comments: Recent Research on the Japanese Early Palaeolithic**

Although the "Fujimura scandal" in 2000 led to nullification of over 100 "Early" and "Middle" Palaeolithic assemblages, several sites had researched or re-investigated after the scandal are asserted to be before 40 ka, when is the beginning of the Upper Palaeolithic in Japan. These assemblages are estimated by investigators to date from 100 to 40 ka by radiometric dating as OSL, tephro-chronological and sedimentological studies, and techno-typological aspects of lithics. Since in the Japanese Archipelago any Lower Palaeolithic site containing Acheulian is not reported so far, it is supposed that these are Middle Palaeolithic stage without Mousterian.

## 12 The Hunter-gatherer Backbone of the Northeast Asian Bronze Age: Late Paleolithic and Neolithic Adaptations to Northern Latitudes

*Organizers:* **BARTON Loukas**

**CLARK Julia**

*ROOM:* A

*TIME:* **09:00-12:40, JUNE 9 (Monday)**

### *Session Abstract:*

Despite considerable effort to document and evaluate the earliest evidence for metallurgy, monumentality, and mounted mobility in northern Eurasia, little is known of the adaptive strategies that enabled humans to thrive in northern latitudes. What we do know is that hunter-gatherers of the last glaciation found diverse and often unique ways to exploit desert, steppe, mountain and forest resources, and did so well into the Holocene. In this session we explore the nature of late Pleistocene and early Holocene cultural change (technological, organizational, and institutional) that permitted adaptation to dramatic environmental change, and ultimately set the stage for the adoption of agro-pastoral subsistence and socio-political complexity. This is an opportunity to develop and share novel insights about the ways in which the northern Eurasian Bronze Age was built on the foundations of hunter-gatherer life.

BARTON Loukas

### **Microblades, Marginality, and Mobility**

Adaptive strategies of hunter-gatherers in northern Asia (specifically China and Mongolia) have received little attention. This is due, in part to an historical disinterest in foraging people, but also because so much of the record is unspectacular and stratified archaeological sites are rare. The purpose of this paper, and indeed the entire session, is to explore what we do know and how to integrate this into testable hypotheses about change in hunter-gatherer behavior from the terminal Pleistocene to the middle Holocene. This is an exploration of the relationship between resource abundance and distribution, subsistence technology, and patterns of land-use in marginal, northern latitude environments.

TABAREV Andrey

### **Principal Technological Innovations in the Stone Age of Northern Mongolia, 45-8,000 BP**

Technological innovations are one of the best archaeological markers in the process of understanding of the trajectory of cultural evolution. Several such events were traced and dated for the Stone Age sites in Northern Mongolia (Selenga River basin) during the investigations of Russian-Mongolian-American team in 2002-2011. Among these events (1) prismatic blade technology (as early as 45,000 BP) for the Early Upper Paleolithic, (2) microblade pressure technology (28,000 BP) for Upper Paleolithic, and (3) technology of pottery making (8,500 BP) for Early Holocene may be recognized as the principal and revolutionary ones. From the other hand the nature, origin, and cultural significance of the listed technologies are quite different and determined by specific climatic, economic and cultural conditions.

ZWYNS Nicolas

**The Open-air Site of Tolbor 16 (Northern Mongolia): New Results and Perspectives**

Session

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Numerous questions remain regarding the timing and the context of Upper Paleolithic emergence in Northeast Asia. Available data allow the recognition of a form of Initial Upper Paleolithic (IUP) documented in the Altai circa 45-40 ka 14C BP, in the Cis- and Transbaikal around 40 ka 14C BP. In Northern Mongolia, a series of assemblages show intriguing similarities with IUP laminar assemblages from South Siberia and suggest long distance contact/movements of population during the first half of MIS3. These contacts are potentially enabled by the main river that drains into the Lake Baikal, the Selenga. By cutting through the Sayan and the Yablonovy mountain ranges, the Selenga drainage system provides a potential corridor connecting South Siberia with the plains of Mongolia. The Tolbor 16 site (Ikh Tulberiin Gol, Northern Mongolia) is located circa 13 km from the confluence with the Selenga, this newly discovered site offers the possibility to generate high-resolution contextual data and to integrate them into the regional Upper Paleolithic chronology. The goal of this project is to use the obtained archeological, chronological and environmental sequences of T16 to test the prediction of the 'Selenga corridor hypothesis', such as the existence of a united IUP tradition between Southern Siberia and Northern Mongolia. Work at T16 is on-going and first results from the 2011-2013 excavation are reported here.

TEYSSANDIER Nicholas, GUNCHINSUREN Byambaa, ANTOINE P., BRAGA José,  
CALASTRENC G., DISCAMPS E., DURANTHON R., IZUHO M., LKUNDEV G., MENARD C.,  
TSEDENDORJ B. , ZWYNS Nicolas

**Archaeological Survey and Upper Paleolithic Assemblages in North-Eastern Mongolia: Introducing the Havstgayt Valley**

We report here preliminary results of an on-going international project triggered by the discovery of the Anatomically Modern Human skullcap from Salkhit, in Northeast Mongolia.

The survey led to the discovery of the Havstgayt Valley ca. 20 km to the South-East of Salkhit. A test-pit open on the terrace of a rock shelter illustrates a succession of Holocene-like and Upper Paleolithic layers. The first layer includes a rich lithic assemblage dominated by pressure flaking technique. It features conical microblade cores, highly standardized rectilinear blanks and bifacial pieces. The associated fauna mainly consists in small bovid and horses. Under the Holocene layer, the sparse lithic artifacts encountered are tentatively attributed to an unidentified Upper Paleolithic tradition.

Another clear Upper Paleolithic component has been discovered in the vicinity of the rock shelter. Massive and convergent blades with faceted platforms have been collected along a gentle slope. They are consistent with an attribution to the Initial Upper Paleolithic technocomplex. Although the latter is well known in the Siberian Altai, in the Transbaikal and in North-Central Mongolia, Havstgayt currently stands as one of the easternmost localities that document such technical tradition.

MORGAN Christopher

**From Serial Specialist to Cereal Specialist: Managing Hunting and Husbandry in the Context of the Terminal Pleistocene-Early Holocene Fitness Landscape of North China**

Recent reconstructions of terminal Pleistocene-early Holocene settlement and subsistence patterns in northern China indicate that the intensive yet highly mobile hunting pattern that developed during the Younger Dryas as a way of mediating the increased temporal and spatial patchiness of the terminal Pleistocene resource base was maintained and even facilitated by early experiments with farming millet in the early Holocene. The long-term viability of this novel adaptation is evaluated in the context of other adaptations that first appear in the region in the Early Holocene. Within this framework of competing adaptations, it is argued that though mobile hunter-farmers may have initiated the adoption of agriculture multiple times across northern China in the terminal Pleistocene, this lifeway was ultimately outcompeted by a less mobile, more agriculturally-dependent adaptation that could support greater population densities in the early and middle Holocene.

JANZ Lisa

**Dune-fields, Wetlands, and Sheep in Mongolia: Finding the Origins of Pastoralism in Pre-pastoralist Societies**

Mongolia's landscape serves as a steppe-land corridor between Central and East Asia and this geographic character indicates that the region must have played an essential role in the spread of herding and nomadic pastoralism across the steppes of Inner and East Asia. Despite the importance of this region in understanding the origins of local production economies, pre- and early Bronze Age archaeology (prior to 1000 BC) is remarkably understudied. Recent large-scale analysis of microlithic assemblages from the Gobi Desert reveals key patterns in prehistoric land-use, most notably a trend in intensive dune-field/wetland use beginning around 6000 and lasting until 1000 BC. Certain elements of material culture also suggest that local groups had knowledge of and contact with food producing neighbours prior to the spread of nomadic pastoralism around 1200 BC. These data underline the importance of hunter-gatherer studies in revealing the origins of pastoralism.

CLARK Julia K.

Session

12

**Hunters in a Herder's World: Using Ethnoarchaeology, Historical Data and Cultural/ecological Modelling to Investigate Mixed Hunting-herding Strategies in Northern Mongolia**

Today (and for the last few millennia) Mongolia's economy and national identity is closely tied with specialized pastoral herding. The hunters and gatherers that once inhabited the region were either replaced by, or adopted the economic traditions of their herding neighbors. This transition, in whatever form it took, was likely not instantaneous, but rather a long process in which long periods of mixed hunting-herding strategies were employed. In some regions of Mongolia, an ongoing balance of hunting/fishing/gathering and herding strategies continues. In this presentation, I will explore the ways in which using ethnoarchaeology, historical data, and cultural and ecological modeling can be used to investigate mixed hunting-herding strategies that persist in the region, and then investigate the ways in which these kinds of empirical data can then be used to direct and inform archaeological research. While appropriate caution must be used for these kinds of analogies, a look at hunters in a herder's world might help us to understand the first herders in a hunter's world.

WRIGHT Joshua

**Continuity and Change in the Landscape Networks of Holocene Mongolia**

Intensive archaeological surveys in several regions of Mongolia have documented a continuous record of hunter-gatherer land-use starting before the last glaciation and reaching into the Bronze Age. A main lesson of this work is that there are no clear chronological divisions here. Distinctive material cultures are intermixed on the ground, monument types are enmeshed and cross-referential, and the adoption of new forms takes place while old technologies are still in use. One of the places we see this process being played is at palimpsest habitation sites. Palimpsest sites provide a useful - if attenuated - record of the adoption of the subsistence system and material culture of Bronze Age pastoralism into an active hunter-gatherer landscape. They also offer us a way of looking at patterns of choices in land-use and how those networks span chronological boundaries. This paper will use detailed archaeological survey data to pinpoint continuously used locales, and trace their connections to different chronological periods. It will then evaluate both arguments for gradual change and adaptation alongside network flipping in which some elements of one network are adapted rapidly into another.

## 13 Patterns of Craft Production Since Neolithic Times in China, Part I

*CHAIR:* **XIE Liye**

**CHEN Xingcan**

*ROOM:* B

*TIME:* **09:00-12:40, JUNE 9 (Monday)**

*Session Abstract:*

To complete the picture of ancient production systems, we need to pay attention to both specialized and non-specialized craft production, because objects produced in different production systems serve various needs. This symposium attempts to draw case studies from abundant archaeological, ethnographic, and historical resources in China to demonstrate how various patterns of craft production fulfilled different levels of economic and social need under specific cultural, political, and environmental conditions. It promises to bring together a diverse group of researchers with potential to establish theories and methods for understanding multiple facets of a society, including but not limited to its resources, cultural transmission, social structure, politics, and economy.

CHEN Xingcan

### **Were Neolithic Rice Paddies Plowed? Functional Analysis of Plow-shaped Tools from Pishan in the Lower Yangzi River Region, China**

Several Neolithic sites dating to the Songze and Liangzhu cultures (4000-2300 BC) in the Lower Yangzi River valley have revealed large triangular-shaped stone implements, commonly described by archaeologists as ploughs used for rice cultivation. This functional interpretation, however, is based on the formal typology of these tools, and no experimental study or usewear analysis has been carried out to verify this claim. This paper attempts to investigate the hypothesis of ploughing. In order to understand the usewear patterns of soil-working tools, we conducted experimental ploughing with a stone tool and examined a modern iron plough and a Neolithic stone spade. The usewear patterns from these references are used to compare with plough-shaped tools from a Songze culture site at Pishan in Zhejiang. The assumption that Neolithic rice paddies were prepared with stone plows is questionable, and more studies on Neolithic stone tools are needed.

FLAD Rowan Kimon

### **Comparing Prehistoric Salt Production and Associated Social Networks in Shandong and the Three Gorges**

Session

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Archaeological studies of salt production in China are relatively recent in China yet in the last decade research in Chongqing, Shandong, and elsewhere have demonstrated that the salt industry that became so important to state finance in the Imperial era had deep historical roots that show some distinctive regional characteristics, but also clear connections across long distances. Salt production in pre-Qin China was an important specialization that fostered cultural development and stimulated long-distance contacts. This paper compares recent analyses of salt archaeology in Shandong to previous work at the site of Zhongba in the Three Gorges of Chongqing Municipality. Similar technologies were used in both places during the period leading up to technological changes that transformed the production process. The paper discusses how technology developed locally in these two cases and how the salt production fit into broader regional networks.

KIKUCHI Hiroki

### **The Birth of the Horse Production System during the Zhou Dynasty, China**

Horse production was one of the core revolutions that facilitated expansion of warfare, power, ritual and transport in Ancient China. This study presents lines of evidence demonstrating that the horse production system was well developed by the time of Zhou Dynasty (11th-3th century B.C.). Ancient literature documents that the utilization and breeding technology of the horse started in Late Shang (14th-11th century B.C.). The production system was gradually established and finally refined with a hierarchy of Zhou Dynasty officials. It operated on a seasonal schedule year round with human agency strongly influencing horse husbandry making it an important craft specialization within the Zhou social and economic systems.

MAKIBAYASHI Keisuke

### **Multiplicity of the Farming Tools of Rice Cultivation in Prehistoric China**

It's a widely accepted view that the rice cultivation was originated in the Yangtze river area. Subject of that research is basically the rice remain. But rice cultivation is also a technique. By using tools, plowing, harvesting, processing and cooking are realized. If so, how about the origin and development of rice cultivation from the perspective of farming tools? In this paper, of those farming tools, I especially focus on the harvesting tools such as stone knife and sickle. Through the analysis of typology, we can reveal that: stone knives in the middle and the lower Yangtze river were not within the same technological lineage. Right angle sickle in mainland China had its origin in the lower Yangtze river area. Based on these analyses, this paper discusses the technological multiplicity of rice cultivation in prehistoric China.

XIE Liye

**Self-sufficient Household Production of Bone Spades and its Marginal Effects in Early Hemudu Culture, 7,000-6,000 BP, China**

Bone spades crafted from wild water buffalo scapulae were used for rice cultivation and constructing structures in wetlands in the early Hemudu culture of eastern China, 7,000-6,000 BP. These bone spades had sophisticated hafting designs that were costly to make. Based on multiple lines of evidence, my research shows that these spades were produced by self-sufficient household craftspeople. The social learning strategy of emulation within a self-sufficient household production system may have contributed to an extended tradition of using bone spades even when raw material was in short supply and caused a prolong process toward intensification of agriculture and sedentary settlement.

NIWA Takafumi

**A Transformation of "Multi-production System" in China**

Multi-production systems, i.e. the co-manufacture of multiple crafts (e.g. metal, lacquer, and glass) in the same workshop, are commonly found in Japan at sites spanning the Kofun to Asuka periods. However, little research on this topic has been carried out in China. This paper discusses the Multi-production systems, i.e. the co-manufacture of multiple crafts (e.g. metal, lacquer, and glass) in the same workshop, are commonly found in Japan at sites spanning the Kofun to Asuka periods. However, little research on this topic has been carried out in China. This paper discusses the "multi-production system" from the Shang-Zhou to Sui-Tang periods in China. Prior to the Spring and Autumn period, we recognize that bronze and pottery production sites were close, with some researchers suggesting a close relationship between the beginning of metallurgical technology and the development of kiln structures. With advances in iron casting technology following the Warring States period, we note that bronze and iron production relied on the same equipment, such as furnaces and large scale blow pipes. During the Sui-Tang period, soda glass fragments were discovered at the Liquanfang kiln site in Xi'an, indicating that kiln and glass products were manufactured at the same site.

HUNG Ling-yu

**Technology and Organization of Pottery Production: Ethnoarchaeology in the Upper Yellow River Region, NW China**

Session

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Ongoing ethnoarchaeological study provides insight into the technological choices and social contexts surrounding the production of painted-pottery vessels in the upper Yellow River region. In this region, tens of thousands of painted-pottery vessels are dated to the Neolithic and Bronze Ages. Many of the surviving examples are revered as exquisite artworks and icons of ancient Chinese culture, now housed in museum collections world-wide. Today, artisans use local clays to duplicate these ancient pots for modern tourist trade. Visits in 2007, 2008, and 2013 with these modern artisans and their workshops revealed the complex processes, as well as the variety of technology and organization, involved in making painted pottery. Clays and potsherds collected from these workshops have been analyzed to compare their geochemical composition with archaeological samples. The results broaden our understanding of the archaeological specimens and help to frame new research questions.

## 14 Advances in Bioarchaeology

*CHAIR:* ERDENE Myagmar

*ROOM:* A

*TIME:* 09:00-10:40, JUNE 9 (Monday)

BROSSEDER Ursula, BEMMANN Jan, YERUUL-ERDENE Ch., GANTULA J.-O., GRUPPE Gisela, McGLYNN George

### **Bioarchaeological Research in the Upper Orkhon Valley: State of Research and Future Prospects**

For the Bronze and Early Iron Age in Mongolia we currently lack a deeper understanding of the co-existence of various archaeological features, such as khirigsuurs and slab graves. Our projects therefore aim at the systematic research of the ritual landscape in one micro-region of the Upper Orkhon Valley (Central Mongolia) that displays an exceptionally dense occupation in the Late Bronze and Early Iron Age. While most features look familiar there are numerous structures with a layout that are currently unknown and yet await their exploration. The goal of our research is to understand the use and shaping of the ritual landscape in this micro-region in the second and first millennium BCE by employing an approach combining aspects of landscape archaeology and bioarchaeology including questions of diet and health. Over the past three years we have mapped the archaeological structures in this micro-region and excavated several features that shed light not only on the temporal sequence but also allow for insights into the use of these monuments.

GAVAACHIMED Lkhagvasuren, CHOI Jee-Hye, MIN Na Young, HAN Sunghoon, CHOI Jaesung, LEE Si-Eun, LEE Ho Woon, JUNG Eui Do, KIM Sang Kyun, LEE Won-Joon, KIM Jae-Hyun, TUMEN Dashtseveg, LEE Kwang-Ho

### **Neolithic Populations of Far Eastern Asia (5,000-7,000 yBP) Carried the Europe-prevailing mtDNA Haplogroups**

Neolithic skeletons that were dated 5,000-7,000 yBP and excavated in Far Eastern Asia, including the Mongolian plateau and the southern part of the Korean peninsula, were successfully typed for their mtDNA and Y haplogroups. Three specimens from the eastern part of the Mongolian plateau were found to carry the Eastern Asia-prevailing mtDNA haplogroups, D4, and A, and Y haplogroup C, whereas two from the western part carried the Europe-prevailing mtDNA haplogroups, M35 and U5a, and Y haplogroups, R and J. Surprisingly, 7 skeletons from the Korean peninsula, the easternmost place on the Asian continent, carried the Eurasia-prevailing mtDNA haplogroup H1b. It was totally inconceivable that the H1b mtDNA haplogroup, which has never been observed on the Eastern Asian continent but prevailed in the contemporary Europeans, was found on the Korean peninsula. These results suggest that there was intensive anthropological mixture between Mongoloid and Caucasoid ethnic groups in the Eastern part of Asia even early in the Neolithic period, implying that the Neolithic populations might have migrated more dynamically all over the world than we think.

GAVAACHIMED Lkhagvasuren, CHOI Jee-Hye , MIN Na Young, HAN Sunghoon, CHOI Jaesung, LEE Si-Eun, LEE Ho Woon, KIM Jae-Hyun, TUMEN Dashtseveg, LEE Kwang-Ho

Session

14

### **The First Molecular Key to Unveiling the Mysterious Genealogy of Genghis Khan's Family**

The Mongol Empire could not be built without the involvement of women in Genghis Khan's family, including his daughters who dominated neighboring kingdoms which shielded the inner territory of the Mongolian steppe and provided a springboard for his world conquest. No documents about them have survived despite the illustrious achievements of the Mongol Empire. In 2004, 7 graves assumed to belong to the Mongol imperial family (Golden family) were discovered in Tavan Tolgoi, Eastern Mongolia, and their occupants were analyzed for haplotypes and haplogroups of their mtDNAs, autosomes and Y chromosomes. The present study—as the world's first molecular archaeological analysis of human skeletons belonging to the Golden family—is expected to provide clues for deciphering the mysterious genealogy of Genghis Khan's family and for reconstructing the history of the women in Genghis Khan's family, forgotten for 8 centuries.

LIU Ming

### **Research on Ancient Human Stature in Mid-southern Inner Mongolia, from the Bronze Age to the Early Iron Age**

The mid-south of Inner Mongolia area is a very important component of the farming-pastoral ecotone of northern China. Therefore, the study is conducive to a knowledge of the development of the northern nomads belt along the Great Wall of China, which about the archaeology culture and the populations in this area from Bronze Age to Early Iron Age. The point of this article is to rebuild the stature of ancient human through their limbs. The result shows that the average stature of the inhabitants in mid-south of Inner Mongolia area was medium compared to other populations at the same time. Furthermore, it suggests that the economic pattern had greater influence on the ancient populations than the difference of region and ethnic group.

## 15 Trade and Interaction in Northeast Asia, Part I: Crossroads of Initial and Early States in Northeast Asia

*Organizers:* NAKAMURA Daisuke

SEYOCK Barbara

*ROOM:* A

*TIME:* 11:00-12:40, JUNE 9 (Monday)

### *Session Abstract:*

Initial states in the Korean Peninsula and the Japanese Archipelago took shape in the centuries before 300 AD, owing much to stimulations from abroad, especially from the Chinese Han dynasty. Related archaeological data from excavations in Korea and Japan has recently increased, indicating that the trade routes changed drastically during this period. Initial states apparently have not formed entirely out of inner-social developments in the respective regions, although we can perceive that internal structures, such as hierarchies and production systems of crafts, also changed in that time. It is clear that both external and internal factors had their impact on the formation of initial and early states. At present, however, research approaches focusing on the relationship of both are not highly developed. Therefore, this session concentrates on the relationship of trade and social complexity in Northeast Asia through case studies in various research fields, such as the reconstruction of trade in iron, bronze, glass, stone beads, etc., and the investigation how social complexity advanced in this context.

SEYOCK Barbara

### **Memories from Abroad: Han-Chinese and Epi-nomadic Heritage in Korean and Japanese Archaeological Contexts**

The centuries around 100 BCE to 300 CE brought about major changes in material culture, social structures, and cross-cultural trade relations for the Korean peninsula and the Japanese archipelago. Owing to the establishment of four Chinese commanderies in the north of the Korean peninsula in 108 BCE, new techniques, such as bronze and iron production, spread throughout the whole of the peninsula and further south crossing the Straits to the Japanese islands, fuelling the development of increasingly hierarchical societies. Chinese bronze import goods have been excavated from many elite burials in the Korean southeast and the western part of Japan. Animal style bronzes moreover illustrate the influx of formerly Scythian elements into that region, while locally produced goods seem to have been extensively traded across the Korea Strait in both directions. This paper attempts to analyze the spread of respective artefacts in Korean and Japanese sites, and pays special attention to the change in function of elite burial goods in the proto-historic period.

NAKAMURA Daisuke

**Bead Traders and Political Power during the Formation of Early States**

Session  
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Northern Kyushu (NK) area was the largest center of distribution for finds such as bronze objects, and jasper and jade beads in the latter half of Middle Yayoi period (1st C. BC). However, jasper distribution changed in the latter half of Late Yayoi period (2nd C. BC), and many jaspers then centered in the Sanin and Tango area. Though a few jaspers, which were mined in different areas, are still distributed in NK area in minor quantities, it was only in the terminal phase of the Yayoi period (3rd C. BC) that the distribution of jasper again centered in the NK area and sources of jasper became more manifold. Moreover, within NK area several small areas can be identified, such as Fukuoka, Itoshima and Karatsu area, where beads of different material have been prominent. It seems that the change of beads distribution relates to the change of power relationship of these areas. In this presentation, I will examine how changes in the distribution of these beads relate to the complexity of the societies.

NAGATOMO Tomoko

**The Innovation of Trade Routes from the 1st Century AD to the 3rd Century AD**

The period between the 1st century AD and the 3rd century AD is a transitional period in Japan; society changed from a system of competing elites to a chiefdom society. This can be detected by an analysis of the shifts in the trade networks. Stone as the main materials for tools, for example, was replaced by iron. Other materials also changed, so that we generally need a different approach to understand the impact of trade innovations in the early societies of Japan. I will therefore discuss this transitional period by an analysis of trade with special attention towards the differences in trade goods associated with elites, such as bronze mirrors, and trade goods associated with common people, as for example bronze coins.

UENO Yoshifumi

**Chinese Style Items in the Social System of the Early States in East Asia**

During state formation period in the Japanese archipelago and the Korean peninsula (3rd to the 7th centuries), the relation between the central authority and the elite of each region was represented by the distribution of certain items. Chinese items were of specific importance for the change in societies. The distribution of them was controlled by the central authorities. Two purposes can be identified; one affects the general acknowledgement of social power, the other defines rank or position within the increasingly hierarchical system. 'Traditional' items such as mirrors and metal ornaments – crowns or buckles – were used to establish a network of equal bonds among the holders, while new unique items were created in order to distinguish between groups of different rank or otherwise hierarchical position, as will be elucidated. Thus, the political strategy of the central authorities vividly influenced the distribution system of Chinese style items, a development that culminated in the establishment of ancient states

YAMAMOTO Takafumi

**Trade Innovations of Baekje and Silla during State Formation**

During the period of ancient state formation, trade articles imported from mainland China were utilized as a medium that promoted the domestic unification of several states in the southern part of the Korean Peninsula. Baekje imported Chinese ceramics from the beginning of the initial state stage, and ceramics were distributed among influential local groups. Chinese aristocratic culture thus seems to have been introduced into Baekje as a symbol of authority. In Silla, on the other hand, trade products from western Eurasia were imported – including a glass vessel and gold and silverware – directly, neglecting the ancient routes going by way of Chinese territory. Chinese central culture did apparently not affect this trade. Various trade articles reached the different states, and the productions centers also differ broadly. It is therefore considered that the differences symbolized respective local traditions and process of sovereignty and administration.

## 16 Patterns of Craft Production Since Neolithic Times in China, Part II

*Organizers:* **XIE Liye**

**CHEN Xingcan**

*ROOM:* B

*TIME:* **14:00-17:40, JUNE 9 (Monday)**

### *Session Abstract:*

To complete the picture of ancient production systems, we need to pay attention to both specialized and non-specialized craft production, because objects produced in different production systems serve various needs. This symposium attempts to draw case studies from abundant archaeological, ethnographic, and historical resources in China to demonstrate how various patterns of craft production fulfilled different levels of economic and social need under specific cultural, political, and environmental conditions. It promises to bring together a diverse group of researchers with potential to establish theories and methods for understanding multiple facets of a society, including but not limited to its resources, cultural transmission, social structure, politics, and economy.

HUANG Tsuimei

### **Bead-strings with Trapezoidal Plaque from the Zhou Dynasty of China and their Connection with Headsets of the Northern Grasslands**

Head ornaments consisting of bead-strings and trapezoidal plaques are thought to have come into existence during Western Zhou period (Middle 11th C. – Early 8th C. BCE) in China; they remained as popular jewelries for women throughout early Eastern Zhou time (second quarter of 8th C. -7th C. BCE). It is noted that the components and design features of these bead-string sets not only were markedly different from those of the earlier examples of the kind, the way these body ornaments were used also could be distinguished from other contemporary jade-string sets. However, the source and the detailed design patterns of these bead ornaments are topics yet to be explored. In this article, the author studies relevant examples from recent archaeological excavations and hypothesizes the origin of this specific type of jewelry and its developmental trajectory. The study investigates the position of the bead-strings and trapezoid plaques in the burials, the composition of these components in a set, and their temporal and spatial distributions.

OMURA Mari

**Braids Excavated in Xinjiang, China and their Manufacturing Techniques**

This article deals with some braids excavated in Sampula, Xinjiang and a possibility of the use of loop braiding techniques. The period of the graves are dating back to from the first century BC to the 4th century AD. We have analyzed the pattern and structure of some braids and tried to reconstruct them using the techniques.

The results tell us that the looped-elements to make some braids were combination of two-colour loops and one-colour loops. They would have been made from even number of looped-element according to the typical pattern if these techniques had been applied. This would be specific point of this group. Besides, there is a close resemblance about the use of threads between East Asian silk braids dated to the 5th-6th centuries AD found on iron armour in South Korea and Japan; several small threads are used as one to make some braids.

YOSHIDA Yasuyuki

**The Production Technique of Ring Ornaments in the Chinese Neolithic - Bronze Age Period: Insights from Workshop Sites in Northern Vietnam**

Ring Ornament is one of the most characteristic artifacts from Later Neolithic Period to Bronze Period in China and Northern Vietnam. Both areas have not only common shape ring ornament - for instance famous T-section ring, but also common technique for ring ornament production - removing core technique. Chronologically, it would be sure that the emergence of ring ornaments and its production technique in Northern Vietnam was the result of influence from Chinese ancient culture. However, the decent workshop sites we can see the details of the technique concentrate in Northern Vietnam. By analyzing the materials - ring ornaments, unfinished products, removed cores, tools in the workshop sites, the author would like to show tentative assumption about the relationship between production process and tools. This work will lead to comparative studies with workshop sites in China and contribute to fill in the missing piece of ancient technique history.

QIN XiaoLi

### **The Study of Turquoise Ornaments Technology from Later Neolithic to Early Bronze Age of China**

Session

16

Most of the turquoise ornaments from early Neolithic sites are pendants with a single material. However from the later Neolithic period, people started to use turquoise ornaments with two or more composite materials. Ornaments were inlaid with turquoise and other materials by unique techniques. In early Bronze Age, turquoise production process reached its peak. From Erlitou site, archaeologists found a large dragon-shaped turquoise painting, variety animal-shaped turquoise decorations, and turquoise workshops. The purpose of this paper is to understand the importance of turquoise products in early dynastic formation process by analyzing the following topics: the technological evolution, the combination of composite materials, the usage of adhesive, and the production process of this type of ornament craft from Neolithic to the early Bronze Age.

SAGAWA Masatoshi

### **Innovations and Adoptions of Roof Tiles across East Asia in Historic Periods of China**

In China, mass production and use of roof tiles began in the Western Zhou dynasty. The manufacturing techniques and the application of roof tiles became increasingly sophisticated in the Western Han dynasty, e.g., a clay slab was added to the cylindrical wooden tub. The technical innovations had been adopted in southern China, Korea, and Japan by the seventh century. However, in north China and north Asia, the clay slab method was not adopted until after Yuan conquered Southern Song and imported the latter's craftspeople. The designs and manufacturing techniques of roof tiles varied greatly in the Northern and Southern dynasties. Polished and carbonized tiles and eaves tiles were invented and adopted in different areas and times in north China and Korea. The history of roof tiles across East Asia reflects not only practical needs, but also economic conditions of and interactions among the political entities.

GUO Qinghua

### **Assessing Two Types of Roofing Tiles from Bohai's Shangjing**

Shangjing was the capital of the Bohai kingdom (698-926) in north-eastern China. This study is interested in roof tiles excavated at Shangjing where the tiles follow the general range of types familiar in Tang dynasty China (618-907). But, a type of eaves-cover tiles and a type of animal heads are distinctive and uncommon in the Tang.

The primary objective of this research is to engage with the following questions: What was the purpose of the eave-cover tiles and dragon heads? Where were they positioned on roofs? Was there any connection between dragon-head sculptures and high reliefs? This study aims to recognize their functions, to trace their origins and connections, and to interpret coherently on these issues.

DING Yu

**A Brief Discussion about the Spread of the Technology of Fully Glazed Wares in the Chinese Ceramic Kilns**

Located in Henan province, the two important kilns of Ru and Jun made use of a special technology to glaze their ceramics. This involved using small branch nail sticks to support the wares and ensure that they didn't touch the saggars. In this way, the vessels did not adhere to the saggars and were nearly fully glazed. Although this characteristic technique is associated with these famous kilns, its origin and development has not been sufficiently discussed. Used widely at high quality ceramic kilns in China, the technique also affected the production of Koyo Celadon. This paper discusses the origin and development of this technology and looks at the products of Jun kiln as a way to determine the site's chronology.

KOZUKI Katsumi

**Cross-cultural Production, Trade and Consumption of the Hizen Ware Bowls with Dragon Pattern**

This paper discusses by archaeological records how the Great Clearance in 1662 had the economic impact on East Asia and Southeast Asia in the late 17th century. Those records are the Hizen Ware bowls with dragon pattern. These bowls were unearthed so much from the layers of scorched soil in Nagasaki, the most important port city for Tokugawa Japan. These layers are vestige of two of the large fires in 1663 and 1698. Therefore, those bowls can be divided into three types: the type produced before 1663, the type produced in 1663 and the type produced after 1663. Thus Comparing the three types of bowls with the bowls excavated from the Hizen porcelain kiln or Southeast Asian cities, this paper clarifies the transition of porcelain production system in Hizen area and/or the time when Hizen Wares started to be traded to each city in Southeast Asia after the Great Clearance.

## 17 Trade and Interaction in Northeast Asia, Part II: The Yellow Sea Interaction Sphere - Moving Beyond the Texts

*Organizer:* LEE Dennis

*ROOM:* C

*TIME:* 14:00-17:40, JUNE 9 (Monday)

### *Session Abstract:*

Until recently, the hegemonic nature of historical texts in East Asia has focused studies in the Yellow Sea interaction sphere on relations between traditional historic states.

However, the New archaeological data coming out of China, Korea, and Japan has complicated and problematized our understanding of the interactions within the Yellow Sea interaction sphere as well as shedding light on the textually invisible border/frontier regions that also played important roles forming economic and political ties with the historic centers and among themselves. This session examines connections and interactions between polities and regions within the Yellow Sea interaction sphere that are invisible in the historical records while challenging or bringing New light to our present understanding of the Yellow Sea interaction sphere.

LEE Dennis

### **Invisible Borderlands and Silent Frontiers: the Keyhole-Shaped Tombs on the Korean Peninsula**

Once thought to only exist on the Japanese archipelago, fourteen keyhole-shaped tombs have been discovered on the Korean peninsula. This paper argues that these tombs arose from interactions between autonomous polities in the borderlands or frontier regions of Paekche and Yamato. This study illuminates the role of these borderlands within the dynamic political changes occurring in early relations between the Korean peninsula and the Japanese archipelago during the 5th – 6th century AD. As a secondary objective, this paper illustrates how geonationalism (i.e. the projection of arbitrary geographical borders into the past), totalizing notions of territory and conquest, and the hegemonic nature of text-based narratives render these borderlands invisible and silent.

GILAIZEAU Linda

**Diplomacy from the Grave: Interactions between Western Japan and the East Asian Continent from a Burial Point of View**

From the beginning of the Yayoi period, signs of interactions between Japan and North East Asia are clearly visible, especially through burial practices.

Frequent references are made to the Chinese chronicles to analyze the relationships between Asia and Ancient Japan, in terms of politics, diplomacy, war or exchanges. Yet, these texts, taken as the main reference, are not enough to show the complexity of these interactions and their multiple expressions.

The study of burial practices in Western Japan allows us to propose a long-term evolution analysis about the interactions with Northeast Asia. The analysis of architecture, burial goods, body treatment, cemeteries' organization and management and physical anthropology on a long term point of view, enables us to show trends of evolution. It is a window on how Yayoi societies reacted to events and historical trends on the Asian continent, on a technological, political, cultural, human and ideological point of view.

BARNES Gina

**Inspiration for Combed Decoration on Silla Ware from South China?**

This presentation raises the possibility of connections between the southern Korean Peninsula and the southern coast of China with exact timing and contacts yet unspecified. From the 3rd century AD onwards, the shapes of Kaya and Silla ware have always been regarded as more Mainland-like than their Wajil predecessors. But the discovery of combed patterns on ceramics in the Tomb of King Zhao Mo of Nanyue (122 BC) that are very similar to Kaya/Silla ware decoration do suggest some kind of transfer, perhaps through trade. The timing is difficult, and we look forward to intervening southern discoveries that may fill the gap between Zhao Mo and Kaya.

IM Hyojai, KO Jaewon

**The Gosan-ri Neolithic Site and its Place in Northeast Asia**

The Gosan-ri Neolithic site in Jeju, Korea, was first discovered in 1987 and excavated for three seasons in the 1990s. Its estimated date of 11,000-10,000 BP as well as the presence of early pottery and microblade tools received much attention from domestic and international scholars. Its location and cultural contents has an important implication in the discussion of the transition from the Upper Paleolithic to the early Neolithic period in Northeast Asia. During the two seasons of the excavation at the site in 2012 and 2013, a few dozens of semi-subterranean houses, hundreds of pits, and a number of open-air hearths have been discovered. This new body of archaeological evidence provides an important information for our understanding of one of the earliest settled villages in Northeast Asia. This paper will present the most recent archaeological data from the Gosan-ri site and discuss its temporal, spatial, and cultural place in the early Holocene Northeast Asia.

PAK Yangjin

**Interaction between Northeast China and Korean Peninsula as Seen in Bronze Age Pottery**

Session

17

Many scholars have noted the close similarities of Bronze Age pottery vessels between Northeast China and Korean Peninsula. Some of these similarities include such stylistic attributes as the double-layered rim, the serrated band, and the clay-band rim. Other similarities include entire vessel forms such as long-neck jars, pedestal dishes, and the so-called Misong-ri style pottery vessels. At the same time certain differences between the two areas clearly existed, the most notable of which is the absence of tripod vessels in Bronze Age Korea. This paper will summarize the similarities and differences of Bronze Age pottery between Northeast China and Korean Peninsula and try to explain how and why such phenomena came to exist. It will also discuss the uneven degree or intensity of interaction between different parts of Northeast China and their corresponding areas of Korean Peninsula.

TAMURA Tomomi, OGA Katsuhiko

**Distribution of Lead-barium Glass in Ancient Japan**

Lead-barium glass, considered to be unique to ancient China, was one of the types of glass that first appeared in Japan as early as the 3rd c. BCE. The associated advanced bronze-age culture and a small amount of iron tools indicate that lead-barium glass was also a marker for interaction and trade relationships between Japan, China, and Korea in the early Iron Age. Further evidence suggests that the distribution of most of the lead-barium glasses stopped by the end of the 2nd c. CE. In Japan, while tubular beads are the most common lead-barium glass artefacts, other objects, including bi disks, eye-beads and comma-shaped beads, also exist.

Lead-barium glass tubular beads found in Japan may be divided into three groups based on manufacturing method and shape. Most surprising is that the most common Japanese tubular beads, colored by Chinese blue pigment, have not yet been found in Korea.

KIM Gyuho, KIM Nayoung

**The Characteristics of Lead Barium Glass on the Ancient Korean Peninsula**

Lead-barium glass on the Korean peninsula dates to at least the 2nd c. BCE, with early evidence from the Hapsongni kilns near Buyeo. New excavations since 2010 in southwest Korea have helped provide a clearer picture of the distribution of lead-barium glass artefacts. For this presentation, we will discuss the relationship between glass chemical composition and the type, age and region of the archaeological finds, as well as lead-isotope evidence for the raw materials used in lead-barium glass production. Based on these studies, we may summarize the characteristics of lead-barium glass in early Korea, gaining insight into the role of regional exchange between China, Korea and Japan.

LANKTON James, GRATUZE Bernard, BRILL Robert H.

**What Yellow Sea Interaction Sphere? The Glass Evidence**

While the earliest lead-barium-silica glass in Korea and Japan seems linked to exchange within Northeast Asia, the evidence for the several varieties of potash-lime-silica glass that dominate Korean and Japanese glass ornaments from the 1st c. BCE onward is not so clear. We look to new glass trace element and strontium isotope data to answer the question: Was Yellow Sea interaction and exchange still important for the supply of glass to developing polities in Korea and Japan after the 1st c. BCE, or had new trading partners and exchange networks replaced reliance on traditional sources?

NELSON Sarah

**Discussant**

## 18 Ritual Spaces, Images and Artifacts

*CHAIR:* **WRIGHT Joshua**

*ROOM:* A

*TIME:* **14:00-17:40, JUNE 9 (Monday)**

REINHART Katrinka

### **Food, Wine, and Blood: Old Imagistic Religiosity in the Early Bronze Age of Northern China**

Ritual traditions involving feasting and sacrifice in northern China during the Neolithic and Bronze Age are explored using a widely applied anthropological theory known as Divergent Modes of Religiosity (DMR) theory. According to DMR theory, there are two basic types of religious behaviour that predict particular sociopolitical characteristics. The 'imagistic mode' consists of rarely occurring but highly arousing rituals. By contrast, the 'doctrinal mode' consists of frequently occurring rituals that are learned and not very arousing. Whereas imagistic ritual is characteristic of small-scale societies, doctrinal ritual is characteristic of centralized large-scale societies such as those of the Bronze Age. This case study not only examines Shang religion under new light, leading to a questioning of certain assumptions, but also challenges DMR theory since politically complex Bronze Age settlements continued to exhibit imagistic mode dynamics that were established in much earlier times—namely violent and emotionally stimulating rituals.

LAM Hau-ling Eileen

### **Simulation and Representation: Bi Discs in Han Burial Ritual**

With the belief in jade durability being closely related to immortality during the Han periods, the mortuary use of jade bi discs was widely distributed in both high ranking and modest cemeteries throughout and beyond the realm of Han. Nonetheless, present finds indicate a wide range of different materials such as glass, wood, ceramic etc. were used for manufacturing bi disc besides jade. By the later Han period, images of bi disc that were depicted on the mural paintings or inscribed on stone steles came into being. Although these non-jade bi discs are generally perceived as less precious simulations of those of jade, evidence to date showed that these do not necessarily hinge on jade's availability. This paper seeks to investigate the ideology of the form of bi disc in relation to the belief of jade and the role of other materials in the burial ritual throughout the Han times.

WEST Erin Elizabeth

### **Animal Style Art in the Dian Kingdom: the Religious and the Secular**

Archaeological sites from the Dian Kingdom of China's ancient southwest have revealed thousands of intricate bronze artifacts. Notably, they indicate a link to the Northern Steppes through the presence of Animal Style art; however, this Animal Style, though abundant, does not permeate all of the arts equally. It is largely limited to use on secular objects, such as cowry shell containers and belt plaques, rather than on objects of known religious intent, such as the bronze drum which retained a more local manner of animal depiction. Furthermore, it changed in style to fit the Dian context, and the types of changes reflect the influence of Dian religion. Thus, despite existing primarily in the secular realm, the Animal Style of the Dian creates a link between both the secular and the religious.

MONTEITH Francesca

### **Lotus Spitting Dragons**

These lotus spitting dragons are a chronologically isolated form with nearly all existent examples dating to the sixth century. The widespread usage of this motif during this period followed by its almost complete absence in later artworks seems too abrupt to be dismissed as coincidence. As such this essay will first outline the geographical spread of the main forms of this motif, before analyzing Buddhist religious practices during this period. Having presented this data this paper will examine the iconography of these two motifs before considering a how the iconography of these two motifs could have led to a variety of possible iconographic and iconological interpretations based on the contemporary culture and Buddhist practices therein. This paper will highlight the strengths and weaknesses of each theory.

GUSEV Sergey

### **Man's House (Karigi (Canadian Eskimo)-Ka'igit (Asian Eskimo)): the Sacred Place in the Village of Ancient Whalers (Unenen)**

Which archaeological features indicates the religious, spiritual and transcendental ideas in ancient cultures ?

Discovered constructions and special findings indicate the sacral space. Transcendental ideas presented by pavement of walrus skulls, shrine, skin bag with shaman things. All the findings allow to identify this construction and place as man`s house. Archaeological similarities were found in Alaska and in Chukotka. Rituals had associated with walrus cult because walrus was the main game. Important ritual was the manifestation the victory of walrus against reindeer, sea against land spiritual power of sea presented as walrus penises was stronger than reindeer skull. Struggle for territory and coast. High level of maritime economy had manifested in specialized rituals and sacral constructions and things.

The core of sacral space and ritual communication was man`s house. The main authority was Umiak' owner who had lead not only the economical activities but spiritual ones.

KOVALEV Alexey

Session

18

**Composition, Structure and Significance of Deer (Stag) Stone Ritual Sites in Central Mongolia: on the Excavations of Uushigiin Uvur (Ulaan uushig) and Surtiin Denzh Sites in Hovsgol Aimag**

Last years joint expedition headed by A. Kovalev and D. Erdenebaatar firstly undertook scale researches of ritual sites with deer stones in Mongolia: Surtiin Denzh and Uushigiin Uvur. Excavations results show that such sites in Central Mongolia have the same structure as khereksurs sites in this region: without burial constructions but with stone fences with stone heaps, stone circles and stone pavements typically accompanying khereksurs. Thus deer stones were used instead of real burials. We conclude that stone fences with heaps early contained rests of horse skeletons but later into them stopped putting bones. This tradition continues in great mounds of Scythian "kings" in Arzhan (Tuva). The tradition of ritual use of deer stones in Central Mongolia differs sharply from the tradition of use of deer stones in Mongolian Altai because in the west deer stones were erected atop and to east of burial mounds in the form of "wheel with spokes".

PERRIN Ariane

**The Image of the Deceased in Koguryō Funerary Art: a Comparison between the Ji'an and Pyongyang Regions**

This paper discusses and analyzes the use of the image of the deceased in Koguryo tomb mural art in the two Koguryo core areas: the Ji'an region in northeast China and the Pyongyang region in North Korea. Although tombs in both regions feature similar imagery, its placement within the stone chamber, its association with other pictorial elements, as well as the pictorial style are regionally distinctive. In total 117 Koguryo painted tombs have been discovered so far (as of 2010). Out of these, the portrait of the deceased alone or with his wife appears in 27 tombs. The study of this corpus shows that funerary portraiture in tombs of the Pyongyang region connects the tombs' occupant to a particular social class. It is also significant that procession scenes, which are closely associated with the image of the deceased, appear only in tombs of the Pyongyang area.

BRADFORD Rosalind E

**Prometheus: How Fire Came to Japanese Art**

While several flamboyant ceramic vessels made in the preliterate, Neolithic Middle Jomon period have suggested flames to some archaeologists, no flames appeared in the near millennium of succeeding Japanese art.

Lichtglanz, the ancient Iranian concept of kingly fiery glory was adopted by the Kushan kings, Vima Kadphises and Kaniska (starting in 127 CE) in northern Afghanistan who had themselves depicted with flaming shoulders on their coins. In the Kapisi Valley, the Buddha also came to be shown with flaming shoulders. Carried by devout monks, the bronze Harvard Buddha with flaming shoulders was found in an early center in Hebei.

The Western Qin Amitabha was painted in Cave 169, Binglingsi, in 420 CE. The Northern Wei then depicted flames in halos and mandorlas and they spread to the Korean Three Kingdoms thence to Japan in the seventh century.

## 19 Mobility, Subsistence, and Interaction on the Eurasian Steppes

*CHAIR:* HOULE Jean-Luc

*ROOM:* A

*TIME:* 09:00-12:40, JUNE 10 (Tuesday)

HOULE Jean-Luc

### **Long-Term Occupation and Seasonal Mobility in Mongolia**

An important aspect of the development of more complex forms of social organization was the emergence of larger more integrated communities. These complex societies frequently came into existence after the establishment of face-to-face sedentary agricultural life. However, many mobile pastoralist societies also exhibited complex features of social organization. To be sure, evidence of elaborate burials and large-scale communal projects have all been linked to such developments in the Eurasian Steppes. The question remains, however, under what circumstances can mobile pastoralists develop and sustain complex social organizations? This presentation compares Bronze and Iron Age settlement data to try and understand under what circumstances pastoralists in central Mongolia managed to develop complex social organizations while it does not seem to have been the case in the Khoton Lake region of western Mongolia. Preliminary results suggest that environmental conditions and stability of occupation, rather than simply continuity of occupation, played an important role.

HSU Yiu-kang (Gary)

### **The Numbers Speak for Themselves: How Chemical Datasets of Bronze Artefacts can Illuminate the Communication of Metalwork in the Eastern Eurasian Steppe**

The steppe zone of eastern Eurasia always functioned as a crossroad where a variety of archaeological cultures had confronted each other since prehistoric times. Bronze metalwork was one of the "commodities" that had been constantly exchanged in such an enormous geographic extent, especially in the regions of southern Siberia, northern China, and central Yellow River Plain. Within these areas, a group of bronze artefacts have been typologically identified as evidence of communication during the Late Bronze Age and early Iron Age. In order to better understand the relationships between different metal-producing societies, this project adopts an alternative perspective to examine chemical composition of over 5,000 analyzed copper-based objects in eastern Eurasia. A model (developed by Bray & Pollard 2009) is employed to pinpoint the characteristics of different metalworking traditions and inter-regional metal flows based on patterns of trace elements. The results hypothesize possible scenarios of metallurgical interactions in eastern Eurasia.

KELSOE Camilla, CLARK Julia, BARTON Loukas

**Technological Investment and Mobile Life: the Logic of Pottery Use in Northern Mongolia**

Recent studies of ceramic technology focus on the potential of pottery to increase subsistence returns in marginal environments, but waver on the feasibility of pottery production and use among mobile populations. Disposable pots made in expedient fashion of local materials may be more amenable to the mobile lifestyle. However, in regions where pottery production is seasonally constrained, the use of durable, high-investment pots may provide higher returns. The most efficient mode of production may therefore be predicted by environmental and social constraints, including access to raw materials, dietary needs, and degree of residential mobility. We adapt an established model of technological investment to operationalize differences between disposable and durable wares based on experimental and ethnographic data from northern Mongolia. This study has important implications for our understanding of the use of pottery in mobile populations faced with seasonal scheduling conflicts, tool transport, and both resource variability and uncertainty.

LIU Xinyi

**The Structures of Everyday Life: Tran-Eurasian Exchange of Starchy Crops in Prehistory**

Scholarly interest has been growing in an episode of Old World globalization of food resources significantly predating the 'Silk Road'. The impetus behind this growth of interest has been the expansion of bio-archaeological research in Central and East Asia over the past decade. This paper considers the agents responsible for the food globalization process in prehistory and the forms they took. One of the key aspects of the Trans-Eurasian movements of crops in prehistory was that the movements were not to regions devoid of an existing starch-based agriculture, but instead constituted an addition to that agricultural system. Other economic plants, such as grapes, dates and peas, also moved significant distances. However, the novel starchy crops held a particular significance; they went on to become significant staple foods in many of their new destinations. Drawn from recent discovery from eastern shore of the Central Asia, we will take into consideration differences in the projected archaeological signatures of different potential agents who involved in transmission of the crops.

PAN Ling

Session

19

**Changes in the Nature of Cultural Exchange between the Northern Area of China and the Eurasia Steppe from the Late Stage of the Warring States Period to the Middle Stage of Western Han Dynasty**

On the late stage of the Warring States Period, there was thorough cultural exchange between the northern states in the Chinese great wall belt and the Eurasia steppe. From the changing period from Qin dynasty to Han dynasty, the cultural exchange between the northern area controlled by Western Han dynasty and the Eurasia steppe was almost stopped, and this is the cultural background of Zhang Qian being missioned to the Western Regions by Wu Di emperor and the opening of the silk road. At the Han Dynasty, the silk road passed through the desert area in the Xinjiang area which is more southern to the steppe silk road of the Warring States Period. This transformation made great and deep influence to the religion and art of ancient China.

TAYLOR William, TUMURBAATAR Tuvshinjargal, BAYARSAIKHAN Jamsranjav

**Horseback Riding and Equine Cranial Morphology in the Mongolian Bronze Age**

The domestication of the horse was one of the most significant events in history, changing forever the organization and trajectory of pastoral societies in Eurasia. While early domestic horses had many uses, the ability to ride on horseback made rapid, long-distance travel and fully nomadic pastoralism a reality. The precise chronology of equestrianism in Eastern Asia remains a matter of continuing debate, but several lines of archaeological evidence support a late Bronze Age adoption of horsemanship in Mongolia. To test this hypothesis, a sample of 25 horse skulls from late Bronze Age monuments were studied with a digital 3D scanner and analyzed for pathologies. Ossification along the occipital crest and previously undocumented remodeling in the incisive bone suggest extended periods of exertion and point to human use. Results provide support for the early adoption of horseback riding in Mongolia, and highlight new methodologies for investigating equestrianism in the archaeological record.

TSYDENOVA Natalia

### **Cultural Correlations between the Neolithic Sites of the Baikal Region and Eastern Mongolia**

Neolithic materials of the Eastern Mongolia detect similarities not only with the agricultural cultures of the northern China and the Russian Far East (Okladnikov & Derevyanko 1970; Dorzh 1971), but also with the cultures of wandering hunters and gatherers of the Baikal region, as confirmed by the new findings. For instance, in the settlements of Barga els and Togootyn gol-V in Sukhe-Bator Aimak, along with numerous stone items there were fragments of cord-printed pottery. A few fragments found in Barga els, are similar to Posolsk type pottery (pointed-bottomed thin-walled corded and stroked with subtriangular thickening of the rim – cornice), characteristic of the Baikal region and dating back within 6-4.5 thousand years ago. Also a few fragments of a mesh grey clay pottery, similar to the Serovski type of Pribaikalye were found here. The collection of stone artifacts of Barga els consists of wedge-shaped and prismatic microcores, microblade inserts, bifacial retouched arrowheads and darts, transversal and lateral burins, ended and combined scrapers, chop drawing-knives. Togootyn gol-V pottery turned out to be similar to that of Khaitinsky type (corded with a straight crown clipping) from the Baikal region. Stone items here are presented by cores, end microscrapers, blade inserts (Tsydenova, Tumen, Erdene, 2012).

BRODERICK Lee, SEITSONEN Oula, HOULE Jean-Luc

### **The Culture Changes but the Herd Stays the Same: Bronze Age and Xiongnu Subsistence**

Research into prehistoric Mongolia has often been monument focused, which has led to a skewed understanding of a variety of facets of past cultures. One of these aspects is diet and subsistence. Recent work in Arkhangai aimag, in Central Mongolia, has focussed on identifying and excavating habitation sites associated with Bronze Age and Xiongnu cultures. Alongside material culture, the excavations have also yielded faunal remains.

This paper interprets the analysis of the animal bones from these sites to shed new light on the economy and lifestyle of the peoples associated with them: for the first time we can begin to glimpse a complex subsistence strategy which functioned in sympathy with the local environment. This strategy was to prove so successful that, once adopted, it changed little between the Bronze and Iron Ages and, indeed, through to the present day.

## 20 Imperial Silks and Noble Jewels: Aspects of Tang Archaeology

*Organizer:* MUELLER Shing

*ROOM:* B

*TIME:* 09:00-12:40, JUNE 10 (Tuesday)

### *Session Abstract:*

This session touches subjects less dealt with in the past. While a large-scaled, updated survey of tomb construction (Ehrenwirth) will give a sense of unity at least in the sepulchral culture of the Tang, it should be asked how foreigners with obvious different countenances and cultural roots, for instance the Sogdians, did accommodate themselves within this uniformity, especially in the more xenophobic second half of Tang times (Huber). New elaborate and complex jewelries for ladies of the high society were stimulated by foreign traditions of handicrafts, but patterns and designs were transformed to please the Chinese aesthetic sense (Filip). Moreover new weaving techniques, dyes and fabric patterns for silk are attested after the Middle Tang from the silk findings of the Famensi (874 AD) (Knaller, Mueller). The topics of Filip, Knaller and Mueller are part of a Sino-German research project presented for the first time outside China and Germany.

EHRENWIRTH Rebecca

### **Buried in a Square: Tang-Dynasty Tombs and their Structure**

Generally speaking, the Tang followed in many ways the precedent Sui-Dynasty regarding the tomb constructions. Nonetheless, they developed some distinguished features, which help to date the tombs. However, are there significant differences between the tombs of the early and those of the late Tang?

Despite the slight regional disparities concerning the structure of Tang-Dynasty tombs, there are striking similarities regardless the location, e.g. the square floor plan. In this paper, I want to concentrate on these resemblances as well as on the regional differences and illustrate them by comparing selected tombs with an emphasize on the late Tang-Dynasty. In addition, I will analyze the Tang-Dynasty tomb structure and its development throughout the centuries and I will try to interpret the structural changes embedded in the historical and social background of the Tang.

HUBER C. F. Moritz

**The Aftermath of An Lushan Seen through Archaeological Evidence: a Xenophobic Turn and Stigmatisation of Foreigners?**

The rebellion of Rokhshan in 755, a Sogdian of mixed Turkish origins and better known under his Chinese name An Lushan, could only be suppressed as late as 763, resulting in the Chinese loss of control over the silk road for a hundred years. Commonly it also marks the watershed between early and late Tang.

Several papers state that after the early cosmopolitan era, xenophobic tendencies developed in the late Tang-Dynasty. The persecution of western foreigners (i.e. Sogdians, Turks etc.) prompted them into accelerated assimilation. The present paper will focus on the changes in the position and careers of foreigners of western origins after said rebellion by analyzing the epitaphs and tombs of Sogdians as An Chongzhang (Li Baoyu) or He Wenzhe and comparing their *curricula vitae* to those of the early Tang (namely the Shi from Guyuan).

KNALLER Regina

**Silk for Buddha: the Textile Treasury of the Famen Si in Shaanxi Province, P. R. China**

In 1987 hundreds of textiles originating from the late T'ang Dynasty (618-907 AD) have been unearthed from the Buddhist temple in Famen, northwest of Xi'an.

A cooperation between the Römisch-Germanisches Zentralmuseum Mainz, Germany, and the Shaanxi Provincial Archaeological Institute in Xi'an, P. R. China, allowed detailed studies concerning the textile-technology, e.g. costume-history, decoration-, weaving- and sewing techniques, of garments from a bundle which had been unfolded in 2002. Further research was done on dyes, metal threads and the provenances of sericulture. The textiles, all made of silk – garments and covers, scarfs, etc. – show various textile techniques which can be sub-divided into woven textile techniques and non-woven one's. Woven techniques such as tabby, damask as well as complex weaves such as weft faced compound twill and complex gauzes have been richly decorated with paint, appliqué, and embroidery. The vestments have been joined together by using only the running stitch.

KNALLER Regina, HOFMANN-de KEIJZER Regina, VAN BOMMEL Maarten R., JOOSTEN Ineke, HEISS Andreas G., NATSCHLAEGER Helga, PICHLER Bernhard, ERLACH Rudolf, MEGENS Luc, de KEIJZER Matthijs

Session

20

**Yellow for Buddha: Investigation of Colourants and Metal Threads on Silk-Textiles from the Famen Temple, Shaanxi Province, P. R. China**

The textiles excavated in 1987 at Famen temple, can be considered the most important archaeological textile find of the T'ang Dynasty (618-907 AD). Prerequisite for this project was the conservation and research concerning the textile technology of six garments originating from one bundle. Within an interdisciplinary project between the RGZM Mainz, Germany, the RCE Amsterdam, The Netherlands, and the ARCH Vienna, Austria, these fabrics were investigated by microscopic and chromatographic techniques to find similarities and differences in colouring. Dye analysis was performed by means of ultra performance liquid chromatography coupled with photo diode array detection (UPLC-PDA). Scanning electron microscopy with energy-dispersive X-ray analysis (SEM-EDS) served for the investigation of chemical elements in silk fibers, metal threads, and silver-coloured ornaments. In the presentation the analytical results on colourants and metal threads will be summarized. Taking into account former analyses and relevant literature, the origin of dyes and chemical elements will be discussed.

MUELLER Shing

**The Silks of the Tang Famen Temple: a Reconstruction of their Deposition in the Crypt and Some New Features in Weaving and Textile Decorations**

The silks from the crypt of the Famen Temple near Xi'an discovered in 1987 were donated by the emperors Yizong and Xizong in 874 according to two inscriptions on stone tablets; thus they can be categorized as the most exclusive weaves of the time. However, the obscure archaeological context of these silks remains the major obstacle in the identification of the silk objects with the inventory, for the discussion of their functions and specific donors, and for unravelling rituals associated with the silks. This paper proposes a reconstructed archaeological context of the silks in the crypt which, to a certain extent, provides clues for the identification of some of the silk objects. Beyond this, the present paper also suggests a possible ritual procedure associated with the eight-fold nested caskets for Buddha's Relic according to some remaining silk ties. Also some new features concerning patterns and textile decorations will be examined.

FILIP Sonja

**A Noblewoman's Attire: the Reconstructed Jewelries of Li Chui and Some Thoughts on the Development of Tang Dynasty Adornment**

Although archaeological finds are rare, it has been always assumed that the Tang society highly appreciated jewelry items. Illustrations, references in historical sources and objects in museums and private collections lead to this assumption. The unlooted tomb of the noblewoman Li Chui (711-736) in Xi'an and her rather well preserved attire was a further proof of the fondness for jewelry at that time. This paper presents the restored objects, more precisely an elaborate headdress, a waistband and two pendants of golden cloisonné elements, and proposes an image of Li Chui's appearance.

To classify these objects, contemporaneous and later finds of the middle and late Tang era will be examined. Furthermore it will be discussed to what extent illustrations and historical sources can help to identify the status of the wearers.

## 21 Archaeology of Ancient Interactions between Mongolia and Korea

*Organizer:* **KANG In Uk**

*ROOM:* C

*TIME:* **09:00-12:40, JUNE 10 (Tuesday)**

### *Session Abstract:*

For almost 20 years, Korea and Mongolia archaeological teams have carried out cooperated investigations especially in Xiongnu and early medieval age archaeology. In this panel, we will sum up the results of these works, and discuss the ancient interactions of nomad and sedentary civilizations in North-eastern Asia.

JOO Kyeongmi

### **A Comparative Study of Gold and Silver Ornaments of Nangnang and those of the Xiongnu Tombs**

In recent archaeological excavations in Mongolia discovered were many special gold and silver ornaments from Xiongnu tombs. Those gold and silver ornaments were made by high-quality metal techniques such as repousee, granulation and gem settings. In addition, they represent a distinctive animal-style art. Such style and techniques are closely related to the gold and silver ornaments found in Nangnang tombs in Korea. In this presentation, I will analyze the techniques and styles of these artifacts from both Xiongnu and Nangnang tombs. The close relationship of material cultures between Xiongnu and Nangnang suggests that they may have directly contacted each other despite a political prohibition by Han China.

KANG In Uk

### **Adoption of the Floor-heating System (Ondol) in Xiongnu Fortresses and Role of Sedentary People in the Xiongnu Empire**

Xiongnu(=Hunnu) is one of the most interesting and practical subjects for East Asian archaeology. In spite of the rapid development in Xiongnu archaeology in recent decades, most of new evidence has been recovered from the burials of the northern Xiongnu who lived a mobile way of life in Mongolia and Cis-Baikal area. However, the sedentary people of the Northern Xiongnu has been poorly studied. This paper discusses the reason for the adoption in Xiongnu fortresses of the floor-heating system, that is believed to be originated in Korea, and tries to unveil the interactions between Xiongnu and Korea around the beginning of the common era.

CHOI Sungrak

**The Character of the Mound Jar-coffin Tombs in Yeongsan River Basin**

The most salient feature in cultural transformation of the Yeongsan River Basin during the 3rd ~4th century CE was the change in mortuary practice from the wooden coffins with surrounding ditches (Jukumyo) to the mound jar-coffin tombs. The most famous jar-coffin tomb is the Sinchonri no. 9 tomb. From this tomb, many prestige goods including gilt-bronze crown were found, and specially cylindrical pottery stands were also found on the top of the mound in 1999. The political entity of the mound jar-coffin tomb can be seen as the Shinmi-Jegug (新彌諸國, various small countries representing Shinmi).

CHANG Yoon chung

**Comparative Analysis of Animal Sacrifices in the Tombs of Three Kingdom Period and those of the Xiongnu Tombs in Mongolia**

Burying animals inside a tomb is a widely practiced burial custom in the early historical period of East Asia. In this presentation, I will compare the custom of animal sacrifice in Three Kingdom Period of Korea with that of the Xiongnu tombs in Inner/Outer Mongolia. My analysis shows that horses were sacrificed in both regions, while sheep and cows were found only in Inner Mongolian area. The types of sacrificed animals also represent the social roles and regional characteristics.

CHANG Eunjeong

**Comparison of the Burial Practices of the Xiongnu in Mongolia and those in the Altai**

The Xiongnu tombs that are distributed in central Mongolia have some distinctive characteristic in their burial practice. Their uniqueness is not only found in the tomb structure but also in the ways by which to bury goods and animals with the dead. On the other hand, the Xiongnu tombs of Altai have a strong tendency to be associated with regional traditions in some ways. This is related to the fact that other representative nomadic cultures existed in this region before the arrival of the Xiongnu. Therefore, this presentation attempts to understand the meaning of the difference in the Xiongnu tombs between these two regions and to postulate the Xiongnu-style burial practice.

YANG Si-Eun

### **A Study of Northern Cultural Characteristics in Koguryo**

Session

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Koguryo is one of the three ancient kingdoms of Korean peninsula and northeast China that lasted almost 700 years. Koguryo was founded in 37 BC in Huanren, Liaoning, which lies north of the Yalu River. Koguryo moved its capital to Ji'an, Jilin in China, and again to Pyongyang in North Korea in AD 427. It fell in AD 668.

At its zenith in the late 5th century AD, Koguryo occupied an area which extended to the Songhua River to the north, the Geum River to the south, the Liao River to the west, and Russian Primorye to the east. Based on this territorial dominance, Koguryo was able to establish itself as one of the central powers in East Asia. The northern cultural characteristics of Koguryo are reflected on the various kinds of artifacts, in particular pottery and metal artifacts. Koguryo pottery shows the similar surface decoration technique including burnished pattern as the pottery of the ancient northern culture. Horse harnesses also show similar characteristics. Although the Koguryo culture may not be directly related to the ancient Mongolian culture, this approach may be a meaningful work in order to find the trace of interaction between the two areas.

JO So-Eun

### **Comparative Analysis of the Construction of the Pazyryk Kurgans in the Altai and the Silla Kurgans in Kyongju**

In this presentation, we will re-examine the 'mound-builder' controversy of kurgans of the Silla kingdom in the 4-5th CE and compare them with the Pazyryk kurgans on the basis of newly excavated data in the last 20 years. For almost 100 years, archaeologists have abstractly suggested the appearances of big kurgans in Silla as a result of nomadic migration(or invasion) without providing concrete evidence. In this presentation, we will consider the adoption of kurgan construction as a demand of social development and exchange of burial construction skills. Like the case of Pazyryk, the construction of large-scale tombs began in Silla as a result of the interactions with neighboring cultures, which helped in turn political ascension of the ruling elites during the crucial time of the state formation.

HAN Jinseong

### **Typology and Chronological Sequence of Buckle Plaques of Xiongnu and their Diffusion to East Asia**

A buckle plaque is one of the most distinguished symbols for ancient nomad warriors of the Xiongnu empire. Furthermore, a buckle with animal style has diffused to Central Plain of China and Korean Peninsula. In this paper, the authors will try to present a preliminary analysis on the buckle plaques with a focus on their typology and chronology and discuss the meaning of these belt ornaments in the Xiongnu society and their diffusion to other areas of East Asia.

YUN Hyeungwon, EREGZEN Gelegdorj

**Comparative Research on the Hunnu Tombs of Mongolia and the Nangnang Tombs of Korea**

Many similar aspects are observed between the Hunnu tombs in Mongolia and the Nangnang tombs in Korea in their tomb shapes, artifacts, burial ritual, etc. Their cultural artifacts are sometimes compared with the Chinese ones, but both the Hunnu and Nangnang show their own unique cultural characteristics. With a holistic and systemic view on these two cultures, an attempt is made to compare the Hunnu with the Nangnang and discuss their similarities and differences.

## 22 Subsistence and Domestication from South to North

*CHAIR:* WEISSKOPF Alison

*ROOM:* A

*TIME:* 14:00-17:40, JUNE 10 (Tuesday)

CASTILLO Cristina

### **Rice, Millets and Translocation to Southeast Asia**

Archaeobotany in Southeast Asia is a relatively new specialization and there have been only a few studies conducted in the region. However, the picture emerging is that the two main economic crops present in Prehistoric Mainland Southeast Asia are rice and foxtail millet. These two crops have their origins in China but in different regions and occur in several Southeast Asian sites at different periods, both together and separately. Foxtail millet predates rice in at least one Thai site by a millennium, whereas rice is sometimes the only cultivar reported. This paper concentrates on the latest archaeobotanical research conducted in Southeast Asia and the results thereof. Discussions revolve around rice, since this is the most studied economic crop, including morphometric and aDNA analysis. Plausible alternative hypotheses for the spread of rice to mainland Southeast Asia will be presented.

LEE Cheng-Yi, CHEN Maa-Lin, DITCHFIELD Peter, LIN Hsiu-Man, LIN Li-hung, LO Ching-Hua, POLLARD A. Mark, TSAI Hsi-Kuei, WANG Pei-Ling

### **Paleodiets of the Yuan-Shan People in Taiwan: Evidence from Stable Carbon and Nitrogen Isotopic Analyses of Human Skeletons and Faunal Remains**

The application of isotopic analysis on human skeletons and faunal remains has successfully gained insights into diet and subsistence systems of prehistoric population which no other data could offer. In this research, human and faunal remains collected from the Yuan-Shan site, northern Taiwan, were subjected to carbon and nitrogen isotopic analyses in order to investigate the diets and subsistence of Yuan-Shan prehistoric people. The isotopic results confirm the previous suggestions which derived from the evidences of ecofact and artifact remains, and even draw that in more detail. From these results, we conclude that Yuan-Shan people practiced hunting-gathering and cultivation as their subsistence activities, in which the main food resources included C3 plants and C4/marine plants, shellfish, pig and deer.

Keywords: diets, subsistence, carbon and nitrogen isotopes, Yuan-Shan culture

WEISSKOPF Alison, QIN Ling, FULLER Dorian

**From Wet to Dry and Back again: the Ecology of Domesticating and Intensifying Early Rice in the Lower Yangtze**

We explore the journey of wild rice cultivated on the wetland margins at 6000BC through early domestication and the trajectory of the first arable systems from farming in wet dug out fields from c.4000 BC to fully developed irrigated paddy fields in the Lower Yangtze Valley. Investigations of associated rice weed flora across a range of arable systems reveal how rice cultivation changed over time. We use multivariate analysis of archaeobotanical data from traditionally farmed fields to create modern analogues of ancient systems which are applied to our archaeobotanical samples to interpret the spread of wet rice. Next we interpret our data with Madella's (2009) 'wet and dry' model to show how rice farming changed from wet to dry and back again.

HOSOYA Leo Aoi, NAKAMURA Oki, SEGUCHI Shin'ji, SHIBUTANI Ayako

**What did Jomon People Eat in Fact? Chronological Shifts in Japanese Jomon Subsistence Strategies on the Basis of Local Characteristics of North Tohoku Area**

With the support of JSPS Grant-in-Aid for Scientific Research (C) from the fiscal year 2012 to 2014, we have conducted research on East Asian prehistoric culinary culture from the scope of plant storage and processing techniques. The core research was carried out in the north Tohoku area of Japanese Jomon sites (the early to late Jomon phases; approx 5,000 to 1,300 BC).

Focusing on three representative Jomon sites in north Tohoku: Ikenai site, Akita pref. (early Jomon), San'nai Maruyama site, Aomori pref. (middle Jomon) and Korekawa Nakai site, Akita pref. (late Jomon), we conducted plant macro remain analyses (Hosoya) and ancient starch analyses of processing tools (grinding stones and pottery) (Shibutani), and also multivariate analyses of settlement and storage pits patterns and processing tools (Nakamura & Seguchi). By these multiple approaches, we reconstruct substantial relationships between chronological shifts in subsistence strategy and social organization, in the local characteristics of north Tohoku Jomon culture.

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SHIBUTANI Ayako, HOSOYA Leo Aoi, NAKAMURA Oki, SEGUCHI Shin'ji

**Plant Food Ways Reflected from Microbotanical Remains and Grinding Stones in Prehistoric Northern Japan**

Session

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This research aims to explore plant food consumption of hunting-gathering populations in prehistoric northern Japan, spanning the Early Jomon to Final Jomon (about 7000-2800 BP). The people between these periods are often regarded as elaborate hunter-gatherers, and did use various plant resources around settlements. A series of questions on which I focus how prehistoric people selected plant food resources over the long term. Examples come from three habitation sites: the Ikenai site in Akita, Sannai-Maruyama and Korekawa-Nakai sites in Aomori. The focus is micro-plant remains that are extracted from grinding stone tools. The research evaluates the possibility of the diverse ways of wild plant uses by Japanese prehistoric hunter-gatherers.

YANG Yimin

**Subsistence Strategy of Xiaohe Culture in Early Bronze Age, Xinjiang, Northwestern China**

Xiaohe Culture (BP3500-4000) is one of earliest culture in Bronze Age, Xinjiang, China, and include three tomb sites: Gumugou tombs, Xiaohe tombs and Beifang tombs, located in Taklimakan desert, Tarim Basin. In this paper, human hairs were analyzed by carbon and nitrogen isotope, and food remains were analyzed by proteomics or plant microfossils. The results indicate that wheat, millet and dairy products were consumed differently from the early to the later period. In r Gumugou, just wheat was used as staple food and may be not ground into flour, and no solid milk products were found. In Xiaohe, although millets were found in a large number, the proportion of millet in human diet is small; meantime, solid dairy products, kefir cheese and curd were found. For Beifang people, wheat and millet floor food were identified, and millet plays a major role in Human's diet; moreover, solid dairy products were still consumed.

FENNER Jack, TUMEN Dashtseveg, KHATANBAATAR Dorjpurev

**Stable Isotope Analysis of Mongol Empire Period Diet in Eastern Mongolia**

The Mongol Empire brought many changes to conquered lands and, presumably, to the Mongolia homeland as well. While historical sources provide insight into Mongol dietary changes (and stability) in some regions, little is known about how much change the Empire brought to the homeland. We used stable isotope analysis of human and faunal bone collagen from eastern Mongolia to provide direct evidence of Mongol ruling elite local elite/commoner diet during the Mongol Empire period. While carbon and nitrogen stable isotope ratios differ amongst the groups, environmental factors appear to be more significant than dietary change.

JONES Martin

### **The Role of Minor Crops in the Development of Eurasian Agriculture**

Scientific research effort towards crop improvement has placed significant emphasis upon the world's major crops, including bread wheat, rice and maize. The consequences of this include a competition within the optimal arable lands for human food, animal food and biofuels. There has in comparison been less emphasis upon the potential role of more marginal lands and minor crops adapted to them. Bio-archaeological research reveals that the dominance, as opposed to the presence, of these major crops has only persisted for a fraction of the full history of agriculture. For the majority of that history, a rather wider range of crops accompanied these, and a wider range of agrarian management systems pertained. In the case of Asia, the small grained millets are significant in this respect.

New methods of bio-archaeology, including archaeobotany, archaeogenetics and stable isotope studies allow us to examine more closely the wide range of crop-related human ecologies that pertained in the past, and draw lessons from them for the ecological challenges of today.

## **23 Production, Distribution and Appreciation: New Aspects on East Asian Lacquer Wares**

*Organizer:* **PRUECH Margarete**

*ROOM:* B

*TIME:* **14:00-17:40, JUNE 10 (Tuesday)**

### *Session Abstract:*

This session will shed light on lacquer objects found in tombs from the 2nd through the 11th century. Recent discoveries in Korea, China and along the Silk Road as far as the Crimea will be presented and thoroughly analyzed. The papers will mainly focus on the regional distribution of the findings and their places of manufacture, as well as on the production process and the development of their decor. The session will thus not only illustrate the meaning of East Asian lacquer ware in everyday life as well as grave furnishing, but also reveal the appreciation of lacquer within material culture over a period of more than one thousand years.

BROSSEDER Ursula

### **Patterns of Consumption, Questions for Production: Lacquer Vessels from Eurasia (100 BCE – 100 CE)**

The famous lacquer ear-cups from the Xiongnu period graves of Noyon Uul as well as the lacquer vessels from Begram are widely recognized in today's scholarship. Largely unknown, however, is the amount of lacquer objects that were found in Siberia, Central Asia and the Black Sea Region as well as the great variety of objects which comprises besides vessels of different types, elements of armor, coffins, and possibly personal accoutrements as well as other single objects. In this lecture a comprehensive analysis of lacquer objects from Mongolia, Siberia and Central Asia will be given that highlights not only the variety of lacquer products but sheds light on the flow of goods and consumption in the Eurasian Steppes. From this analysis new questions arise concerning the contexts of lacquer production and the possibilities of exporting raw lacquer that go beyond what we currently know about lacquer production during the Warring States and Han period.

PRUECH Margarete

**Han Dynasty Lacquer Boxes in Crimea: Remarks on their Possible Place of Manufacture and Distribution**

During the 1990s scientists of the Ukrainian Institute of Archaeology–National Academy of Sciences planned a second excavation campaign at the necropolis of Ust'-Al'ma on the Crimea peninsula, Ukraine. These tombs dating from the 1st cent. B.C. to the 2nd century A.D were richly furnished with gold, glass, weapons and ceramics mirroring the widely ramified international relationships at that time. The discovery of fragments of Chinese lacquer boxes however was a sensation.

The method of production, the use of lacquer and the ornaments of the boxes would support the assumption, that they were produced in China during the 1st to 2nd cent. A.D. in China. The research will shed light on possible production centers and distribution of the lacquer boxes. Comparison of lacquer boxes from excavations of today's Anhui, Jiangsu, or Shandong provinces and also from tombs of the former colony of Lelang, today's Pyongyang area allows us a further geographical and chronological classification of the objects.

KIESER Annette

**New Aspects on Six Dynasties Lacquer Ware**

In Six Dynasties tombs green ware was the most common material for burial goods. It had become so dominant that other materials like bronze or lacquer ware seem to have played a marginal role in tomb furnishing only. And indeed, our idea of southern lacquer ware is dominated by few exceptional discoveries like the more than sixty pieces from Zhu Ran's (d. 249) tomb excavated 1986 in Ma'anshan, Anhui province.

Recent excavations, however, brought to light many notable pieces of lacquer ware in Jiangsu, Jiangxi, Hubei and Guangxi, and there are also scattered findings and fragments known from other southern provinces. These burial goods enable us to reconsider the significance of lacquer ware in Six Dynasties funeral rites. My investigation will shed new light on production centers, decoration techniques and development of vessel types as well as changes of fashion.

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 JUNG Soon-Chim

### **Technical Innovation and Material Diversity: Tang Dynasty Lacquer Ware**

Session

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During the era of the Tang dynasty (618–907) new decorative methods were developed in lacquer art, especially in the field of cast and lacquered mirrors. Among the preserved Tang dynasty lacquer wares we find mirrors inlaid with gold-and silver design (pingtuo), inlaid with mother-of-pearl or inlaid with mother-of-pearl in combination with various gems and jewelry.

Although some monochrome lacquered domestic utensils were found in tombs in the provinces of Jiangsu, Jiangxi, and Shaanxi, the majority of excavated lacquered wares, however, are mirrors with different inlaying techniques; they were found statewide from the provinces of Heilongjiang and Xinjiang in the northwest to Jiangsu in the south. Two mirrors with inlaid mother-of-pearl décor were only recently excavated from the tomb of the princess Li Chui in Xi'an, Shaanxi province.

This presentation will examine the characteristic features of Tang dynasty lacquer and trace its influential role in the lacquer craft of the neighboring Korean peninsula.

LEE Nan Hee

### **A Study on an Early Goryeo Dynasty Lacquer Incense Box Decorated with Flora and Waterfowl Motifs**

The lacquer incense box with mother-of-pearl inlay and gold painted decoration depicting flora and waterfowl design of early Goryeo dynasty (918–1392) has been discovered in an archaeological excavation of a tomb in Gaeseong (present day North Korea) in the 1920s, and is now owned by the National Museum of Korea in Seoul. The box which was badly damaged during the Korean War (1950–1953) is broken into fragments, and has only recently been analyzed thoroughly for the very first time.

The paper will explore the characteristic features of this early Goryeo lacquer box inlaid with mother-of-pearl and compare it with other pieces from the period, which are known for their exquisite beauty and exceptional elegance, as well as their technical refinement. In all only around 25 lacquer objects with mother-of-pearl inlay have survived from the Goryeo dynasty, most of which originated in a Buddhist context. They can be distinguished by the use of precious materials, such as tortoiseshell and metal wires, as well as their consummate craftsmanship.

FRICK Patricia

**Simplicity and Reserve: Song Dynasty Lacquer Ware**

The majority of surviving Song lacquer objects have been found during archaeological excavations conducted over the past decades in China. Although the sites span a relatively extensive area, there has been a definite concentration in the Yangtze Region.

The numerous archaeological discoveries in tombs dating from this era – such as the ones at Yangmiaozhen, Jiangsu province, and Shilipu, Hubei province, – testify to the influential role played by lacquered wares in everyday life of the Song upper class. The finds also show that the lacquer production was dominated by monochrome pieces which far exceeded carved and inlaid lacquers in number. Simplicity and reserve were the aesthetic hallmarks of the lacquer art at that time.

The presentation will focus on the most important archaeological excavations of Song dynasty lacquer wares; it will look into their meaning and function and will shed light on their inscriptions as well as on the productions centers, which were concentrated in the Jiangnan region south of the lower reaches of the Yangtze River.

## 24 Archaeology in Asia: History, Practices, and Interpretation

*CHAIR:* **KINGSBERG Miriam**

*ROOM:* C

*TIME:* **14:00-15:40, JUNE 10 (Tuesday)**

STEIN Britta

### **The Origin and Development of Japanese Archaeology before 1945**

It is often said that archaeology was introduced to Japan by Westerners during the Meiji period. But its origins lie in premodern Japan. The aim of this presentation is to outline the development of Japanese archaeology before 1945. Some scholars of the Edo period were interested in material archaeological remains. They collected and described archaeological objects, conducted first excavations and questioned the ancient Japanese chronicles by proposing new theories about Japan's ancient past. Their research formed the basis for archaeological studies later on. In the Meiji period methods and terms of western archaeology were introduced and the government made a first effort to protect historical objects and sites. At the same time archaeological research was being restricted by the government to avoid any doubts about the mythical legitimization of the Japanese emperor. During the Taishō and early Showa period archaeology was established as an academic discipline.

KINGSBERG Miriam

### **Japanese Archaeology/Archaeology of Japan: Postwar Political Uses of Foreign Pasts**

In the growing history of archaeology sub-field, the "archaeology of a nation" is often seen as interchangeable with "national archaeology." In Japan, the analysis of the material past has long been associated with nationalism and national identity. Japanese archaeology and the archaeology of Japan are thus typically viewed as coterminous, leading to perceptions of research and researchers as insular and inward-looking. Through a case study of Japan's first excavation beyond its traditional sphere of influence in Asia—a dig in the Peruvian highlands in 1958—I call attention to the overlooked intellectual and methodological significance of work abroad to the profession at home. As I argue, foreign civilizations interested mid-century Japanese scholars as a foil for discussing and coming to terms with their own nation's historical trajectory, particularly the recent disaster of World War II. Ironically, cosmopolitanism in early postwar archaeology reinforced rather than eroded collective preoccupation with the nation.

BROWN Clayton

**The Role of Antiquities in Sino-American Relations: a Century of Cultural Heritage Management**

On 14 January 2009, the US and China marked the thirtieth anniversary of the establishment of diplomatic relations by signing a landmark Memorandum of Understanding on cultural heritage protection. Virtually unknown, however, are the roots of this agreement that go back a century. With the collapse of China's last dynasty in 1911 and the loss of central authority that followed, a vulnerable China fell prey to Western museums and art collectors who both purchased and plundered her antiquities. With the establishment of the Republic of China in 1912, however, the US government, in conjunction with the Archaeological Institute of America and the Smithsonian Institution, sponsored a series of expeditions to China to pioneer with the Chinese government and academic community both archaeological research and systematic monument and artifact preservation. This collaborative venture resulted in numerous joint Sino-American excavations and exhibitions, including the landmark excavation of the Shang dynasty capital at Anyang, the establishment of China's first national museum, and the passage of an Antiquities Protection Law. While this story is not well known in America or China, it became the foundation for our current bilateral agreement.

O'DELL Emily

**Memories of the Mongols at Merv: Surveying Archaeological & Textual Accounts**

This paper will investigate how the "memory" of the Mongols at Merv has been excavated, represented and reproduced in archaeology, historical accounts, and hagiographies of Sufi "saints". By surveying archaeological traces of the Mongols at Merv, as well as textual accounts, we will discuss how the "memory" of the Mongols at Merv has been preserved in physical, textual, philosophical, and religious terms. Conceptualizing Merv as a "deathscape," we will apply the language of "necropolitics" to this important medieval site to consider more broadly the politics of death in Central and East Asia in the 13th century. Having excavated at Merv myself, I will share my slides of the archaeology of the Mongol sack, as well as of the shrines of the medieval "saints" buried there.

DENNELL Robin

**Hallam Movius and the Line that never was**

Session

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The "Movius Line" is one of the most fundamental concepts in studies of the Asian Palaeolithic. Despite its importance in contrasting the Acheulian, biface-using inhabitants of west and south Asia with the core and flake using inhabitants of East and SE Asia, there has been almost no discussion of the validity of the field data that Movius collected in Myanmar in 1938 and which underpinned his 1948 synthesis, or of the Pleistocene chronological framework of Helmut de Terra that was used by Movius. Here, I show that the geological sequence of de Terra is almost certainly invalid; that Movius was unable to demonstrate that any of his "Anyathian" artefacts could be correlated with de Terra's alleged Pleistocene terraces; or that the lithic assemblages that he considered from Southeast Asia were Early or Middle Pleistocene in age. Overall, the "Movius Line" was a house built on sand, and is best forgotten.

## 25 Advances in Application of the Latest Techniques to Eastern Asia Archaeology

*Organizers:* **JIN ZhengYao**

**LI Sheng-Hua**

*ROOM:* C

*TIME:* **16:00-17:40, JUNE 10 (Tuesday)**

*Session Abstract:*

Modern techniques have been applied in archaeological studies. This session covers recent advances in applications of dating, isotopic analysis, past environment reconstruction techniques in East Asia archaeology studies. The session will emphasis on the technical developments of new methods and the new discoveries in laboratories for archaeological problems. The topics include: luminescence dating; thermal history of archaeological materials; isotopic analysis of Pb, Cu and Sr isotopes; synchronic radiation technology and other technical advances.

LI Sheng-Hua

### **Human Settlements and Climate Changes over the Last Ten Thousand Years on the Ordos Plateau**

The Mu Us Desert is on the Southeast Ordos Plateau adjacent to the Loess Plateau and situated in the zone affected by the Asian monsoon. The region lies in the northwestern marginal zone of the east Asian summer monsoon and is sensitive to climate change. The climate in the Ordos Plateau changed significantly in the last 10 thousand years. Human settlements and migrations in the region have shown close relationship with climate changes. This presentation explores the natural and human impacts on climate changes and the settlements for the last 10 thousand years. It has shown that interactions of natural climate forcing and human activities have been intensified in the last 2000 years.

MA Jiangbo, JIN Zhengyao, FAN Anchuan, XIANG Taochu, CHEN Fukun

### **Lead Isotope Provenance Analyses of Bronzes Unearthed from Tanheli Site in Hunan Province, China**

Lead isotopic compositions were measured for 26 bronzes excavated from the Shang-Zhou transition period site of Tanheli, which is located in Ningxiang county, Hunan province, China. The isotopic signatures of the bronzes were compared with those of more than 100 bronze samples collected from Late Shang and Early Western Zhou sites such as Yinxu and Gaoshaji. This work shows the effectiveness of using lead isotopic analysis to trace the sources of metal used in Shang and Zhou bronze production.

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FAN Anchuan, JIN Zhengyao, WU Youjin

**Firing Temperature Estimation of Pottery from Jinlianshan and Xueshan Sites at Fuxian Lake, Yunnan Province**

Session

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In the present study, we focus on a variety of pottery unearthed at Jinlianshan and Xueshan Sites, Yunnan, China. Initial polarizing microscope observations suggest that there are generally two types of pottery according to color and mineral composition- reddish ones mainly consisting of quartz and iron oxide, and dark brown ones which contain some amount of carbonates. The material and context of the sherds suggests a wide range of firing temperatures, which makes them ideal samples to test the reliability of using luminescence properties to estimate firing temperature. The results will also be compared to the results obtained by the thermal expansion technique.

LIU YingYu, JIN Zhengyao, FAN Anchuan, HUANG Fengchun, HUANG Fang, ZHANGSUN Yingzi

**Scientific Analyses of Bronze Steamers from the Yejiashan Western Zhou Cemetery in Suizhou, Hubei, China**

The bronze steamer is an important type of cooking vessel during the Shang and Zhou dynasties. This study examines the relationship between the metal sources and the bronze casting foundry for the production of cooking vessels the Early Western Zhou period. Nineteen samples from ten bronze steamers and two metal ingots excavated from the Yejiashan cemetery were analyzed by ICP-OES and MC-ICP-MS for chemical and lead isotope compositions. The alloy types and lead isotope ratios of the bronze steamers were compared with those of the Early Western Zhou bronze steamers in the Sacklar and Izumiya Museum collections and recently excavated vessels from the Jinhou cemetery in Shanxi province and the Yu state cemetery in Baoji, Shanxi province.

JIN ZhengYao

**Reinterpreting the Manufacturing Technique and the Structure of the Early Zhou Bronze Steamers in the Izumiya Museum Collection**

Large-scale X-ray CT and synchrotron radiation  $\mu$ -CT scanners are a powerful tool to probe the inner structures of artifact, such as bronzes and lacquerwares. This paper reinterprets CT images of four Early West Zhou bronze steamers in the Izumiya Museum collection to reconstruct their production techniques.

# Posters



CHAN Libby Lai-Pik

**Chasing Deer in the Central Plain: Exoticism, Originality and Political Propaganda of the Deer Iconography in the Western Zhou dynasty**

The emergence of deer iconography specifically on jades coincided with the rise of the Zhou Empire and the establishment of the new capital in the Central Plain Zhouyuan during the 11th century BC. The prevalent deer-shaped jade pendants in the Western Zhou dynasty (1046-771 BC) are usually two-dimensional, with elaborate antler design and stylized position. By identifying exotic features and indigenous origins on the formulated Western Zhou deer iconography, this poster aims to

- 1) discuss this curious phenomenon of the jade material culture unique to the Western Zhou dynasty (1046-771BC) as a result of political propaganda in the new kingdom;
- 2) identify the possible exoticism from the Eurasian steppes, crucial links of the indigenous origins possibly from the Southwest tribes in the periphery and artistic attributes introduced from the Southeast Asia;
- 3) trace the cultural influences of the Western Zhou deer iconography on later eras in Southern China, Eurasian Contingent as far as Mediterranean basin.

FAVEREAU Aude

**Late Prehistoric and Early Historic Ceramics in Hong Kong**

Excavations conducted by Pamela Rumball Rogers on the site of Tung Wan Tsai in Hong Kong have brought to light ceramic finds dated from the beginning of the Bronze Age until the Han historical period. The presentation focuses on the transition period witnessing the Han expansion to the South and examines ceramics dated between the middle of the 4th century BC and the 2nd century AD. Their technological analysis allows characterizing traditions specific to local and Han groups and aims at assessing how the Han expansion affected ceramic production and distribution.

SEITSONEN Oula Ilari, HOULE Jean-Luc, BRODERICK Lee

**GIS approaches to movement and mobility in the monumental landscape of the Bronze Age Khanuy Valley**

Poster presents ongoing GIS studies of the past mobility and movement patterns in the Bronze Age Khanuy Valley. Landscape of Khanuy Valley is dominated by monumental sites, for instance the largest khirigsuurs in Mongolia and numerous slope burials. GIS analyses build on the theoretical basis of time-geography to model and examine spatial relations of settlement sites and monuments. Research evaluates the ways in which different types of localities, their inter-visibility, dominance, and accessibility patterns could have affected the past landuse and mobility, and to what extent these might reflect worldview(s) of the ancient inhabitants.

UEMINE Atsushi, MATSUFUJI Kazuto, SHIBATA Masaki

**Paleoliths from MIS 5 to 7 Discovered recently in Shimane Prefecture, Japan**

This paper provides the information about the earliest stone artifacts discovered in Shimane prefecture, the northwest coast of the main Japanese island Honshu. At the Sunabara site, a total of 37 artifacts were unearthed from two cultural layers whose ages correspond to MIS 5e-d. These assemblages contain scraper, chopping-tool, bec, flake, chip, hammer-stone, core and chunk, which are made of silicide rhyolite and quartz distributed around the site. After the excavation of the Sunabara site, we have recovered a few artifacts at 2 locations in this area. One is Itazu site where a pebble tool like cleaver of rhyolite was collected on the surface. We consider that it was originally included in the loess layer of MIS 6, judging from the comparison between adhering minerals and clay on the paleolith and the original sediment samples. The other is Kakeya outcrop. We found 2 potential-hammer stones from the fine paleosol of MIS 7.

Attendees  
and  
Non-attending Co-Authors



NUMBER = SESSION NUMBER

\* = NON-ATTENDING CO-AUTHORS

- AKOSHIMA Kaoru  
(*Tohoku University, Japan*) 11
- ALLARD Francis  
(*University of Pittsburgh, USA*) 10
- ANKHSANAA Ganbold  
(*The Center for Cultural Heritage of Mongolia, Mongolia*) 02
- \* ANTOINE P.  
(*Centre national de la recherche scientifique, France*) 02
- \* BAI Jinsong  
(*Hulun Buir Museum of Nationality, China*) 04
- BARNES Gina  
(*University of London, UK*) 17
- BARTON Loukas  
(*University of Pittsburgh, USA*) 12, 19
- BAR-YOSEF Ofer  
(*Harvard University, USA*)
- BAT-ERDENE Sukhbaatar  
(*Mongolian University of Science and Technology, Mongolia*) 02
- BAYARSAIKHAN Jamsranjav  
(*National Museum of Mongolia, Mongolia*) 02, 19
- BEMMANN Jan H.  
(*University of Bonn, Germany*) 09, 14
- BENNETT Gwen  
(*McGill University, Canada*) 09
- BOLDBAATAR Yundebat  
(*Mongolian University of Science and Technology, Mongolia*) 02
- BOLORMAA Sakhiya  
(*Mongolian University of Science and Technology, Mongolia*) 02
- BOURGEOIS Jean  
(*Ghent University, Belgium*) 03
- BRADFORD Rosalind E  
(*Canada*) 18
- \* BRAGA J.  
(*University of Toulouse, France*) 02
- \* BRILL Robert H.  
(*USA*) 17
- BRODERICK Lee G.  
(*University of York, UK*) 07, 19, Poster
- BROSSEDER Ursula  
(*University of Bonn, Germany*) 14, 23
- BROWN Clayton  
(*Utah State University, USA*) 24
- BYAMBA-OCHIR Tsedendamba  
(*Mongolian University of Science and Technology, Mongolia*) 02
- \* CALASTRENC G.  
(*Toulouse University, France*) 02
- CASTILLO Cristina  
(*University College London, UK*) 22
- CHAN Annie  
(*University of Pennsylvania, USA*) 03
- CHAN Libby  
( Poster)
- CHANG Eunjeong  
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- \* CHEN Maa-Lin  
(*National Taiwan University, Taiwan*) 22
- \* CHEN Fukun  
(*University of Science and Technology of China, China*) 25
- CHEN Pochan  
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- CHEN Xingcan  
(*Chinese Academy of Social Sciences, China*) 13
- \* CHENG Chief-fu Jeff  
(*Boston University, USA*) 03
- CHIOU-PENG TzeHuey  
(*University of Illinois Urbana-Champaign, USA*) 04

- 
- \* CHOI Jaesung  
(*Chung-Ang University, Korea*) 14
- \* CHOI Jee-Hye  
(*Chung-Ang University, Korea*) 14
- CHOI Sungrak  
(*Mokpo National University, Korea*)  
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- CLARK Julia  
(*University of Pittsburgh, USA*) 12,  
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- \* CONG Dexin  
(*Chinese Academy of Social Science,  
China*) 03
- CUI Jianfeng  
(*Peking University, China*) 04
- \* de KEIJZER Matthijs  
(*Cultural Heritage Agency of the  
Netherlands, Netherlands*) 20
- DENNELL Robin  
(*University of Exeter, UK*) 24
- DING Yu  
(*Peking University, China*) 16
- \* DISCAMPS E.  
(*University of Bergen, Norway*) 02
- \* DITCHFIELD Peter  
(*University of Oxford, UK*) 22
- DREHER Aline  
(*University of Bochum, Germany*)
- DU Hui  
(*Minzu University, China*) 10
- \* DURANTHON R.  
(*Natural History Museum, Toulouse,  
France*) 02
- \* DVOMIKOV A.  
(*Gorno Altaisk State University,  
Russia*) 03
- \* EBEL A.  
(*Gorno Altaisk State University,  
Russia*) 03
- EHRENWIRTH Rebecca  
(*University of Munich, Germany*) 20
- ERDENE Myagmar  
(*National University of Mongolia,  
Mongolia*) 05
- ERDENEBAATAR Diimaajav  
(*National University of Mongolia,  
Mongolia*) 01, 02
- ERDENEBAT Ulambayar  
(*National University of Mongolia,  
Mongolia*) 01
- ERDENE BOLD Lkhagvasuren  
(*Mongolian University of Science  
and Technology, Mongolia*) 02
- \* EREGZEN Gelegdorj  
(*Mongolian Academy of Sciences,  
Mongolia*) 21
- \* ERLACH Rudolf  
(*University of Applied Arts Vienna,  
Austria*) 20
- FAN Anchuan  
(*University of Science and  
Technology of China, China*) 25
- \* FAVEREAU Aude  
(*National Museum of Natural  
History, France*) Poster
- FENNER Jack  
(*Australian National University,  
Australia*) 22
- FILIP Sonja  
(*Roemisch-Germanisches  
Zentralmuseum Mainz, Germany*) 20
- FLAD Rowan Kimon  
(*Harvard University, USA*) 13
- FRANKEN Christina  
(*German Archaeological Institute,  
Germany*) 09
- FRANZEN Carola  
(*University of Munich, Germany*)
- FRICK Patricia  
(*Museum of Lacquer Art, Germany*)  
23
- FUJISAWA Shiori  
(*Aomori Chuo Junior College,  
Japan*) 05
- FUJITA Hisashi  
(*Niigata College of Nursing, Japan*)  
05
- \* FULLER Dorian  
(*University College London, UK*) 22
- \* GANTULA J.-O.  
(*Institute of Archaeology, MAS, USA*)  
14
- GAVAACHIMED Lkhagvasuren  
(*Chung Ang University, Korea*) 05,  
14
- \* GHEYLE Wouter  
(*Ghent University, Belgium*) 03

- GILAIZEAU Linda  
(*Institut national des langues,  
littératures et civilisations orientales,  
France*) 17
- GILLAM J. Christopher  
(*University of South Carolina, USA*)  
03
- \* GLADYSHEV Sergei A.  
(*Russian Academy of Sciences,  
Russia*) 03
- \* GRATUZE Bernard  
(*Centre national de la recherche  
scientifique, France*) 17
- \* GRUPPE Gisela  
(*University of Munich, Germany*) 14
- GUAN Garry  
(*Asian American Media Group, USA*)
- \* GUNCHINSUREN Byambaa  
(*Mongolian Academy of Sciences,  
Mongolia*) 02, 03
- GUO Qinghua  
(*University of Melbourne, Australia*)  
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- GUSEV Sergey  
(*Russian Research Institute for  
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Russia*) 03, 18
- \* HAGIWARA Hirofumi  
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- HAN Jinseong  
(*Kyunghee University, Korea*) 21
- \* HAN Sunghoon  
(*Chung-Ang University, Korea*) 14
- HARPER Aaron  
(*USA*)
- \* HEISS Andreas G.  
(*Vienna Institute for Archaeological  
Science, Austria*) 20
- \* HOFMANN-de KEIJZER Regina  
(*University of Applied Arts Vienna,  
Austria*) 20
- HOMMEL Peter  
(*University of Oxford, UK*) 10
- HOSOYA Leo Aoi  
(*Ochanomizu University, Japan*) 22
- HOULE Jean-Luc  
(*Western Kentucky University, USA*)  
07, 19, Poster
- HSU Yiu-kang, Gary)  
(*University of Oxford, UK*) 19
- \* HUANG Fang  
(*University of Science and  
Technology of China, China*) 25
- \* HUANG Fengchun  
(*Hubei Provincial Institute of  
Cultural Relics and Archaeology,  
China*) 25
- HUANG Tsuimei  
(*Tainan National University of the  
Arts, Taiwan*) 16
- HUBER C. F. Moritz  
(*University of Munich, Germany*) 20
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- IKAWA-SMITH Fumiko  
(*McGill University, Canada*) 11
- IM Hyojai  
(*Seoul National University, Korea*)  
17
- \* IZUHO M  
(*Tokyo Metropolitan University,  
Japan*) 02
- JANZ Lisa  
(*University of Arizona, USA*) 12
- JIA Xiaobing  
(*Chinese Academy of Social Science,  
China*) 03
- JIN Zhengyao  
(*University of Science and  
Technology of China, China*) 25
- JO So-Eun  
(*Kyunghee University Museum,  
Korea*) 21
- JONES Martin  
(*University of Cambridge, UK*) 22
- JOO Kyeongmi  
(*Seoul National University, Korea*)  
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- \* JOOSTEN Ineke  
(*Cultural Heritage Agency of the  
Netherlands, Netherlands*) 20
- \* JUNG Eui Do  
(*The Korea Archaeology and Art  
History Research Institute, Korea*)  
14
- JUNG Soon-Chim  
(*Korea*) 23

- KANG Dong Seok  
(*Cultural Heritage Administration of Korea, South Korea*) 08
- KANG In Uk  
(*Kyunghee University, Korea*) 21
- KELSOE Camilla  
(*University of Pittsburgh, USA*) 19
- KHARINSKI Artur  
(*Irkutsk State Technical University, Russia*) 09
- KHATANBAATAR Dorjpurev  
(*Mongolian University of Science and Technology, Mongolia*) 22
- KIESER Annette  
(*University of Muenster, Germany*)  
23
- KIKUCHI Hiroki  
(*Nara National Research Institute for Cultural Properties, Japan*) 13
- \* KIKUCHI Kyoichi  
(*Iwate Prefectural University, Japan*)  
11
- KIM Bumcheol  
(*Chungbuk National University, Korea*) 08
- KIM Gyuhoo  
(*Kongju National University, Korea*)  
17
- \* KIM Jae-Hyun  
(*Donga University, Korea*) 14
- KIM Kwon-Joong  
(*Jungbu Institute for Archaeology, Korea*) 08
- KIM Myeung Ju  
(*Dankook University, Korea*) 05
- \* KIM Nayoung  
( ) 17
- \* KIM Sang Kyun  
(*The Korea Archaeology and Art History Research Institute, Korea*)  
14
- KIM Taehee  
(*Kyungpook National University, Korea*) 08
- KINGSBERG Miriam  
(*University of Colorado, Boulder, USA*) 24
- KIZAWA Naoko  
(*Gangoji Institute for Research of Cultural Property, Korea*) 04
- KNALLER Regina  
(*Roemisch-Germanisches Zentralmuseum Mainz, Germany*) 20
- KO Jaewon  
(*Jeju Cultural Heritage Institute, Korea*) 17
- KO Min-Jung  
(*Gyeongnam Development Institute, Korea*) 08
- \* KOMUKAI Hiroaki  
(*Cultural Division of Otsuchi, Japan*)  
11
- KOVALEW Alexey  
(*Russian Academy of Sciences, Russia*) 18
- KOZUKI Katsumi  
(*Kyoto University, Japan*) 16
- KRADIN Nikolay  
(*Vladivostok Far-Eastern Federal University, Russia*) 09
- KURODA Atsushi  
(*Cultural Division of Tono City, Japan*) 11
- LAI Celine Y. Y.  
(*Chinese University of Hong Kong, China*) 06
- LAM Hau Ling Eileen  
(*Hong Kong Institute of Education, China*) 18
- LANKTON James  
(*University College London, UK*) 17
- LEBEDINTSEV Alexandr  
(*Russian Academy of Sciences, Russia*) 04, 07
- LEE Cheng-Yi  
(*National Taiwan University, Taiwan*) 22
- LEE Dennis  
(*University of California, Los Angeles, USA*) 17
- \* LEE Ho Woon  
(*Chung-Ang University, Korea*) 14
- \* LEE Kwang-Ho  
(*Chung-Ang University, Korea*) 05,  
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- LEE Nan Hee  
(*The National Folk Museum of Korea, Korea*) 23
- LEE Rachel  
(*University of Michigan, USA*) 08

- \* LEE Si-Eun  
(*Chung-Ang University, Korea*) 14
- LEE Sungjoo  
(*Kyungpook National University, Korea*) 08
- \* LEE U-Yong  
( ) 05
- LEE Won-joon  
(*Seoul National University, Korea*)  
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- LI Sheng-Hua  
(*The University of Hong Kong, China*) 25
- \* LIN Li-hung  
(*National Taiwan University, Taiwan*) 22
- \* LIN Hsiu-Man  
(*National Museum of Prehistory, China*) 22
- LIN Kuei-chen  
(*University of California, Los Angeles, USA*) 06
- LINDUFF Katheryn  
(*University of Pittsburgh, USA*) 10
- \* LIU Guoxiang  
(*Chinese Academy of Social Science, China*) 04
- LIU Ming  
(*Jilin University, China*) 14
- LIU Xinyi  
(*University of Cambridge, UK*) 19
- LIU YingYu  
(*University of Science and Technology of China, China*) 25
- \* LKUNDEV G.  
(*Mongolian Academy of Sciences, Mongolia*) 02
- \* LO Ching-Hua  
(*National Taiwan University, Taiwan*) 22
- LYONS James Scott  
(*University of California, Berkeley, USA*) 04
- MA Jiangbo  
(*University of Science and Technology of China, China*) 25
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(*Ehime University, Japan*) 13
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(*Doshisha University, Japan*) 11,  
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- MATSUMOTO Keita  
(*Kyushu University Museum, Japan*)  
04
- \* McGLYNN George  
(*University of Munich, Germany*) 14
- \* MEGENS Luc  
(*Vienna Institute for Archaeological Science, Austria*) 20
- \* MENARD C.  
(*Toulouse University, France*) 02
- MIJIDDORJ Enkhbayar  
(*National University of Mongolia, Mongolia*) 05
- MILLER Bryan K.  
(*University of Bonn, Germany*) 09
- \* MIN Na Young  
(*Chung-Ang University, Korea*) 14
- MONTEITH Francesca  
(*Minjiang University, China*) 18
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(*Germany*)
- MORGAN Christopher  
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(*Austria*) 20
- NELSON Sarah  
(*University of Denver, USA*) 17
- NI Geli  
(*Bureau of Cultural Relics of Wenquan County, China*)
- \* NI Run'an  
(*Peking University, China*) 04
- \* NIKITIN Yuri G.  
(*Russian Academy of Sciences, Russia*) 04

- NIWA Takafumi  
(*Nara National Research Institute for Cultural Properties, Japan*) 13
- ODBAATAR Tserendorj  
(*National Museum of Mongolia, Mongolia*) 01, 02
- O'DELL Emily  
(*American University of Beirut, Libanon*) 24
- OGA Katsuhiko  
(*Nara National Research Institute for Cultural Properties, Japan*) 17
- OH Kangwon  
(*Academy of Korean Studies, Korea*) 08
- \* OLSEN John W.  
( 03
- OMURA Mari  
(*Gangoji Institute for Research of Cultural Property, Korea*) 16
- \* O'SULLIVAN Rebecca  
(*University of Oxford, UK*)
- OTAKE Noriaki  
(*Archaeological Research Center of Nagano Prefecture, Japan*) 11
- OWLETT Tricia  
(*Stanford University, USA*) 04
- PAK Yangjin  
(*Chungnam National University, Korea*) 17
- PAN Ling  
(*Jilin University, China*) 19
- PAPELITZKY Elke  
(*University of Salzburg, Austria*)
- PARK Seongmin  
(*Yemaeg Institute of Cultural Heritage, Korea*) 08
- PERRIN Ariane  
(*Centre national de la recherche scientifique, France*) 18
- \* PICHLER Bernhard  
(*University of Applied Arts Vienna, Austria*) 20
- \* PLETS Gertjan  
(*Ghent University, Belgium*) 03
- \* POHL Ernst  
(*University of Bonn, Germany*) 09
- \* POLLARD A. Mark  
(*University of Oxford, UK*) 22
- POPOV Alexander N.  
(*Far Eastern Federal University, Russia*) 07
- PRIEWE Sascha  
(*The British Museum, UK*) 10
- PRUECH Margarete  
(*University of Heidelberg, Germany*) 23
- QIN Cao  
(*University of Oxford, UK*)
- \* QIN Ling  
(*Peking University, China*) 22
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(*Kanazawa University, Japan*) 16
- RAWSON Jessica  
(*University of Oxford, UK*)
- REICHERT Susanne  
(*University of Bonn, Germany*) 09
- REINHART Katrinka  
(*Stanford University, USA*) 18
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- SAGAWA Masatoshi  
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- SAKAMOTO Shun  
(*Nara University, Japan*)
- SATO Hiroyuki  
(*Tokyo University, Japan*) 11
- \* SEGUCHI Shin'ji  
(*Shiga Prefectural Association for Cultural Heritage, Japan*) 22
- SEITSONEN Oula Ilari  
(*University of Helsinki, Finland*) 07, 19, Poster
- SEYOCK Barbara  
(*University of Bochum, Germany*) 15
- SHIBATA Masaki  
(*Doshisha University, Japan*) 11, Poster
- SHIBUTANI Ayako  
(*National Museum of Japanese History, Japan*) 22
- SHIN Dong-Hoon  
(*Seoul National University, Korea*) 05
- \* SHIOZUKA Koichi  
(*Hirado City Board of Education, Japan*) 11

- SOHN Chul  
(*Kangnung National University, Korea*) 08
- STEIN Britta  
(*University of Halle-Wittenberg, Germany*) 24
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(*Gettysburg College, USA*) 10
- TABAREV Andrey  
(*Institute of Archaeology and Ethnography, Russia*) 03, 07, 12
- \* TAKEDA Yoshio  
(*Japanese Archaeological Association, Japan*) 11
- TAMURA Tomomi  
(*Nara National Research Institute for Cultural Properties, Japan*) 17
- TAYLOR William  
(*University of New Mexico, USA*) 19
- TEYSSANDIER Nicholas  
(*Université Toulouse Le Mirail, France*) 02
- \* TSAI Hsi-Kuei  
(*National Taiwan University, Taiwan*) 22
- \* TSEDENDORJ B.  
(*Mongolian Academy of Sciences, Mongolia*) 02
- TSERENDAGVA Yadmaa  
(*Mongolian Academy of Sciences, Mongolia*) 01
- TSYDENOVA Natalia  
(*Russia*) 19
- TUMEN Dashtseveg  
(*National University of Mongolia, Mongolia*) 01, 02, 05, 14
- TUMURBAATAR Tuvshinjargal  
(*National Museum of Mongolia, Mongolia*) 19
- UEMINE Atsushi  
(*The Japan Society for the Promotion of Science/Doshisha University, Japan*) 11, Poster
- UENO Yoshifumi  
(*National Museum of Japanese History, Japan*) 15
- \* VAN BOMMEL Maarten R.  
(*Cultural Heritage Agency of the Netherlands, Netherlands*) 20
- VANCHIGDASH Chuluunkhuu  
(*Mongolian University of Science and Technology, Mongolia*) 02
- WADA Yoshifumi  
(*Hitoyoshi City Board of Education, Japan*) 11
- \* WANG Pei-Ling  
(*National Taiwan University, Taiwan*) 22
- WEI Jian  
(*Renmin University, China*) 07
- WEISSKOPF Alison  
(*University College London, UK*) 22
- WEST Erin Elizabeth  
(*Guangxi University, China*) 18
- WILLIAMS James T.  
(*University of Pittsburgh, USA*)/Renmin University, China) 06
- WOO Eun-Jin  
(*Seoul National University, Korea*) 05
- WRIGHT Joshua  
(*Oberlin College, USA*) 12, 18
- \* WU Youjin  
(*University of Science and Technology of China, China*) 25
- \* XIANG Taochu  
(*Hunan University, China*) 25
- XIE Liye  
(*University of Arizona, USA*) 13
- YAMAMOTO Takafumi  
(*Nihon University, Japan*) 15
- \* YANAGIDA Toshio  
(*Tohoku University Museum, Japan*) 11
- YANG Si-Eun  
(*Seoul National University Museum, Korea*) 21
- YANG Yimin  
(*University of Chinese Academy of Sciences, China*) 22
- \* YERUUL-ERDENE Ch.  
(*Institute of Archaeology, MAS, USA*) 14
- YOO Yongwook  
(*Chungnam National University, Korea*) 04
- YOSHIDA Yasuyuki  
(*Kanazawa University, Japan*) 16

YUN Ho-Pil

*(Gyeongnam Development Institute,  
Korea) 08*

YUN Hyeungwon

*(The National Museum of Korea in  
Jeonju, Korea) 21*

\* ZHANGSUN Yingzi

*(University of Science and  
Technology of China, China) 25*

ZHOU Hai

*(Zengpiyan Site Museum, China) 03*

ZHU Si-mei

*(Jilin University, China) 06*

ZHUSHCHIKHOVSKAYA Irina

*(Russian Academy of Sciences,  
Russia) 04*

ZWYNS Nicholas

*(University of California-Davis,  
USA) 02, 03, 12*