

Dietary shift of Late Pleistocene bears from the Romanian Carpathians as a response to climate variability (PN-III-P1-1.1-PD-2021-0262)

<https://www.paleotrace.com/>

● Phase 1 - Assessment of work methodology, gathering samples from field sites and/or paleontological collections

► The first phase of the project (*1 April -31 Decembre 2022*) covered the prioritization of the research methodology (*Fig. 1 -A*) and extensive fieldwork campaigns in Romanian Carpathians in several key-sites (*Fig. 1-B*), additionally selecting fossil remains for different paleontological collections. The project workflow was implemented within four activities and covering three main objectives by sampling more than ~ 60 fossil remains (*Ursus spelaeus*- sensu lato and *Ursus arctos*) from several sites and five speleothems were selected for U/Th dating and microbiological analysis.

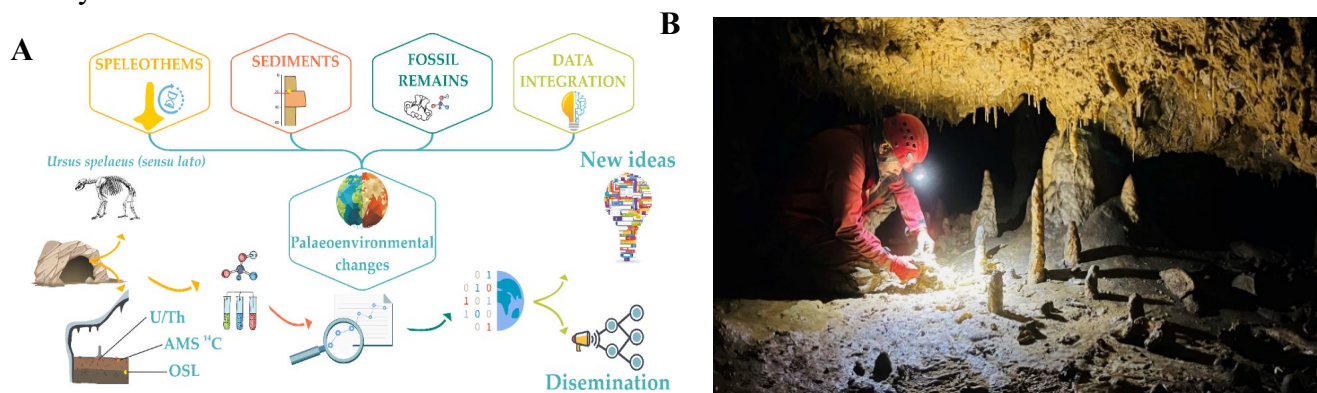


Figure 1. **A.** The methodological approach; **B.** Sampling fossil remains from cave sites.

► During this period, we aimed to achieve the following deliverables: (i) *sampling fossil remains for isotope analyses and radiocarbon dating*; (ii) *recording, measuring, and inserting the fossil remains in the database*; (iii) *dissemination of the preliminary results at international conferences*.

► The fossil remains for the first phase of the project were sampled from caves from Carpathians Mountains (*Fig. 2*), especially from Muierilor (Southern Carpathians) and Urșilor (Apuseni Mountains) caves. We selected mostly mandibles for the isotope analyses ($\delta^{13}C$, $\delta^{15}N$ and $\delta^{18}O$) and radiocarbon dating (*AMS ¹⁴C*).

► The speleothems were sampled from Muierilor Cave-Southern Carpathians (for microbiological and chemical analysis) and from Tăușoare (Rodnei Mountains, Eastern Carpathians), Ferice and Fața Apei (Apuseni Mountains) for microbiological interdisciplinary analysis (*Fig. 2*).

- ▶ The preliminary results were shared through two presentations at international scientific conferences, and two scientific papers are currently being prepared for publication.
- ▶ Participation at the archaeological excavation from Hayonim Cave (Israel; Fig. 3).

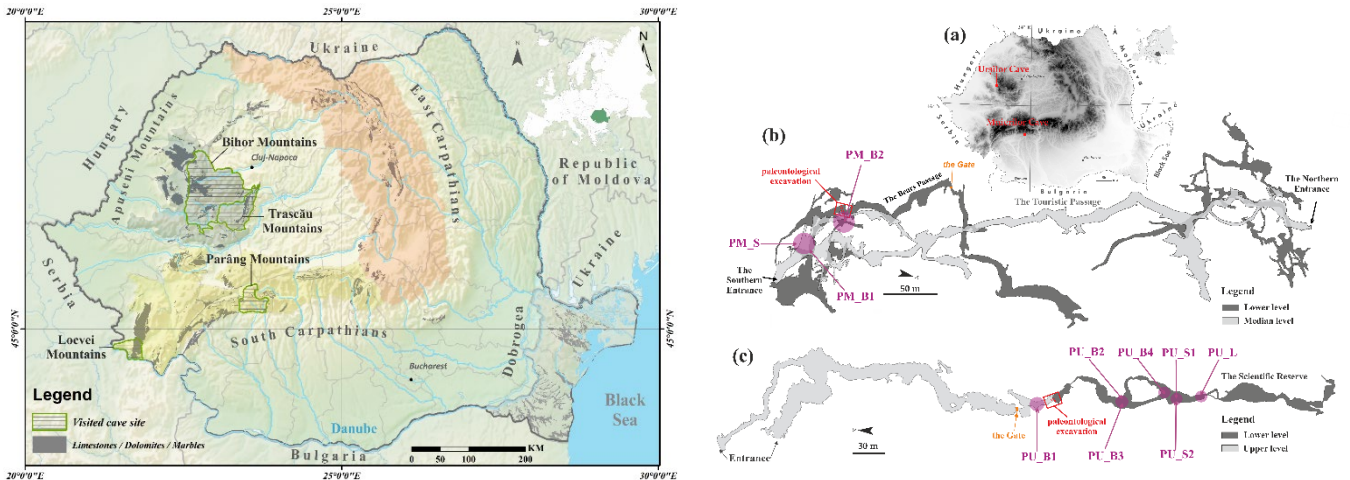


Figure 2. A. Field work campaigns in Bihor and Parâng Mountains; **B.** Sampling location in Muierilor Cave



Figure 3. A. Participation at the archaeological excavation from Hayonim Cave (Israel); **B.** Presenting the preliminary results of the *PaleoTrace* project at the workshop held within the Hayonim excavation.