

Andean Archaeology and pre-Columbian mining and metallurgy

Place: Haus der Archäologien
Am Bergbaumuseum 31, 44791 Bochum

Lectures (Hörsaal):

13.01.2026 - 4pm *c.t.*

Copper and rituals in the Southern Andes

20.01.2026 - 4pm *c.t.*

Pre-Columbian and colonial mining and metallurgy in the extreme Northwestern Argentina highlands

Workshop (Seminar room 1):

28.01.2026 - 10am-4pm

Pre-Columbian mining and metallurgy in the Southern-Central Andes

registration:
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Lectures

**Hörsaal
Haus der Archäologien, Bochum**

13.01.2026 - 4pm c.t.

Copper and rituals in the Southern Andes

Research on beads and crushed copper minerals in pre-Columbian, Northwestern Argentina



Green and blue minerals and rocks played significant roles in multiple dimensions of pre-Columbian Andean societies. Their extraction and circulation shaped human–environment interactions in the region since ancient times. Among these minerals, copper held a particularly important place due to its role in metallurgical and mining traditions. Yet, despite its significance, many aspects of its use remain poorly understood—especially which minerals were selected and worked for lapidary purposes.

This presentation synthesizes research carried out to date in the Southern Andes, focusing on several case studies from different sites and contexts in pre-Columbian Northwestern Argentina, particularly during the Late and Inka Periods (10th–16th centuries). Part of this research has been developed in collaboration with the Archaeometallurgy and Materials Science departments of the Deutsches Bergbau-Museum Bochum.

20.01.2026 – 4pm c.t.

Pre-Columbian and colonial mining and metallurgy in the extreme Northwestern Argentina highlands

Lines of research, challenges and collaborative mining heritage conservation and exhibition



Since 2004, GAEPuNo (Archaeology and Ethnohistory Group of the Northern Puna) has been conducting research in the northern highlands of extreme Northwestern Argentina, in Jujuy Province. One of the main lines of research concerns mining and metallurgy during pre-Columbian and Colonial times. This presentation will highlight part of the results of this research, with special emphasis on the most recent outcomes of our investigations.

In addition, it will particularly showcase the collaborative projects developed with local Indigenous communities for the preservation and exhibition of mining heritage in the area. This work is especially relevant in a region where mining heritage is celebrated, yet contemporary mining projects remain highly contested due to their social, economic, and environmental impacts. The debate involves multiple stakeholders—including the state, mining companies, and local communities—who negotiate the meanings and consequences of both past and present extractive activities. The presentation will also address the challenges of collaborative work, as well as the contributions that can be made to tourism promotion, heritage conservation, and community claims, underscoring how collaborative archaeology can contribute to strengthening Indigenous rights and sustainable forms of heritage management.

Workshop

Seminar room 1

Haus der Archäologien, Bochum

28.01.2026 – 10am-4pm

Pre-Columbian mining and metallurgy in the Southern-Central Andes



Source: *Culturalis. Repositorio de la División Arqueología del Museo de la Plata.*
<https://culturalis.mlp.fcnym.unlp.edu.ar/handle/2858872547/4193>



Session 1 (morning):

- Earliest evidence of the use of metals.
- Chronology and regions.
- Case study: Northwestern Argentina.
- Local innovation and development.
- Metals and alloys employed.
- Technologies for mining, metallurgy and metalworking during pre-Columbian times and Colonial period.

Session 2 (afternoon):

- Social complexity and metals.
- Labour organization.
- Ore provenance and circulation.
- New lines of research.
- The case of the Inca State.
- Different strategies and policies.
- Local communities' responses.



Limited places: 25 participants

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Suggested readings

Abbott, M. & A. Wolfe. 2003. Intensive Pre-Incan Metallurgy Recorded by Lake Sediments from the Bolivian Andes. *Science* 301 (5641): 1893–1895. DOI: <https://doi.org/10.1126/science.1087806>

Angiorama, C. & M. F. Becerra 2017. Reverberatory Furnaces in the Puna of Jujuy, Argentina, during Colonial Times (from the End of the 16th to the Beginning of the 19th century A.D.). *Journal of Anthropological Archaeology* 48:181–192. DOI: <https://doi.org/10.1016/j.jaa.2017.07.007>

Cortes, L. & M. C. Scattolin 2017. Ancient metalworking in South America: A 3000-year-old copper mask from the Argentinian Andes. *Antiquity* 91(357): 688–700.

Cruz P., H. Lechtman & C. Rivera-Casanovas 2023. The Escaramayu Complex: A Prehispanic Metallurgical Establishment in the South Andean Altiplano (Escara, Potosi, Bolivia), Ninth to Fifteenth Centuries AD. *Latin American Antiquity* 34(4):764–782. DOI: <https://doi.org/10.1017/laq.2022.77>

Figueroa Larre, V., B. Mille, Benoît, D. Salazar, J. Berenguer, A. Menzies, mP. Sapiains, A. Cifuentes & D. Joly. 2018. A Major Prehispanic Copper Production Center identified at Collahuasi, Southern Tarapacá Altiplano (Chile). *Revista de Antropología Chilena* 50:557–575.

Figueroa Larre, V., D. Salazar, H. Salinas, P. Núñez Regueiro y G. Manríquez. 2013. Pre-hispanic mining ergology of northern Chile: an archaeological perspective. *Chungara, Revista de Antropología Chilena* 45(1): 61–81.

Garrido, F. & D. Salazar. 2017. Imperial Expansion and Local Agency: A Case Study of Labor Organization Under Inca Rule. *American Anthropologist* 119 (4): 631–644. DOI: <https://doi.org/10.1111/aman.12924>

Hein, A., G. Gluzman & V. Kilikoglou. 2018. Pre-Columbian metallurgy – Evidence of pyrotechnical ceramics from Rincón Chico, Northwestern Argentina (Andes). *Journal of Archaeological Science: Reports* 21: 1163–1170.

Lechtman, H. 2014. Andean metallurgy in prehistory. In B.W. Roberts, C. P. Thornton (eds.), *Archaeometallurgy in Global Perspective*, 361–422. Springer Science+Business Media New York. DOI: https://doi.org/10.1007/978-1-4614-9017-3_15

Macfarlane, A. & H. Lechtman 2016. Andean Ores, Bronze Artifacts, and Lead Isotopes: Constraints on Metal Sources in Their Geological Context. *Journal of Archaeological Method and Theory* 23(1): 1–72.

Plaza Calonge, T., V. Figueroa Larre & M. Martinon-Torres. 2022. Technology, life histories and circulation of gold objects during the Middle Period (AD 400–1000): A perspective from the Atacama Desert, Chile. *Archaeological and Anthropological Sciences* 14:89. DOI: <https://doi.org/10.1007/s12520-022-01549-8>

Schultze, C. & C. Stanish. 2023. Copper Metallurgy in the Andes. In E. Ben-Yosef, I. W. N. Jones (eds.), *“And in Length of Days Understanding” (Job 12:12): Essays on Archaeology in the Eastern Mediterranean and Beyond in Honor of Thomas E. Levy, Interdisciplinary Contributions to Archaeology*. 1419–1448. Springer. https://doi.org/10.1007/978-3-031-27330-8_60

Van Buren, M. & C. Cohen. 2010. Technological Changes in Silver Production after the Spanish Conquest in Porco, Bolivia. *Boletín del Museo Chileno de Arte Precolombino* 15(2):29–46. [10.4067/S0718-68942010000200003](https://doi.org/10.4067/S0718-68942010000200003)

Zori, C. 2019. Extracting Insights from Prehistoric Andean Metallurgy: Political Organization, Interregional Connections, and Ritual Meanings. *Journal of Archaeological Research* 27: 501–556. DOI: <https://doi.org/10.1007/s10814-019-09128-7>

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Ph.D. in Archaeology from the University of Buenos Aires, she is a researcher at CONICET (National Council for Scientific and Technical Research of Argentina) in the Museum of La Plata, National University of La Plata.

She is an assistant professor in the Anthropology program at the University of Buenos Aires and in the Archaeometry specialization program at the National University of La Plata.

Her research focuses on pre-Columbian and colonial mining and metallurgy in the Southern Andes. She is currently studying the use, circulation, and provenance of copper in Northwestern Argentina.

