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Development



ATES ANNUAL REPORT

2025



Association for Trans-Eurasia Exchange
and Silk Road Civilization Development



ATES Annual Report 2025

1. Executive Summary

2025 marked a pivotal year for the Association for Trans-Eurasia Exchange and Silk Road Civilization Development (ATES), characterized by remarkable milestones in institutional development, scientific research, international collaboration, and outreach.

First, officially endorsed by UNESCO as a Programme of the International Decade of Sciences for Sustainable Development (IDSSD), ATES solidified its global standing as a leading platform for interdisciplinary Silk Road studies. Secondly, we formally launched “*ATES Science Plan (2025-2030)*”, a two-year collaborative effort by over 50 global experts. Meanwhile, a synthesis paper was published in *Science Bulletin* to promote the ATES Science plan and its visibility. Thirdly, we successfully co-hosted the “ANSO-MTA Silk Road Forum and the 3rd ATES Open Science Conference” in Budapest with ANSO, the Hungarian Academy of Sciences, Eötvös Lorand University and many other international partners, which convened more than 80 scholars from Europe, Asia and North America.

Furthermore, six ATES Working Groups (WGs) delivered groundbreaking research across paleoanthropology, prehistory agriculture, urban evolution, cultural exchange, population genetics, and human-environment interactions, publishing a substantial number of high-impact research articles directly in association with ATES in prestigious journals, including *Science*, *Nature*, *PNAS*, *Cell Genomics*, and *Science Bulletin*. ATES also expanded its international network through strategic partnerships with institutions in Central Asia, Europe, and beyond, while advancing capacity building and public engagement initiatives. Despite progress, challenges persist in cross-WG communication, funding diversification, and geopolitical coordination, which will guide priority actions in 2026.

2. Main Progress in 2025

2.1 Refine the Institutional Management Structure

ATES strengthened its governance framework to enhance efficiency and interdisciplinary synergy.

- 1) **Enhance Co-chairs' Leadership:** The tripartite co-chair system, led by Prof. Fahu Chen (Institute of Tibetan Plateau Research, Chinese Academy of Sciences), Prof. Michael Meadows (Nanjing University/Cape Town University), and Prof. Jürg Luterbacher (Justus Liebig University Giessen, Germany), provides cohesive strategic oversight, guidance, and facilitates collaborative international research endeavors.
- 2) **Establish the Science Steering Committee (SSC):** A diverse SSC of nine international experts was formally constituted to refine research agendas, review emerging directions, enhance international cooperation, and bridge gaps between Working Groups. SSC members actively participated in key meetings, including the ATES Budapest Conference and Workshop in September 2025, to shape ATES's scientific priorities and future work plans. ([Appendix I: List of ATES Science Steering Committee Members](#))
- 3) **Strengthen the Interaction with ATES Working Groups (WGs):** Regular cross-WG coordination protocols have been instituted, including a plenary meeting in December 2025. This meeting facilitated systematic progress reviews, confirmed the consensus on communication and branding ATES with leaders of WGs, identified collaboration opportunities, and aligned WG activities with ATES's cross-cutting priorities ([Appendix II: List of WG Co-leaders and Key Members](#)).

2.2 Main Research Achievements 2025

2.2.1 Key Scientific Breakthroughs

In 2025, ATES achieved significant scientific breakthroughs across the following thematic fields ([Appendix III: List of ATES Main Publications in 2025](#)):

1) Paleolithic Human and Culture Evolution

- ✓ New findings deepens the understanding of biocultural dynamics of *Homo sapiens*, Denisovans, and possibly other hominins in the Late Pleistocene of East Asia (Ruan et al, 2025, *PNAS*). And symbolic ochre use by Neanderthals (d'Errico et al., 2025, *Science Advances*).
- ✓ Ancient genomes from Yunnan unveiled unique Basal Asian ancestry tied to Tibetan and Austroasiatic origins, highlighting the region's key role in Asian population dynamics (Wang et al,

2025, *Science*).

- ✓ Analysis of 73 ancient dog genomes (10k-year Eurasian samples) shows dog ancestry correlations with ancient human groups, shifts coinciding with human dispersals, underscoring dogs' long-term key role in human societies (Zhang et al., 2025, *Science*).

2) Trans-Regional Flow of Agriculture and Population in the Neolithic

- ✓ Complementary archaeobotanical and stone tool evidence from the 9200 cal BP in southern Uzbekistan shows early Holocene foragers processed cereals, nuts, fruits and interacted with pistachio and apple progenitors, revealing that such complex cultivation-predisposing foraging behaviors spanned a broader Eurasian area than previously thought (Zhou et al., 2025, *PNAS*).
- ✓ Genome-wide data from 74 Middle Neolithic Yellow/Yangtze basin samples revealed the Yellow River-Tibetan Plateau links (earliest ~5,800 BP EPAS1), Yangtze-southeast coastal/Austronesian affinity (proto-Austronesian northern origins), and mid-Neolithic agricultural expansion's genetic impact (Xiong et al., 2025, *Cell Genomics*).
- ✓ Barley dormancy, regulated by MKK3 haplotypes, led to climate-linked historical selection, offering a genetic framework to balance dormancy and pre-harvest sprouting avoidance (Jørgensen et al., 2025, *Science*).
- ✓ The spread of horses into northern China during the pre-Qin period was systematically reconstructed (Lu et al., 2025, *Archaeological Research in Asia*). Crucially, multidisciplinary evidence consistently indicates that the eastward movement of wheat/barley and westward dispersal of millet occurred mainly through knowledge transfer, not demic expansion (An and Tang, 2025, *Archaeological Research in Asia*).

3) Science and Cross-Cultural Knowledge Exchange

- ✓ The Chinese star name Shi Mu (ζ Andromedae) was officially adopted by the International Astronomical Union (IAU), and a detailed Ming-dynasty record of the 1408 CE nova was reinterpreted using modern astrophysical models—transforming a centuries-old puzzle into valuable scientific data (The Astronomical Journal). This work underscores the precision and

continuity of traditional Chinese astronomy.

- ✓ Studies of Qing-era commercial manuals from the China–Mongolia–Russia “Tea Road” revealed standardized systems of measurement, accounting, and pidgin terminology – demonstrating how practical knowledge was encoded and transmitted across linguistic boundaries in the early modern era (Chen 2025, *Archaeology of Eurasian Steppe*).

4) Environmental Change and Its Impact on Civilizations

- ✓ Identified a Holocene hydroclimate dipole pattern in Asian drylands (progressive wetting in Central Asia, aridification in Western Asia) and clarified the spatial heterogeneity of the 4.2 ka aridification event’s impacts on Eurasian societies. (Ma et al., 2025, *Quaternary Science Reviews*. Nan et al., 2025, *Earth-Science Reviews*).

2.2.2 Contributions to ATEC Cross-cutting Priorities

In 2025, ATEC Working Groups not only achieved significant advances within their disciplinary domains but also actively aligned their efforts with the four cross-cutting priorities of ATEC.

1) Human Adaptation to Environmental and Climatic Changes

- ✓ WG1 (Paleolithic Culture and Human Migration): Results from excavations at high-altitude or marginal sites indicate that innovations in Paleolithic material culture (e.g., bone tools, pigment use) were closely linked to environmental stress, demonstrating early cultural adaptability.
- ✓ WG2 (Origins of Agriculture and Trans-Eurasian Diffusion): Research on crops (e.g., barley, adzuki bean), livestock (dogs), and humans systematically reveals the processes of population migration, crop and animal dispersal, and genetic history across Eurasia
- ✓ WG5 (Genetic History of Silk Road Populations): Analyzing ancient DNA from high-altitude and arid regions to detect signatures of natural selection (e.g., EPAS1 gene), directly linking genetics to environmental adaptation.

- ✓ WG6 (Human–Environment–Climate Interactions): By delineating Holocene dipole precipitation pattern and resolving the spatial heterogeneity of the 4.2 ka event, WG6 strengthens the environmental context needed to interpret cultural transformations, migration dynamics, and civilizational resilience along the Silk Road.

2) Impacts of Climatic and Environmental Change on Civilization

- ✓ WG2: Research on sensitive zones reveals environmental influences on civilizations.
- ✓ WG3 (Evolution of Transport Networks and Towns): Urban rise and decline is linked to local hydrological stability. The spatial distribution of courier stations reflects dependence on water availability and ecological carrying capacity.
- ✓ WG5: Temporal and spatial shifts in ancient population distributions indirectly reflect demographic reorganization driven by environmental pressures.
- ✓ WG6: Led research on this priority, showing that the “4.2 ka BP aridification event” had highly heterogeneous impacts.

3) Sustainable Development, Environmental Management, and Cultural Heritage

- ✓ WG2: Published the popular science book “Illustrated Prehistoric Humans in Gansu Province”, raising awareness of prehistoric cultural heritage.
- ✓ WG3: Documented and digitized understudied courier stations and urban ruins through field surveys, providing foundational data for the conservation of Silk Road linear heritage. The launch of the “Ancient Cities Database of Central Asia” directly supports heritage monitoring and sustainable research.
- ✓ WG4 (Evolution and Circulation of Science and Technology): Curated the exhibition “From Star Atlas to Murals: East-West Dialogue on Science and Technology Witnessed in Dunhuang”, transforming ancient knowledge into a platform for contemporary cultural dialogue. The compilation of Qing-era

“Tea Road” commercial documents revealed institutionalized cross-border trade mechanisms, offering historical insights for modern transnational cooperation.

- ✓ WG6: Based on paleoclimate–hydrology reconstructions, issued scientific warnings about the risks of “pseudo-warm-wet” trends in Central Asia, informing regional water resource management and sustainable development policies.

4) Development of the ATES Database on Environmental Changes and Silk Road Civilizations

- ✓ WG2: Established the “Radiocarbon Databank for Chinese Archaeology” (Qiu et al, 2025, *Scientific Data*), providing a high-precision chronological backbone.
- ✓ WG3: Launched the “Ancient Cities Database of Central Asia,” combining archaeological stratigraphy, site coordinates, historical records, and remote sensing imagery.
- ✓ WG4: Advanced Stellarium Sinicum – a Chinese star-name module within the IAU’s All Skies Encyclopedia, systematically compiling Silk Road astronomical inscriptions, star charts, and multilingual scientific texts, thereby enriching the database’s intangible heritage dimension.
- ✓ WG5 & WG1: Developed metadata standards for ancient DNA samples and established bioarchaeological data integration pipelines, laying the groundwork for future analyses linking genetics, phenotypes, and environmental variables.
- ✓ WG6: Compiled proxy records (lake sediments, tree rings, speleothems) from key regions, including Central Asia, the Tibetan Plateau, and the Loess Plateau, and aligned them with paleoclimate model outputs.

2.3 Partners Networking & Capacity Building

1) Partners Networking

- ✓ Enhanced strategic partnerships with long-standing collaborators, including leading institutions from China, France, Germany, the UK, Spain, Italy, Hungary, and the USA.
- ✓ Forged robust institutional alliances across Central and Western

Asia, Russia, and Mongolia, achieving notable progress in cooperative frameworks, particularly with Uzbekistan and Kazakhstan.

- ✓ Active engagement with international scientific bodies, including the Alliance of National and International Science Organizations for the Belt and Road Regions (ANSO), International Geographical Union (IGU), UNESCO International Decade of Science for Sustainable Development (IDSSD), the World Climate Research Programme (WCRP) through its Coordinated Regional Climate Downscaling Experiment (CORDEX) initiative, the International Union of Prehistoric and Protohistoric Sciences (UISPP), and the International Astronomical Union (IAU) Working Group on Star Names (WGSN), et al.

In 2025, ATES maintains a close collaboration with the IGU Commission on "Silk Road Civilizations and Environments (SCE-IGU)", jointly organizing international symposia and fostering scholarly exchange with a particular emphasis on Central Asian research.

2) Capacity Building

- ✓ Coordinated more than 10 young scientists from Uzbekistan, Pakistan, Tajikistan, and Mongolia to join the Summer School on Earth System Science hosted by ITPCAS. Nyingchi, China. August 2025.
- ✓ Supported two young scholars from Russia for a short-term visit to the Institute for the History of Natural Science, Chinese Academy of Science (IHNS-CAS), to conduct collaborative research on knowledge circulation on the ancient steppe Silk Road.
- ✓ Invited more than 20 young scientists from Hungary and China to attend the ATES conference in Budapest, and encouraged them to give oral presentations.

2.4 Academic Events and Public Outreach

1) Co-hosting Academic Events

- ✓ International Forum on Silk Road Climate-Civilization Interactions. Xi'an, China, May, 2025.
- ✓ WCRP-CORDEX CASCADE Symposium on Climate Change and

Adaptation in Central Asia. Tashkent, Uzbekistan, June 2025.

- ✓ Workshop on Prehistoric Human Activities and Environmental Change in Siberia and Northern China. Lanzhou, China, August 2025.
- ✓ ANSO-MTA Silk Road Forum & the 3rd ATES Open Science Conference. Budapest, Hungary, Sep. 2025.
- ✓ ATES Workshop. Budapest, Hungary, Sep. 2025.
- ✓ Workshop on the Diversity of Middle-Late Pleistocene Archaic Homo and the Rising of Modern Humans in Eastern Asia. Beijing, China, Oct. 2025.
- ✓ Workshop on Cosmology and the Daily Practices in the Ming-Qing Era. Hefei, China, Oct. 2025.
- ✓ Workshop on Evolution of Coupled Environment-Genes-Civilization System in the Monsoon Marginal Zone. Xi'an, China, Nov. 2025.
- ✓ Workshop on the Centers on Terrestrial and Celestial Domain. Hefei, China, Dec. 2025.
- ✓ International Workshop on the Comparative History of Astronomical Observatories as Archival Places. Hefei, China, Dec. 2025.

2) Outreach and Impacts

- ✓ The "ATES Science Plan (2025-2030)" (Chen, et al., Eds, 2025, *Science Press*) was released as the first OA book on Science Press' s platform for free download and online reading, enabling free global access and knowledge sharing.
- ✓ A popular science book entitled "Illustrated Prehistoric Humans in Gansu Province" was published in 2025, establishing new paradigm for science communication and public engagement (Dong et al., Eds, 2025, *Xi'an Map Publishing House*).
- ✓ Exhibition entitled "From Star Atlas to Murals: The East-West Dialogue on Science and Technology Witnessed in Dunhuang". Beijing, Oct. 2025.
- ✓ Prof. Chengbang An (Co-leader of ATES WG3) from Fudan University, published a popular science paper entitled "Millennial Civilization Imprints at the Hungarian National Museum" in *Popular Archaeology* (in Chinese),

systematically introducing to the public about the history, culture and people in Hungary from archaeological perspectives.

3. Challenges of ATES

Despite significant progress, ATES faces key challenges that require strategic attention:

- 1) **Working Group Interactions:** While many activities were established by each WG, gaps remain in real-time information sharing between WGs, SSC and Co-Chairs. And substantive interdisciplinary collaboration needs to be further enhanced, particularly across social and natural science domains.
- 2) **Branding and Visibility:** ATES's brand recognition among global funders, research communities, and the public needs enhancement, with inconsistent acknowledgement of ATES in affiliated publications and events.
- 3) **Funding Gaps:** Dependence on limited funding sources (e.g., national grants) hinders large-scale interdisciplinary projects; geopolitical complexities complicate access to international and private funding.
- 4) **Cross-Border Coordination:** Regulatory barriers, visa restrictions, and geopolitical tensions limit collaboration with key regions (e.g., Central Asia, Russia) and hinder fieldwork and data sharing.
- 5) **Data Sharing Barriers:** Heterogeneous data standards, privacy concerns, and institutional constraints impede seamless integration of cross-regional and cross-disciplinary datasets.

4. Work Plan in 2026

The strategic focus of ATES in 2026 will center on: research excellence, interdisciplinary synergy, and global impact, aligned with the "ATES Science Plan (2025-2030)". Core tasks in 2026 include: launching ATES flagship interdisciplinary projects, branding ATES, strengthening data integration and sharing, and expanding partnerships in underrepresented regions (e.g., Central Asia, the Middle East, and Russia).

Currently, the main events planned in 2026 are as follows:

- 1) International workshop on the Southern Dispersal Route of Modern Humans and their Environmental Adaptations. 2026, Kunming, China.
- 2) The 2nd Silk Road Climate Symposium. 2026, Bishkek, Kyrgyzstan.

- 3) The 2nd Anthropocene Science Congress. 24-26 April 2026, Nanjing, China.
- 4) International Conference on Environmental Change & Archaeology. September 2026, Jiangxi, China.
- 5) ATES session at EGU General Assembly, 3-8 May 2026, Vienna, Austria. <https://www.egu26.eu/home.html>
- 6) ANSO-ATES International Symposium on Silk Road Civilization and Environmental Change. 15-16 August 2026, Istanbul, Turkey
- 7) ATES-SCE joint session in the IGU Regional Conference, 17-21 August 2026, Istanbul, Turkey. <https://www.irc2026.org/en/>
- 8) Young Scientists Training: Online Lectures on Astronomical History and Heritage. 12 lectures for Young Scientists, hosted by USTC. August 2026, Hefei.
- 9) ATES session entitled “Palaeolithic Adaptations to Asian Mountain Environments” at the UISPP Congress. August 31 to September 4, 2026, Poland. <https://uispp2026.com/>
- 10) International Workshop on the History of Science and Technology in the Eurasian Steppe. September 2026, Kazan, Russia.

In 2026, ATES will continue to advance as a global leader in Silk Road interdisciplinary research, fostering cross-cultural understanding and contributing to sustainable development across Eurasia and beyond.

This Annual Report is co-drafted by ATES Working Groups and the ATES Secretariat, revised by the ATES Co-Chairs.

31 January 2026

Appendix I: List of ATES Science Steering Committee Members

Appendix II: List of WG Co-leaders and Key Members

Appendix III: List of ATES Main Publications in 2025

Appendix I: List of ATEs Science Steering Committee Members

(In alphabetical order by the first letter of the family name)

- [1] Prof. Eszter Bánffy
Centre of Excellence of the Hungarian Academy of Sciences
Institute of Archaeology, Research Centre for the Humanities
Eötvös Lorand University, Hungary
- [2] Prof. Deliang Chen
Xinghua Distinguished Chair Professor
Department of Earth System Science
Tsinghua University, China
- [3] Prof. Nicola Di Cosmo
Institute of Advanced Study, Princeton, USA
- [4] Prof. Michael Frachetti
Department of Anthropology
Washington University in St. Louis, USA
- [5] Prof. Bojie Fu
Research Center for Eco-Environmental Sciences
Chinese Academy of Sciences
- [6] Prof. Jean-Jacques Hublin
College De France
- [7] Prof. Weidong Liu
Director General of the Bureau of International Cooperation
Chinese Academy of Sciences
Executive Director of the Alliance of National and International Science
Organizations for the Belt and Road Regions (ANSO)
- [8] Prof. Maria Fernanda Sanchez Goni
École Pratique des Hautes (EPHE), PSL Research University
University of Bordeaux, France
- [9] Prof. Dan Xu
Johannes Gutenberg-Universität Mainz, Germany

Appendix II: List of WG Co-leaders and Key Members

WG1: Paleolithic Culture and Human Migration

Co-leaders: Hao Li (ITPCAS), Francesco d'Errico (University of Bordeaux)

Key members: Dongju Zhang (Lanzhou University), Huan Xia (Lanzhou University), Qijun Ruan (Yunnan Institute of Cultural Relics and Archaeology), Zhenxiu Jia (ITPCAS), Luc Doyon (University of Bordeaux), Daniela Rosso (University of Valencia), Davide Dalpiano (University of Ferrara), Marco Peresani (University of Ferrara), Cristina Lemorini (Sapienza University of Rome, Italy), Ben Marwick (University of Washington)

WG2: The Origin of Agriculture and Trans-Eurasian Diffusion

Co-leaders: Guanghui Dong (Institute of Earth Environment, CAS), Liangcheng Tan (Institute of Earth Environment, CAS), Dorian Fuller (University College London), Hassan Fazeli Nashli (Tehran University)

Key members: Xiaoyan Yang (Lanzhou University), Yuzhang Yang (University of Science and Technology of China), Jianxin Wang (Northwest University), Xinying Zhou (Institute of Vertebrate Paleontology and Paleoanthropology, CAS), Ling Pan (Northwest University), Minmin Ma (Lanzhou University), Ludovic Orlando (Centre for Anthropobiology and Genomics of Toulouse), Andrei Poliakov (Institute of the History of Material Culture, RAS), Xinyi Liu (University of Washington), Ruiliang Liu (British Museum), Dan Xu (Johannes Gutenberg University Mainz), Mark Pollard (University of Oxford), Hassan Basafa (University of Neyshabour), Artur Kharinskiy (Irkutsk National Research Technical University)

WG3: Evolution and Development of the Transport Network and Towns

Co-leaders: Hongwei Yang (Lanzhou University), Xiaohong Zhang (Fudan University), Melinda Pap (Eötvös Loránd University), Chengbang An (Fudan University)

Key members: Comprising scholars from China, Hungary, Russia, and other countries, including over 10 core researchers such as Quanbo

Liu (Lanzhou University), Huidong Xi (Northwest University), and Zsolt Szilágyi (Eötvös Loránd University)

WG4: Evolution and Circulation of Culture, Science and Technology along the Silk Road

Co-leaders: Yunli Shi (University of Science and Technology of China-USTC), Wei Chen (Institute for the History of Natural Science-IHNS, CAS), Weixin Niu (USTC)

Key members: Boshun Yang (USTC), Bill Mak (The Needham Research Institute), N. Ganbat (Mongolia Academy of Sciences), Chen Ji (USTC), Xiaolin Ren (IHNS-CAS), Lognfei Chu (USTC), Haohao Zhu (USTC), Nan Zhang (USTC), Yue Pan (USTC), Ayrat Sitdikov (Tatarstan Academy of Sciences, Russia), Svetlana Glushkova (Kazan Federal University, Russia)

WG5: Genetic History of Silk Road Populations

Co-leaders: Chuan-Chao Wang (Fudan University), Anna Szécsényi-Nagy (ELTE Research Centre for the Humanities), Cosimo Posth (University of Tübingen)

Key members: Key researchers from the Ministry of Education Key Laboratory of Contemporary Anthropology at Fudan University and collaborating international institutions; Institute of Archaeogenomics, Research Centre for the Humanities, Eötvös Loránd University; Archaeo- and Palaeogenetics group, Institute for Archaeological Sciences, Tübingen University

WG6: Human-Environment-Climate Interactions

Co-leaders: Juzhi Hou (ITPCAS), Elena Xoplaki (Euro-Mediterranean Center on Climate Change, Italy)

Key members: Suzanne Leroy (Aix-Marseille Université, France), Liangcheng Tan (Institute of Earth Environment, CAS), Jianhui Chen (Lanzhou University), Natalia Rudaya (Russian Academy of Sciences), Shengqian Chen (ITPCAS), Haichao Xie (ITPCAS), Yanwu Duan (ITPCAS), Yanan Su (ITPCAS)

Appendix III: List of ATEs Main Publications in 2025

- 1) Chen, F., Meadows, M., Luterbacher, J., Ailikun, Hou, J., Eds. 2025. Association for Trans-Eurasia Exchange and Silk Road Civilisation Development (ATES) Science Plan (2025-2030). Beijing, *Science Press*, 76pp. ISBN: 9787030832924. doi.9787030832924
- 2) Chen, F., Meadows, M., Luterbacher, J., et al., 2025. Global platform ATEs: interdisciplinary insights into past human environment dynamics along the Silk Road. *Science Bulletin*. <https://doi.org/10.1016/j.scib.2025.08.030>

WG1: Paleolithic culture and human migration

- 3) Ruan, Q. J., Li, H., Xiao, P. Y., et al., 2025. Quina lithic technology indicates diverse Late Pleistocene human dynamics in East Asia. *PNAS* 122(14), e2418029122. DOI: 10.1073/pnas.2418029122
- 4) Ran, et al., 2025. Homo longi, Denisovans, neanderthals and other archaic hominins in Eastern Asia prior to the rise of Homo sapiens. *Science Bulletin*. DOI: 10.1016/j.scib.2025.11.059
- 5) d'Errico, F., Mauran, G., Pitarch Martí, A., Majkić, A., & Stepanchuk, V., 2025. Evidence for symbolic use of ochre by Micoquian Neanderthals in Crimea. *Science Advances*, 11(44). DOI:10.1126/sciadv.adx4722
- 6) Courtenay, L.A., d'Errico, F., Blasi, D.E., Núñez, R., 2025. Identifying potential artificial memory systems via spatial statistics: Implications for the origin of quantification. *Archaeological and Anthropological Science* 17, 171, 1-20. DOI:10.1007/s12520-025-02286-4
- 7) d'Errico, F., Baker, J., Pereira, D., Álvarez-Fernández, E., et al., 2025. Multivariate analyses of Aurignacian and Gravettian personal ornaments support cultural continuity in the Early Upper Palaeolithic. *PLOS ONE*, 20(6), e0323148. DOI: 10.1371/journal.pone.0323148
- 8) Colagè, I., d'Errico, F., 2025. An empirically-based scenario for the evolution of cultural transmission in the human lineage during the last 3.3 million years. *PLOS ONE* 20.6 (2025): e0325059. DOI: 10.1371/journal.pone.0325059

WG2: The origin of agriculture and trans-Eurasian diffusion of early farming and herding

- 9) Dong, G., Ma, M., and Chen, F., Eds. 2025. Illustrated Prehistoric Humans in Gansu Province. Xi'an. Xi'an Map Publishing House.
- 10) Zhang, S., et al., 2025. Genomic evidence for the Holocene codispersal of dogs and humans across Eastern Eurasia. *Science* 390, 735-740. DOI: 10.1126/science.adu2836
- 11) Wang, T., et al., 2025. Prehistoric genomes from Yunnan reveal ancestry related to Tibetans and Austroasiatic speakers. *Science* 388. DOI: 10.1126/science.adq9792
- 12) Zhou, X., et al., 2025. 9,000-year-old barley consumption in the foothills of central Asia. *PNAS* 122. DOI: 10.1073/pnas.2424093122
- 13) Chen, X., et al., 2025. The discovery of adzuki bean (*V. angularis*) in Eastern China during the 9th millennium BP and its domestication in East Asia. *PNAS* 122, e2510835122.
- 14) Yang, J., et al., 2025. Reassessing the chronology of the Caiyuan Culture and its relationship with Late Neolithic cultures in northwestern China. *Journal of Archaeological Science* 183, 106380.
- 15) Dong, G., et al., 2025. Spatial dynamics of forager and farmer habitats in relation to climate change and agricultural intensification during the early -mid Holocene in the desert-loess ecotone of north China. *Quaternary Science Reviews*. 369, 109662.
- 16) Wang, Q., et al., 2025. Bulk-Bone Shotgun Metagenomic analysis unveils the transport of South Asia fish across the Himalayas in 8th century CE. *Journal of Archaeological Science* 176, 106157. DOI: 10.1016/j.jas.2025.106157
- 17) Qiu, M., et al., 2025. Chronology of early China: A radiocarbon databank for Chinese archaeology. *Scientific Data* 12, 1665. DOI: 10.1038/s41597-025-05956-z
- 18) Zhang, J., et al., 2025. Decadal to centennial scale hydroclimate oscillations on the western Loess Plateau during the past 1400 years. *Palaeogeography, Palaeoclimatology, Palaeoecology* 678, 113235. DOI:10.1016/j.palaeo.2025.113235

WG3: Evolution and development of the transport network and towns

- 19) Li, R., Zhang, X., Li, S., 2025. Characteristics and trends in Chinese Historical Geography (2019-2024), *Journal of Historical Geography*, Volume 88, Pages 17-26.
- 20) Hoppál, K., Pap, M., Boros, P., 2025. Sheep Growing out of the Ground and Other Wonders: The Roman Empire in Pre-6th Century Non-

Dynastic Chinese Sources. *Acta Orientalia Academiae Scientiarum Hungaricae*, 78(1), 1-44.

- 21) Tan, B., Tang, L., Lu, C., et al., 2025. Millet in the Bronze Age Altai Mountains: discovery, progress and research prospects. *npj Heritage Science*, 13:299.
- 22) Lu, C., Du, L., Tan, B., et al, 2025. The spread of the domestic horse in northern China during the pre-Qin period and its influencing factors[J]. *Archaeological Research in Asia*, 41:100596.
- 23) An, C., Tang, L., 2025. Spatiotemporal dynamics of prehistoric millet agriculture dispersal in Northwest China. *Archaeological Research in Asia*, 44:100658
- 24) Zhang, W., Ding, G., Zhang, Y., et al, 2025. Evolution of fire activity in arid Central Asia since~12.9 ka: Transitioning from natural to anthropogenic forces. *CATENA*, 257: 109213
- 25) 杨红伟、赵巾帅《汉藏金桥与明清之际的民族交融》，《民族研究》2025年第2期。
- 26) 杨红伟、李文平《非物质形态史料的生成、整理与存留》，《江西社会科学》2025年第6期。
- 27) 刘全波、李孟龙《汉代民族融合的新篇章：西汉与匈奴的军事博弈》，《敦煌学辑刊》2025年第1期。
- 28) 张博《清代河湟民族走廊地区的“边缺”》，《民族研究》2025年第3期。
- 29) 张晓虹，章琦：《声音景观的空间尺度转换——以近代花儿传播为例》，《民族艺术研究》2025年第2期，第64-75页。

WG4: Evolution and circulation of culture, science and technology

- 30) Yang, B., Vogt, N., Hoffmann, S.M, and (AAS Journals Data Editors), 2025. Was there a (super) nova in 1408? *The Astronomical Journal*, 170:17 (10pp).
- 31) Chen, J., Chu, L., 2025. Adapting and accepting the European astronomical system: A study of the mistakes in the calculation of eclipses using the Western methods in late Ming and early Qing China. *Journal for the History of Astronomy* 56:2, pp.148-171.
- 32) Shuhrat Ehgaberdiev, Wayne Orchiston, Shi Yunli, Lee Eun-Hee, Ji Chen, Yang Boshun (eds), 2025. Ulugh Beg 630th Anniversary Issue:

Proceedings of the ICOA-10 Meeting on Patrons and Patronage in Middle Eastern and Asian-Pacific Astronomy. *Journal of Astronomical History and Heritage* (ISSN: 1440-2807; eISSN: 2097-7182-5085), 28:2, pp. 315-550.

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