

# IOC Engaru 2023 Presentation Program

## Oral Presentations

(PRP: Pre-Recorded Presentation)

### Monday, 3 July 2023

#### Keynote speech

8:50 am – 9:20 am: Overview and prospect of obsidian provenance studies in Japan

**Yoshimitsu Suda**

#### Session 1: Formation of obsidian

Conveners: Keiji Wada and Kyohei Sano

Chairperson: Kuniyuki Furukawa (S1-1 – S1-2)

9:30 am– S1-1: Geology and petrology of Shirataki obsidian-rhyolite monogenetic volcano field, northern Hokkaido, Japan: Formation process of the obsidian-rhyolite magmas

**Keiji Wada and Kyohei Sano**

9:50 am– S1-2: The critical cooling rate required to form glassy obsidian: Application of time-temperature-transformation (TTT) diagram for cooling-induced crystallization

**Kyohei Sano and Atsushi Toramaru**

Break 10:10 am – 10:30 am

#### Session 2: Obsidian sources and their characterization

Conveners: Keiji Wada and Kyohei Sano

Chairperson: Kyohei Sano (S2-1 – S2-4)

10:30 am– S2-1: Geochemical characterization of obsidian from the island of Mindanao, Philippines

**Lee Anthony Moreno Neri and Jacqueline Roanne G. Chua**

10:50 am– S2-2: Source provenance of obsidian artifacts from the Upper Paleolithic site of Dadong, Helong city

**Wugan Luo, Hailong Zhao, and Michael D. Glascock**

11:10 am– S2-3: Provenance of the Carpathian obsidians: Multidisciplinary revision

**Milan Kohút, Yoshimitsu Suda, Adrián Biroň, František Hroudá, Tomáš Mikuš, Stanislava Milovská, and Juraj Šurka**

11:30 am– S2-4 (PRP): Carpathian obsidians reconsidered

**Clive Bonsall and Milan Kohút**

Lunch 11:50 am – 1:10 pm

### **Session 3: Analytical methods and databases of obsidian data**

Convener: Yoshimitsu Suda

Chairperson: Milan Kohút (S3-1 – S3-6)

1:10 pm– S3-1: Geochemical characterisation of obsidian artifacts from El Tigre Island, Gulf of Fonseca, Honduras

**Dennis Braekmans and Marie Kolbenstetter**

1:30 pm– S3-2: Concentration-based XRF provenance analysis of Japanese obsidian: Utility test of factory-installed obsidian calibration mounted in a portable XRF (Bruker Tracer 5i)

**Kazutaka Shimada and Yoshimitsu Suda**

1:50 pm– S3-3: Effect of gamma- and electron-irradiation on the semitransparent gray color obsidian

**Natella R. Aghamalyan, I. A. Gambaryan, E. A. Kafadaryan, M. N. Nersisyan, H. T. Gyulasaryan, G. N. Chilingaryan, and V. G. Khachatryan**

2:10 pm– S3-4 (PRP): Non-destructive dating of obsidian by infrared transmission spectroscopy

**Christopher M. Stevenson, Alexander Rogers, and Thegn N. Ladefoged**

2:30 pm– S3-5: Calculating hydration rates for Pacific Northwest obsidian sources from temporally diagnostic archaeological material

**Jason Alexander Cowan**

2:50 pm– S3-6: Why does thermally-altered obsidian develop irregular hydration rims? a diagnosis using SEM-EDS

**Yuichi Nakazawa and Akiko Matsumoto**

Break 3:10 pm – 3:30 pm

### **Session 4: Cultural aspects of obsidian during different archaeological periods**

Convener: Kazutaka Shimada

Chairperson: Yoshitaka Kanomata (S4-1 – S4-3)

3:30 pm– S4-1: Spatiotemporal patterns of obsidian exploitation in the later prehistory of eastern Kamchatka (Russian Far East)

**Yaroslav Kuzmin, Michael Glascock, Sergey Chaukin, Varvara Chaukina, and Nikolai Krenke**

3:50 pm– S4-2: Obsidian procurement and reduction strategy of the Sakkotsu type microblade core assemblages on Hokkaido, Japan

**Noriyoshi Oda and Masami Izuho**

4:10 pm– S4-3: Behavioral differences between terminal UP and incipient Jomon foragers in Hokkaido

**Daigo Natsuki, Hiroyuki Sato, and Masami Izuho**

4:30–4:40 pm: General discussion

## **Tuesday, 4 July 2023**

### **Session 4: Cultural aspects of obsidian during different archaeological periods**

Convener: Kazutaka Shimada

Chairpersons: Atsushi Uemine (S4-4 – S4-8); Kyle P. Freund (S4-9 – S4-13); Theodora Moutsiou (S4-14 – S4-18); Yaroslav Kuzmin Y.V. (S4-19 – S4-22)

8:30 am– S4-4: Obsidian transportation across the Tsugaru Strait in the Upper Paleolithic and the Jomon period

**Yosuke Aoki**

8:50 am– S4-5: Archaeological excavations of Hoshikuso Jomon obsidian mine site: Obsidian extraction and its changes in the Japanese Archipelago

**Sachie Otake**

9:10 am– S4-6 (PRP): Obsidian and diversity of lithic assemblages in the Late Paleolithic of Korea

**Chuntaek Seong, Younbin Sung, and Jeonghun Choi**

9:30 am– S4-7: A report of 2010 excavation of the Helongdadong site, Jilin Province

**Ting Xu**

9:50 am– S4-8: Post-glacial obsidian transportation in Eastern Indonesia

**Christian Reepmeyer**

Break 10:10 am – 10:30 am

10:30 am– S4-9: First Mousterian obsidian industry in the Northern Caucasus: New data from layer 6B at Saradj-Chuko Grotto

**Ekaterina Doronicheva**

10:50 am– S4-10: Patterns of obsidian procurement in the Middle Palaeolithic of western Azerbaijan (Trans-Caucasus)

**Azad A. Zeynalov, Abbas Q. Seyidov, M.D. Glascock, R.A. Fataliyev, and Y.V. Kuzmin**

11:10 am– S4-11 (PRP): River sources and non-local obsidian: interactions between prehistoric communities and raw materials in the Near East

**Stuart Campbell, Elizabeth Healey, Osamu Maeda, Makoto Arimura, Boris Gasparyan, and Artur Petrosyan**

11:30 am– S4-12: The obsidian evidence for the social organisation of hunter-gatherers in the Eastern Mediterranean islandscape

**Theodora Moutsiou, Vasiliki Kassianidou, Stella Demesticha, Miltiadis Polidorou, Athos Agapiou, Zomenia Zomeni, Corey Bradshaw, and Christian Reepmeyer**

11:50 pm– S4-13 (PRP): Reconstructing early Bronze Age interaction and practice in the insular Aegean: Integrated obsidian characterization studies from Dhaskalio and Kastri (Cyclades), Mochlos (Crete), and Poliochne (Northern Aegean)

**Tristan Carter, Rose Moir, Vassilis Kilikoglou, Marisa Marthari, and Georgia Tampakopoulou**

Lunch 12:10 pm – 1:30 pm

1:30 pm– S4-14: The use of obsidian of the Paleolithic period in North China

**Shinji Kato**

1:50 pm– S4-15: Importance of obsidian sources in Slovakia from Palaeolithic to Eneolithic period: Preliminary results of research project

**Ivan Cheben, Michal Cheben, and Adrián Nemergut**

2:10 pm– S4-16: Technological analysis and geochemical characterization of obsidian artefacts from the Neolithic sites from Poland: An overview

**Dagmara H. Werra, Marcin Szeliga, Richard E. Hughes, and Rafał Siuda**

2:30 pm– S4-17 (PRP): The obsidian blade from Csongrád (South-Eastern Hungary): A unique piece from the Copper Age

**András Markó, Zsolt Kasztovszky, and Katalin T. Biró**

2:50 pm– S4-18 (PRP): Detecting social processes related to obsidian during the 7th and the 3rd Millennium in the Carpathian Basin

**Kata Szilágyi**

Break 3:10 pm – 3:30 pm

3:30 pm– S4-19 (PRP): Prehistoric obsidian use in the Northern Adriatic: Italy, Austria, Slovenia, and Croatia

**Robert H. Tykot**

3:50 pm– S4-20: Obsidian circulation and prehistoric mobility in the Afar, Ethiopia: From the Late Stone Age to the advent of herding (11-3 ka)

**Lamya Khalidi, Gourguen Davtian, Marzia Gabriele, Anna Gioncada, Bernard Gratuze, Joséphine Lesur, Clément Ménard, Carlo Mogni, Carolina Pagli, Olivier Scancarello, and Blade Engda Redae**

4:10 pm– S4-21: Reflecting on obsidian conveyance zones and their utility for studying hunter-gatherer lifeways of the U.S. Great Basin

**Kyle P. Freund and Daron Duke**

4:30 pm– S4-22 (PRP): Obsidian hydration in northwestern Patagonia: Two case studies

**Fernando Franchetti, Christopher Stevenson, Gustavo Neme, Adolfo Gil, and Laura Salgán**

4:50–5:00 pm: General discussion

**Public lecture**

6:00 pm – 7:30 pm: Rare, shiny and deadly: why is obsidian so special?

**Robin Torrence** (Translator: Kazutaka Shimada)

## Thursday, 6 July 2023

### Session 5: Lithic technology and traceological studies

Convener: Satoru Yamada

Chairpersons: Yuichi Nakazawa (S5-1 – S5-5); Jun Takakura (S5-6 – S5-10); Wugan Luo (S5-11 – S5-15)

8:30 am– S5-1: Obsidian lithic artefacts from the Nishitomi site and their implications for the behaviours of microblade-making foragers in the late Upper Palaeolithic of southwestern Hokkaido

**Jun Takakura, Kenji Suzuki, Shino Yabushita, Shuzou Muramoto, Fumito Akai, Yuichi Nakazawa, Masaki Naganuma, Yasushi Terasaki, Yorinao Shitaoka, and Tsutomu Soda**

8:50 am– S5-2: Lithic use-wear analysis of Togeshita type microcores

**Katsunori Takase**

9:10 am– S5-3: Diversity of blade technique at the Shirataki sites: Perspectives from lithic refitted materials

**Yasuo Naoe, Hiroyuki Suzuki, and Naofumi Sakamoto**

9:30 am– S5-4: An overview of the Shirataki sites at an obsidian source in Hokkaido, Japan

**Hiroyuki Suzuki**

9:50 am– S5-5: An examination of the obsidian biface reduction from the microblade assemblage of the Ishikari low land, Hokkaido, northern Japan.

**Fumito Akai**

Break 10:10 am – 10:30 am

10:30 am– S5-6 (PRP): Common habitus of Oshorokko and Tougeshita methods: On the basis of scar pattern analysis and use-wear analysis

**Ulanov Aleksandr**

10:50 am– S5-7: Technical and functional relationship between Hirosato-type microblade core and burin in northern Japan

**Yoshitaka Kanomata**

11:10 am– S5-8: Nexus of biface production and characteristic of gray obsidian at central Japan

**Atsushi Uemine**

11:30 am– S5-9: The occurrence and variation of the microblade technology in Nihewan Basin, North China

**Huijie Mei**

11:50 pm– S5-10: Human adaptations during MIS 2: Evidence from microblade industries of northeast China

**Jian-Ping Yue, Shi-Xia Yang, and You-Qian Li**

Lunch 12:10 pm – 1:50 pm

1:50 pm– S5-11(PRP): Regional interactions on the Anatolian Plateau in the Early Chalcolithic through the techno-functional study of the obsidian toolkit

**Alice Vinet**

2:10 pm–S5-12: Long-distance circulation of obsidian in Late Pleistocene Central Alaska

**Yan Axel Gomez Coutouly, Jeff Rasic, and Joshua D. Reuther**

2:30 pm– S5-13 (PRP): Obsidian jewelry from Teuchitlan tradition in West Mexico: An unknown technology in Mesoamerica

**Rodrigo Esparza López**

2:50 pm– S5-14 (PRP): Production and use of green obsidian central masses at Batchelor, Magallanes region in Chile

**Constanza Arecheta Baratelli and Consuelo Huidobro**

3:10 pm– S5-15 (PRP): Working with obsidian and bone: Toolkits and techniques in the Patagonian seas during the middle Holocene

**Consuelo Huidobro, Josefina Macari, and Victoria Soto**

Break 3:30 pm – 3:40 pm

3:40–4:00 pm: General discussion

## **Poster Presentations**

Core time: Monday, 3 July 2023, 5:00 pm – 7:00 pm

Convener: Jun Hashizume

\*Nominated Posters for the SAS presents: the IOC Student Poster Presentation Award

### **Session 1: Formation of obsidian**

P-1: Origin of obsidian pyroclasts in the Holocene Kawago-daira volcano, Japan

**Kuniyuki Furukawa, Hiroshi Oka, Motohiro Tsuboi, Tatsuo Kanamaru, and Koji Uno**

P-2: Carpathian obsidianite: Obsidian and electrochemistry

**Baráz Csaba**

### **Session 2: Obsidian sources and their characterization**

P-3: Where is the source? In the search of unknown primary obsidian locale in the northern Caucasus

**Yaroslav Kuzmin Y.V., Sergey Kulakov, Michael Glascock, Sergei Budnitsky, and Andrei Grebennikov**

P-4: Bimodal sources of prehistoric obsidian artifacts in Sinamri site, South Korea: Mineralogical and geochemical evidences

**Yong-Joo Jwa and Seonbok Yi**

### **Session 3 (poster): Analytical methods and databases of obsidian data**

P-5: Obsidian exploitation in Sosruko rockshelter, North-central Caucasus: First results from pXRF

**Ekaterina Doronicheva, Liubov Golovanova, and Vladimir Doronichev**

P-6: A catalogue of Japanese obsidians

**Takanori Sakashita, Masaki Kurihara, and Michinori Oya**

P-7: Identification methods of obsidian provenance in northwestern Kyushu and Oki-Dogo areas

**Naoko Iioka and Atsushi Kamei**

### **Session 4: Cultural aspects of obsidian during different archaeological periods**

\*P-8: Occurrence of "Gray obsidian" and the prehistoric utilization

**Saki Murase**

P-9: Environmental changes and obsidian utilization at the Ofurukawa rock shelter site, Nagasaki, Japan.

**Yuzo Yanagita, Hiroshi Kawamichi, Masaki Katata, and Akihisa Nakahara**

P-10: «Museum imports»: An obsidian assemblage from Shikotan Island in the collection of HomeŹ Palace and Park Ensemble (Belarus)

**Aliaksandr Vashanau and Dagmara H. Werra**

### **Session 5: Lithic technology and traceological studies**

P-11: A pilot study to understand the qualitative and quantitative feature of microwear polish on experimental obsidian chipped tools

**Akira Iwase**

P-12: Are they heat treated? Heat fractured obsidian in the archaeological record

**Takashi Tsutsumi and Yuichi Nakazawa**

P-13: How to hold a microblade core?: Technological analysis of obsidian microblade assemblages in northwestern Kyushu from the end of the Upper Paleolithic through Incipient Jomon Periods based on the concept of *chaînes opératoires*

**Masayoshi Oba**

P-14: The role of adaptation strategy in the early microblade technology in the Korean Peninsula: A focus on Hantan River basin

**Kaoru Otani and Masami Izuho**

P-15: The use of obsidian by Neolithic communities in the light of the use-wear analysis: A few observations from Poland

**Dagmara H. Werra, Katarzyna Pyżewicz, and Jolanta Malecka-Kukawka**

\*P-16: Use-wear analysis of obsidian artifacts from the site in Changbai Mountain area

**Han Wang and Ting Xu**

\*P-17: Characterization of use-wear traces from obsidian hafted scrapers: experimental hide-working for Southern Patagonia contexts

**Victoria Soto González, Consuelo Huidobro Marín, and Josefina Macari Correa**

**Session 6: Regional development in relation to geological heritage and archaeological obsidian**

P-18: Use of obsidian resources for education and tourism in Shirataki geopark, Japan

**Yoshifumi Matsumura and Naoto Seshimo**

P-19: Educational activity using local resources of volcanoes and obsidian in Goto Islands geopark, western Japan

**Tomohiro Takaba, Masaru Yasunaga, and Kentaro Ideguchi**

P-20: Jadeite from Itoigawa, one of the symbols of Niigata Prefecture, North Central Japan

**Jun Hashizume and Tetsuya Yamamoto**