



April 30th, 2022

Dear colleagues,

Welcome to the 8th Newsletter of the Pyroarchaeology Commission. You can find conference news on page 2 and publications news on pages 2 to 6.

We will hold our annual business meeting at the EAA meeting later this year and hope to see many of you there!

With our best wishes

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Conference News

The last two **Virtual Micromorphology** meetings last November and March/April both included a microscopy live and discussion session on combustion features and heated materials.

At the annual meeting of the **Society for American Archaeology** this spring in Chicago, U.S.A., S. McPherron, **V. Aldeias**, **P. Goldberg**, D. Olszewski, **D. Sandgathe** presented on “An excavation methodology for the archaeological sciences: a case study in Neandertal use of fire” on their fantastic block excavations.

Also this spring, **G. Gallo and M.C. Stahlschmidt** presented on “Long durations and low temperatures: detection of prolonged heating in experimentally burnt bone exposed to air” at the annual meeting of the **Paleoanthropology Society** in Denver, U.S.A..

At this year’s **Hugo-Obermaier-Meeting** in Berlin this April, D. Marcazzan, **C.E. Miller**, **B. Ligouis**, R. Duches, N.J. Conard and M. Peresani presented on “Not only fire: a microcontextual investigation of combustion features at Fumane Cave (IT)” and A. Agam, I. Pinkas, M. Hattermann, J. Richter and T. Uthmeier presented on “Possible Flint Heat Treatment at Late Neanderthal Site Sesselfelsgrötte (Germany)”.

The **annual meeting of the European Association of Archaeologists** is happening later this year, **August 31st to September 3rd, 2022, in Budapest** and our Pyroarchaeology Commission is organizing session **#345** “Let it burn! Experimental and Ethnoarchaeological Approaches in Pyroarchaeology” with 19 contributions. Furthermore, our commission member **Ségolène Vandavelde** is organizing session **#198** “From Fire to Light” and we will hold our annual business meeting in association with this meeting.

The **next meeting of the UISPP** will take place in **Timisoara, Romania**, and our commission is planning to propose two sessions, one general and one specialized session. Suggestions on the latter are very welcome.

Publication News

Our commission is organizing a special issue on the virtual pyroarchaeology session at last year's UISPP meeting with 11 contributions so far.

Since the last newsletter the following papers were published on pyroarchaeological research (not a complete list):

- Abd El-Rahman, Y., Serneels, V., 2022. Iron production in Ptolemaic Egypt: From the Abu Gerida specular hematite mines to the Hamama smelting workshop. *Geoarchaeology* 37, 245–266. <https://doi.org/10.1002/gea.21884>
- Abdolazadeh, A., McPherron, S.P., Sandgathe, D.M., Schurr, T.G., Olszewski, D.I., Dibble, H.L., 2022. Investigating variability in the frequency of fire use in the archaeological record of Late Pleistocene Europe. *Archaeol. Anthropol. Sci.* 14, 62. <https://doi.org/10.1007/s12520-022-01526-1>
- Allué, E., Zaidner, Y., 2022. The charcoal assemblage from Neshar Ramla, Israel: A contribution to the paleo-environmental dataset from Marine Isotope Stage (MIS) 5 in the Levant. *Quat. Int., Technological Organization, Mobility, and Behavior at the Middle Paleolithic Site of Neshar Ramla* 624, 117–127. <https://doi.org/10.1016/j.quaint.2021.04.025>
- Chen, A., Yang, L., Kang, H., Gao, Y., Xie, Z., 2022. Southern hemisphere fire history since the late glacial, reconstructed from an Antarctic sediment core. *Quat. Sci. Rev.* 276, 107300. <https://doi.org/10.1016/j.quascirev.2021.107300>
- Del Valle, H., Cáceres, I., Tornero, C., Burguet-Coca, A., Moclán, A., Vergès, J.M., 2022. ATR-FTIR to distinguish Holocene fumier facies. A perspective from bone diagenesis at El Mirador cave (Sierra de Atapuerca, Spain). *J. Archaeol. Sci.* 141, 105582. <https://doi.org/10.1016/j.jas.2022.105582>
- Evans, M., Faulkner, P., Asmussen, B., 2022. Investigating intentionality of burning through macroscopic taphonomy in complex legacy funerary assemblages: Opportunities and challenges. *J. Archaeol. Sci. Rep.* 41, 103243. <https://doi.org/10.1016/j.jasrep.2021.103243>
- Falkenberg, J., Mutterlose, J., 2022. Towards a better understanding of historic mortar production—burning experiments on calcareous nannofossils. *Archaeol. Anthropol. Sci.* 14, 66. <https://doi.org/10.1007/s12520-022-01535-0>

- Ferro-Vázquez, C., Mallol, C., Aldeias, V., 2022. Simply red? A systematic colour-based method for identifying archaeological fires. *Geoarchaeology* 37, 284–303.
<https://doi.org/10.1002/gea.21886>
- Finch, J.M., Hill, T.R., Meadows, M.E., Lodder, J., Bodmann, L., 2022. Fire and montane vegetation dynamics through successive phases of human occupation in the northern Drakensberg, South Africa. *Quat. Int., Past Environments and Human Lifeways of Lesotho and the Wider Maloti-Drakensberg Region of Southern Africa* 611–612, 66–76.
<https://doi.org/10.1016/j.quaint.2021.01.026>
- Friesem, D.E., Teutsch, N., Weinstein-Evron, M., Shimelmitz, R., Shahack-Gross, R., 2021. Identification of fresh and burnt bat guano and pigeon droppings in Eastern Mediterranean karstic cave sites based on micromorphological and chemical characteristics. *Quat. Sci. Rev.* 274, 107238.
<https://doi.org/10.1016/j.quascirev.2021.107238>
- Goguitchaichvili, A., Ortega, V., Torres, G., Archer, J., Cejudo, R., Kravchinsky, V., Arreola Romero, K., Morales, J., 2022. Refining the absolute chronology of Teotihuacan (Mesoamerica): New archaeomagnetic datings of fire footprints. *J. Archaeol. Sci. Rep.* 42, 103363. <https://doi.org/10.1016/j.jasrep.2022.103363>
- House, A., Bamford, M.K., Chikumbirike, J., 2022. Charcoal from Holocene deposits at Wonderwerk Cave, South Africa: A source of palaeoclimate information. *Quat. Int., Quaternary Environments and Archaeology of the Northern Cape (South Africa)* 614, 73–83. <https://doi.org/10.1016/j.quaint.2020.10.039>
- Jacobs, I., Bayern, A.M.P. von, Osvath, M., 2021. Tools and food on heat lamps: pyrocognitive sparks in New Caledonian crows? *Behaviour* 1, 1–12. <https://doi.org/10.1163/1568539X-bja10138>
- Karp, A.T., Faith, J.T., Marlon, J.R., Staver, A.C., 2021. Global response of fire activity to late Quaternary grazer extinctions. *Science* 374, 1145–1148.
<https://doi.org/10.1126/science.abj1580>
- Lennox, S., Wadley, L., 2022. Middle Stone Age wood use in Rose Cottage Cave South Africa: Evidence from charcoal identifications. *Quat. Int., Past Environments and Human Lifeways of Lesotho and the Wider Maloti-Drakensberg Region of Southern Africa* 611–612, 102–114. <https://doi.org/10.1016/j.quaint.2020.09.041>

- Lisetskii, F.N., Stolba, V.F., 2022. Archaeological ash deposits and soils formed on ash in the south of the East European Plain. *Quat. Int., Geochemical and Physical Expressions of Soils in Time and Space: Basic Research and Use of Soils for Paleoenvironmental Reconstruction* 618, 14–23. <https://doi.org/10.1016/j.quaint.2020.11.030>
- Marquer, L., Otto, T., Arous, E.B., Stoetzel, E., Campmas, E., Zazzo, A., Tombret, O., Seim, A., Kofler, W., Falguères, C., El Hajraoui, M.A., Nespoulet, R., 2022. The first use of olives in Africa around 100,000 years ago. *Nat. Plants* 8, 204–208. <https://doi.org/10.1038/s41477-022-01109-x>
- McDonough, L.K., Treble, P.C., Baker, A., Borsato, A., Frisia, S., Nagra, G., Coleborn, K., Gagan, M.K., Zhao, J., Paterson, D., 2022. Past fires and post-fire impacts reconstructed from a southwest Australian stalagmite. *Geochim. Cosmochim. Acta* 325, 258–277. <https://doi.org/10.1016/j.gca.2022.03.020>
- Murray, J.K., Oestmo, S., Zipkin, A.M., 2022. Portable, non-destructive colorimetry and visible reflectance spectroscopy paired with machine learning can classify experimentally heat-treated silcrete from three South African sources. *PLOS ONE* 17, e0266389. <https://doi.org/10.1371/journal.pone.0266389>
- Pietraszek, A.V., Zaidner, Y., Shahack-Gross, R., 2022. The distribution and treatment of fire remains across Unit V of the Middle Paleolithic open-air site of Neshar Ramla, Israel. *Quat. Int., Technological Organization, Mobility, and Behavior at the Middle Paleolithic Site of Neshar Ramla* 624, 107–116. <https://doi.org/10.1016/j.quaint.2021.03.027>
- Sánchez-Morales, M., Pèlachs, A., García-Codron, J.C., Carracedo, V., Pérez-Obiol, R., 2022. Landscape dynamics and fire regime since 17,550 cal yr BP in the Cantabrian region (La Molina peat bog, Puente Viesgo, Spain). *Quat. Sci. Rev.* 278, 107373. <https://doi.org/10.1016/j.quascirev.2022.107373>
- Slimak, L., Zanolli, C., Higham, T., Frouin, M., Schwenninger, J.-L., Arnold, L.J., Demuro, M., Douka, K., Mercier, N., Guérin, G., Valladas, H., Yvorra, P., Giraud, Y., Seguin-Orlando, A., Orlando, L., Lewis, J.E., Muth, X., Camus, H., Vandavelde, S., Buckley, M., Mallol, C., Stringer, C., Metz, L., n.d. Modern human incursion into Neanderthal territories 54,000 years ago at Mandrin, France. *Sci. Adv.* 8, eabj9496. <https://doi.org/10.1126/sciadv.abj9496>

Reported on in The Conversations:

<https://theconversation.com/new-research-suggests-modern-humans-lived-in-europe-10-000-years-earlier-than-previously-thought-in-neanderthal-territories-176648>

Stepanov, I.S., Sauder, L., Keen, J., Workman, V., Eliyahu-Behar, A., 2022. By the hand of the smelter: tracing the impact of decision-making in bloomery iron smelting. *Archaeol. Anthropol. Sci.* 14, 80. <https://doi.org/10.1007/s12520-022-01516-3>

Vachula, R.S., Karp, A.T., Denis, E.H., Balascio, N.L., Canuel, E.A., Huang, Y., 2022a. Spatially calibrating polycyclic aromatic hydrocarbons (PAHs) as proxies of area burned by vegetation fires: Insights from comparisons of historical data and sedimentary PAH fluxes. *Palaeogeogr. Palaeoclimatol. Palaeoecol.* 596, 110995. <https://doi.org/10.1016/j.palaeo.2022.110995>

Vachula, R.S., Liang, J., Sae-Lim, J., Xie, H., 2022b. Ignition frequency and climate controlled Alaskan tundra fires during the Common Era. *Quat. Sci. Rev.* 280, 107418. <https://doi.org/10.1016/j.quascirev.2022.107418>

Yamamoto, M., Wang, F., Irino, T., Yamada, K., Haraguchi, T., Nakamura, H., Gotanda, K., Yonenobu, H., Leipe, C., Chen, X.-Y., Tarasov, P.E., 2022. Environmental evolution and fire history of Rebun Island (Northern Japan) during the past 17,000 years based on biomarkers and pyrogenic compound records from Lake Kushu. *Quat. Int., Holocene Environments, Human Subsistence and Adaptation in Northern and Eastern Eurasia* 623, 8–18. <https://doi.org/10.1016/j.quaint.2021.09.015>