



October 30th, 2024

Dear colleagues,

we are happy to share the 13th newsletter of our pyroarchaeology commission with you! Our first newsletter was sent out in September 2018 and this year marks the 6-year anniversary of our commission. According to the statutes of the UISPP, the tenure of the commission board is limited to 12 years with our current board now approaching half-time after putting much effort into establishing this commission and running exciting annual pyroarchaeology sessions. The next 6 years will be a transitional phase to the next board and for now we are changing the board organization with Mareike taking over the president position from Chris.

Our next commission meeting will be at the DIG meeting in Tübingen, May 21st to 24th, 2025, and our annual pyroarchaeology session will be at the EGU meeting in Vienna, April 27th to May 2nd, 2025. You can find further conference news on page 2 and publications news on pages 3 to 6.

With our best wishes

Carolina, Chris and Mareike*

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or on our UISPP commission website <https://uispp.net/en/commissions/pyroarchaeology>

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Conference News

Past

Our commission members P. Schmidt, C. Shaw, and C.E. Miller were organizing and chairing a session called **“Pyroarchaeology: fire-related engineering, environment and cultural proxies” at the 30th annual Meeting of the European Association of Archaeologists in Rome**. They had 12 wonderful presentations.

Upcoming

We are organizing a **fire session at the General Assembly of the European Geosciences Union in Vienna, Austria, April 27th to May 2nd, 2024**: “Combining geosciences and pyroarchaeology methods to study past and present fire dynamics and human fire use/interactions” organized by Mareike Stahlschmidt, Sally Hoare and Jorge Mataix-Solera. **Abstract submission deadline is January 15th, 2025**.

Our board member Chris Miller is organizing the next **Developing International Geoarchaeology meeting in Tübingen, Germany, May 21st to 24th**, and we will have **our annual commission meeting** here.

Individual Talks

Schmidt, P., 2024 - Title: *Do we need to understand the properties of tool-stones to explain raw material selection?*, International workshop: The dark side of the rock choices: non-flint registries during the Palaeolithic in Tautavel (France), 15-16/10/2024.

Schmidt, P., 2024 - Title: *Neanderthal adhesive technology and its implications*, International conference: *30th EAA Annual Meeting in Rome (Italy)*, 28-31/08/2024.

Schmidt, P., 2024 - Title: *Heat treatment and what it tells us about the Stone Age*, International conference: *International symposium on Fire in Human Evolution*, Leiden (The Netherlands), 10-11/06/2024.

Publication News

The topical collection "Archaeological Science Approaches to Pyroarchaeology" organized by our commission and edited by C. Mallol, C.E. Miller, S. Gur. Arieah and M. Stahlschmidt was finalized with 10 splendid contributions in the journal Archaeological and Anthropological Sciences: <https://link.springer.com/collections/cieagfdqfi>

In the last 6 months the following papers were published on pyroarchaeological research (not a complete list):

Álvarez-Barra, V., Maldonado, A., Eugenia de Porras, M., Nuevo-Delaunay, A., Méndez, C., 2024. Postglacial landscape dynamics and fire regimes in west Central Patagonia, Chile (44°S, 72°W): Evidence from the Cisnes River Basin. *Quat. Sci. Rev.* 332, 108655. <https://doi.org/10.1016/j.quascirev.2024.108655>

Barhoumi, C., Bliedtner, M., Zech, R., Behling, H., 2024. Holocene vegetation, fire, climate dynamics and human impact in the upper Orkhon Valley of the Khangai Mountains, Mongolia. *Quat. Sci. Rev.* 334, 108713. <https://doi.org/10.1016/j.quascirev.2024.108713>

Cywa, K., Karczewski, M., Wacnik, A., 2024. Anthracological data as evidence of cultural distinctions in wood usage by communities from the Western Baltic cultural circle in Poland. *J. Archaeol. Sci. Rep.* 60, 104849. <https://doi.org/10.1016/j.jasrep.2024.104849>

del Hierro, I., Reyes-Téllez, F., Herrera, R., Lillo, J., Ortiz-Bustos, J., Pérez-Cortes, Y., Polo-Romero, A., Viñuales-Ferreiro, G., 2024. Analyzing lime mortars from a historic construction in Magán (Toledo, Spain): Insights into mineralogy and firing temperatures. *J. Archaeol. Sci. Rep.* 60, 104812. <https://doi.org/10.1016/j.jasrep.2024.104812>

Delarue, F., Ghavidel, A., Quénéa, K., Bellot-Gurlet, L., Rocha, E., Coubray, S., Baudin, F., Sebag, D., Lemoine, M., Aubry, E., Savignac, F., Dufraisse, A., 2024. Short-term modifications in the chemical structure of wood charcoals: Implications for anthracological investigations. *J. Archaeol. Sci. Rep.* 57, 104672. <https://doi.org/10.1016/j.jasrep.2024.104672>

Despotopoulou, M., Langejans, G.H.J., Hendriks, R.W.A., Joosten, I., Nijemeisland, M., Poulis, J.A., Kozowyk, P.R.B., 2024. Testing non-destructive spectrometric methods for the identification and distinction of archaeological pine wood tar and birch bark tar. *J. Archaeol. Sci. Rep.* 56, 104571. <https://doi.org/10.1016/j.jasrep.2024.104571>

- García, P., Zaidner, Y., Nicosia, C., Shahack-Gross, R., 2025. Site Formation Processes at Tinshemet Cave, Israel: Micro-Stratigraphy, Fire Use, and Cementation. *Geoarchaeology* 40, e22023. <https://doi.org/10.1002/gea.22023>
- Hao, X., Wang, J., Pan, H., Yan, X., Chen, J., Jiang, M., 2024. Wood charcoal from the late Neolithic site of Yingpanshan, southwest China: Past vegetation and plant resources utilization. *J. Archaeol. Sci. Rep.* 57, 104655. <https://doi.org/10.1016/j.jasrep.2024.104655>
- Hebda, N.J.R., Brown, K.J., Conder, N., Walker, I.R., Hebda, R.J., 2024. Past wildfire effects on terrestrial vegetation and biogeochemistry in a drinking water supply catchment. *Quat. Sci. Rev.* 340, 108663. <https://doi.org/10.1016/j.quascirev.2024.108663>
- Herrejón Lagunilla, Á., Carrancho, Á., Villalaín, J.J., Mallol, C., Hernández, C.M., 2019. An experimental approach to the preservation potential of magnetic signatures in anthropogenic fires. *PLOS ONE* 14, e0221592. <https://doi.org/10.1371/journal.pone.0221592>
- Huisman, H.D.J., Peeters, H., de Kort, J.-W., Smits, J., 2024. Some first observations on ant-nest morphology and micromorphology, the effects of wildfires, and their implications for the understanding of archaeological features. *J. Archaeol. Sci.* 170, 106056.
- Jakobitsch, T., Angelopoulou, A., 2024. Food offerings and firewood: Integrated archaeobotanical analyses of seed/fruit and wood charcoal remains from a Hellenistic-Roman Cemetery on Tinos Island, Cyclades. *J. Archaeol. Sci. Rep.* 57, 104658. <https://doi.org/10.1016/j.jasrep.2024.104658>
- Koch, T.J., Kabaciński, J., Henry, A., Marquebielle, B., Little, A., Stacey, R., Regert, M., 2024. Chemical analyses reveal dual functionality of Early Mesolithic birch tar at Krzyż Wielkopolski (Poland). *J. Archaeol. Sci. Rep.* 57, 104591. <https://doi.org/10.1016/j.jasrep.2024.104591>
- Krikunova, A.I., Kobe, F., Long, T., Leipe, C., Gliwa, J., Shchetnikov, A.A., Olschewski, P., Hoelzmann, P., Wagner, M., Bezrukova, E.V., Tarasov, P.E., 2024. Vegetation and fire history of the Lake Baikal Region since 32 ka BP reconstructed through microcharcoal and pollen analysis of lake sediment from Cis- and Trans-Baikal. *Quat. Sci. Rev.* 340, 108867. <https://doi.org/10.1016/j.quascirev.2024.108867>

- Larsen, J.K., Nielsen, N.H., Olsen, J., 2024. Fuel use in medieval iron production in central Jutland, Denmark. *Archaeol. Anthropol. Sci.* 16, 177. <https://doi.org/10.1007/s12520-024-02087-1>
- Liu, N., Wu, M., Su, R., Liu, Y., Wang, Q., 2023. A new FTIR spectrophotometric method for estimating the firing temperature of ceramic bronze-casting moulds from the Houma foundry, China. *J. Archaeol. Sci. Rep.* 52, 104256. <https://doi.org/10.1016/j.jasrep.2023.104256>
- Mosher, S.G., Power, M.J., Quick, L.J., Haberzettl, T., Kasper, T., Kirsten, K.L., Braun, D.R., Faith, J.T., 2024. Examining the effects of climate change and human impacts on a high-resolution, late Holocene paleofire record from South Africa's winter rainfall zone. *Quat. Sci. Adv.* 14, 100194. <https://doi.org/10.1016/j.qsa.2024.100194>
- Pérez-Jordà, G., Carrión Marco, Y., Esquembre, M.A., 2024. Gone with the fire. The role of charred plant remains in inhumation and cremation rituals in the Phoenician necropolis of Puig des Molins (Ibiza, Balearic Islands). *J. Archaeol. Sci. Rep.* 57, 104688. <https://doi.org/10.1016/j.jasrep.2024.104688>
- Schmidt, P., Charrie-Duhaut, A., February, E., Wadley, L., 2024. Adhesive technology based on biomass tar documents engineering capabilities in the African Middle Stone Age, *Journal of Human Evolution*, 194, Article number: 103578.
- Shantry, K., 2024. Thermally-Shocked and fire-cracked Rock: Defining attributes of archaeological boiling stones. *J. Archaeol. Sci. Rep.* 59, 104796. <https://doi.org/10.1016/j.jasrep.2024.104796>
- Sorensen, A.C., 2024. Lucky strike: testing the utility of manganese dioxide powder in Neandertal percussive fire making. *Archaeol. Anthropol. Sci.* 16, 134. <https://doi.org/10.1007/s12520-024-02047-9>
- Tomé, L., Iriarte, E., Blanco-González, A., Fernández-Palacios, E., Martín-Seijo, M., Carrancho, Á., Herrera-Herrera, A.V., Mallol, C., 2024. Fire use and waste management in an Iberian Iron Age village: Geoarchaeological insights into midden formation processes. *J. Archaeol. Sci. Rep.* 59, 104773. <https://doi.org/10.1016/j.jasrep.2024.104773>
- Vachula, R.S., Balascio, N.L., Karmalkar, A.V., Stockton, J., Landolt, B., 2024. Central Appalachian paleofire reconstruction reveals fire-climate-vegetation dynamics across the

last glacial-interglacial transition. *Quat. Sci. Rev.* 338, 108805.

<https://doi.org/10.1016/j.quascirev.2024.108805>

van der Horst, A., Tinner, W., Ezquerro, F.J., Gobet, E., Lotter, A.F., Morellón, M., Muñoz Sobrino, C., Niffenegger, C., Schwörer, C., Szidat, S., Morales-Molino, C., 2024. Late-glacial and Holocene shifts in the mountain landscapes of the Cantabrian range (northern Spain) in response to changing climate, fire occurrence and land use. *Quat. Sci. Rev.* 342, 108899. <https://doi.org/10.1016/j.quascirev.2024.108899>

Xhaufclair, H., Jago-on, S.C., Arzarello, M., Choa, O., Sémah, A.-M., Gallet, X., Schmidt, P., Kerfant, C., Dizon, E., Sémah, F., 2024, Earliest evidence in the Philippines of life under the canopy: plant technology and use of forest resources by our species, *Journal of Paleolithic Archaeology*, 7, Article number: 22

Zheng, Y., Yang, Q., Zeng, Q., Li, H., Zhang, Y., Shi, L., Ji, X., Deng, C., Li, X., Petraglia, M., Zheng, H., 2024. Magnetic detection of anthropogenic fires at Xiaodong Rockshelter, Southwest China. *J. Archaeol. Sci.* 171, 106086.

<https://doi.org/10.1016/j.jas.2024.106086>