



LATE PLEISTOCENE ARTISTS IN CAVES

The figurative portable art of Grotta Romanelli (Southern Italy)

Dario SIGARI^{1,2,*}, Marco BRANDANO³, Jacopo CONTI⁴, Luca FORTI^{5,6}, Giorgio LAI⁷, Ilaria MAZZINI⁸, Beniamino MECOZZI³, Pierluigi PIERUCCINI⁹, Raffaele SARDELLA³

¹CNRS - UMR 5608 TRACES - Université Toulouse Jean Jaurès, Maison de la Recherche, 5 Allée Antonio Machado 31058 Toulouse; ²Institute of Heritage Science (ISPC) National Research Council of Italy (CNR) - Area della Ricerca di Roma 1, Via Salaria km 29,300, 00015, Montelibretti (Roma), Italy; ³Department of Earth Science, Sapienza University of Rome - Piazzale Aldo Moro 5, 00185, Roma, Italy; ⁴Polo Museale, Sapienza University of Rome - Piazzale Aldo Moro 5, 00185, Roma, Italy; ⁵Department of Earth Science "Ardito Desio", University of Milan - Via Luigi Mangiagalli 34, 20133, Milano, Italy; ⁶Institute of Geosciences and Earth Resources National Research Council of Italy (CNR) - Via G. Moruzzi 1, 56124, Pisa, Italy; ⁷Department of Life and Environmental Sciences, University of Cagliari- Viale S. Ignazio da Laconi, 13, 09123 Cagliari CA, Italy; ⁸Institute of Environmental Geology and Geoengineering (IGAG) National Research Council of Italy (CNR) - Area della Ricerca di Roma 1, Via Salaria km 29,300, 00015, Montelibretti (Roma), Italy; ⁹Department of Earth Science, University of Turin - Via Valperga Caluso 35, 10125, Torino, Italy



Introduction

Grotta Romanelli (GR) (Castro, LE) has yielded the most consistent heritage of Palaeolithic portable art in Italy. The finds that fall into this class of objects number over 200 and express a wide variability not only in terms of the type of support (rock and bone), but even thematically (zoomorphic, geometric, anthropomorphic figures), stylistically and technologically (scratching with different tools and or points, and painting). The intense artistic activity, between the end of the Pleistocene and the beginning of the Holocene, in this cave has been known since the first investigations, in the early 20th century. The impressive record of portable and parietal art made immediately GR a reference site in the Palaeolithic studies, together with some Spanish and French caves (Parpallò, La Pileta, Baume-Latrone and Ebbou). So, it was proposed the existence of a "Mediterranean artistic province" (Graziosi, 1932), within which GR, thanks to its geographical location, acted as a connecting point between different artistic trends. However, recent studies have shown that this paradigm is now largely outdated (Sigari *et al.*, 2021). New research activities focused on the artistic evidence of this site, made it urgent to systematically review the symbolic production of GR, which had not been the subject of new critical studies for over fifty years. This urgency materialised in the research project "Dec.O. - Decorated Objects of Romanelli Cave, a key site of the late Pleistocene-early Holocene Mediterranean area", which aims to investigate the dynamics in the imagery on portable art and rock art in deep-time and the past socio-cultural influences and borders between western and southern Europe and the regions overlooking the Mediterranean Sea. In this work we present the first results about the figurative portable art objects of GR.

How to represent the figurative themes? A technical question

The review of the decorated objects of GR confirmed that the most used technique was the engraving. However, if it was thought that only one slab was painted, the identification of red traces on some finds, invited to perform further (XRF, RAMAN and SEM-EDS) analysis that confirmed the presence of red pigment too. So, on both GRM1020 and 23 (Fig. 5), red pigment was identified suggesting that these two objects were engraved and painted.

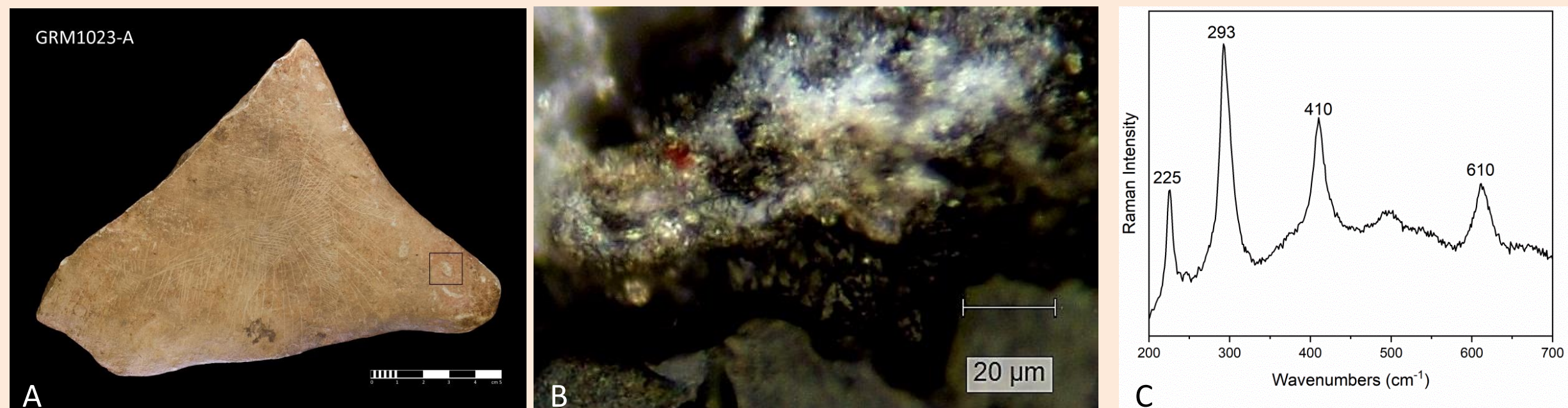


Fig. 5 A) GRM1023; B) Optical microscope image of GRM1023. The Raman spectrum has been acquired on the red particle; C) Raman spectroscopy spectrum acquired on the red particles showing the characteristic Raman bands of red ochre.

The support characterisation

A first lithotypological classification of the rock fragments was performed. This is based on parameters derived from macroscopic observation of several limestone lithic tools and portable art objects. The main elements identified were then correlated with the lithostratigraphic units taken from geological sheet 1:50.000 Capo S.M. Leuca. The selection of the raw material highlights a variability: **G1**: Castro limestone, facies of fore and backreef. Light brown packstone to grainstone with fragments of corals and macro foraminifer (OLIGOCENE; Middle Chattian ca 28-23 Ma); **G2**: Ciolo limestone, slope facies with glauconitic plague. Main colour green and light green (UPPER CRETACEOUS; Maastrichtian ca 72 to 66 Ma); **G3**: Ciolo limestone, calcarenite and calcirudite mud supported (micritic matrix) with rudist fragments. Light brown colour. Slope facies (UPPER CRETACEOUS; Maastrichtian ca 72 to 66 Ma); **G4**: Castro limestone, glauconitic plague with dark green colour and planar lamination (OLIGOCENE; Middle Chattian ca 28-23 Ma); **G5**: reddish hardground located between Porto Badisco and Andrano limestone and the Novaglie formation (UPPER CRETACEOUS; Maastrichtian ca 72 to 66 Ma).



Fig. 6 A detail photo of a G5 limestone fragment.

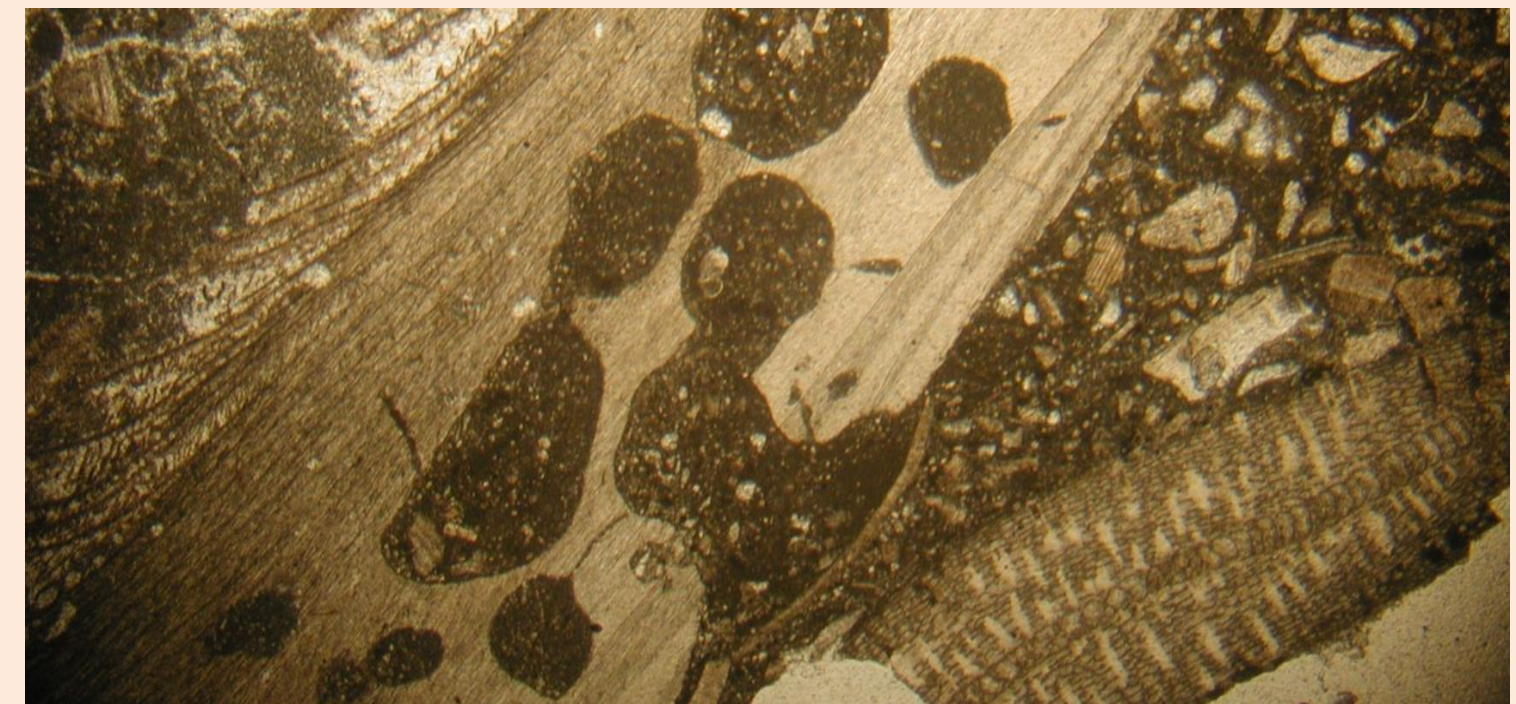


Fig. 7 Thin section of the G2.

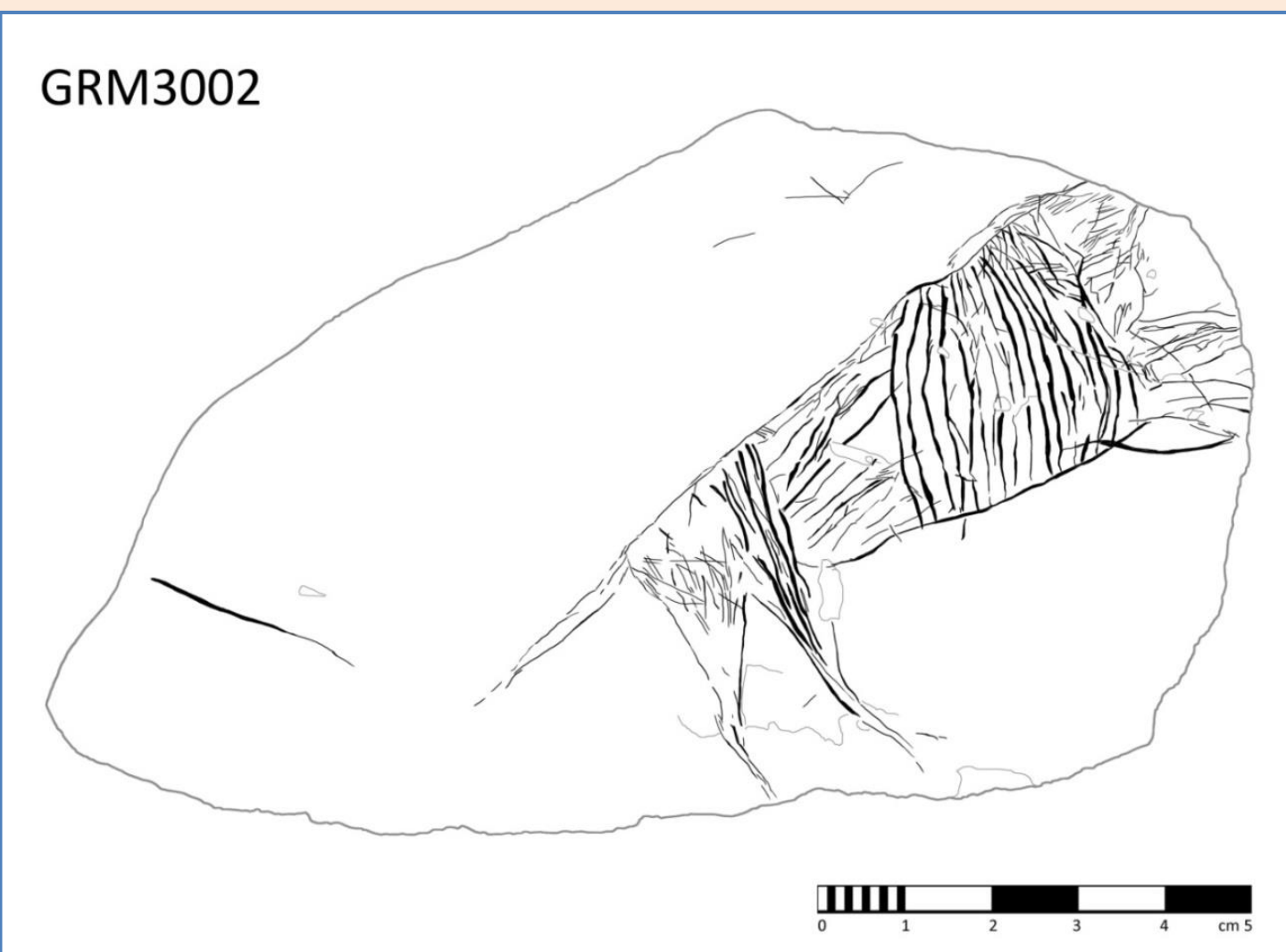


Fig. 1 A zoomorphic figure of difficult interpretation, incised on the rock fragment GRM3002 (tracing: D. Sigari).

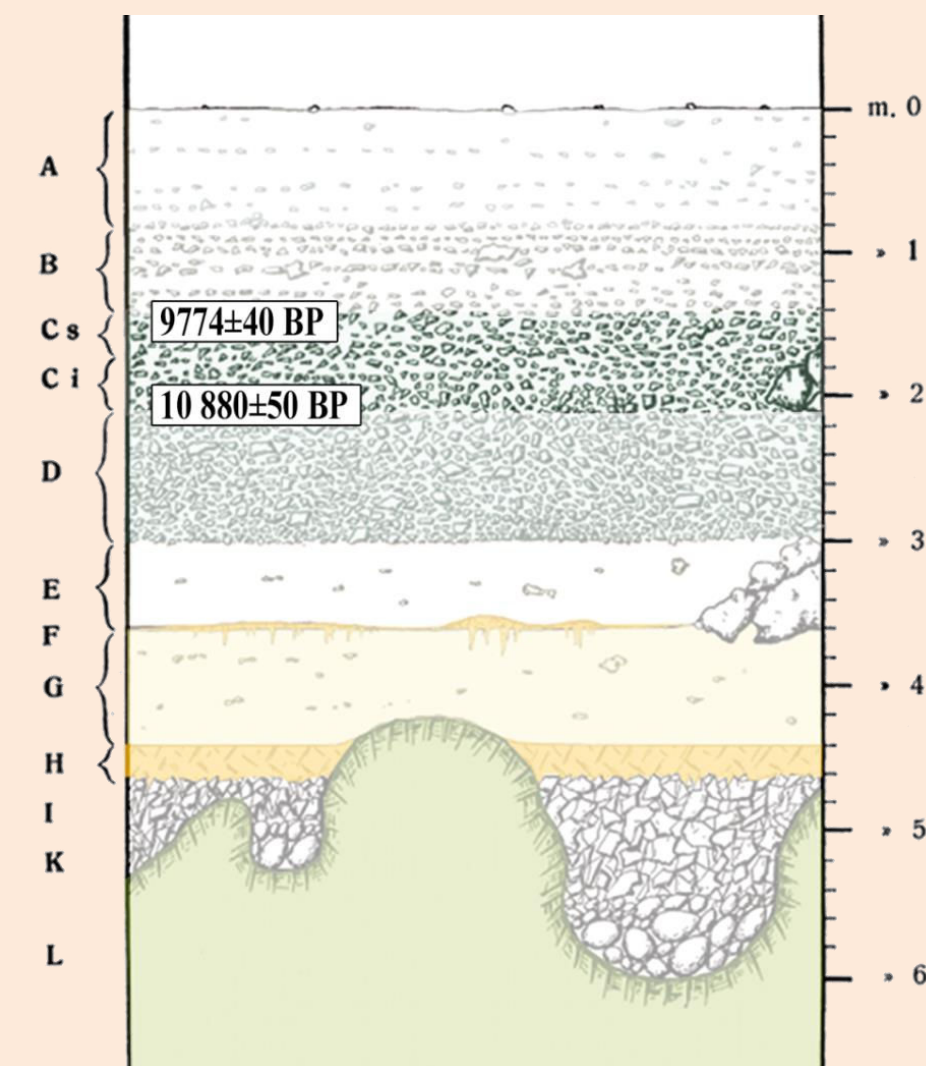


Fig. 2 The stratigraphic sequence according to Blanc (1928) highlighting the C layer and its chronological limits.

Method and materials

The review of the Romanelli portable art led to fully record 180 decorated pieces, among which only 8 (GRM1011,18,20,23,24 and GRM3001,2) have figurative motifs, which can be attributed to two main categories: zoomorph (9), anthropomorph (1). Specifically, the represented subjects are: bovid (2), unidentifiable animals (2) (Fig. 1), horse (1), feline (1), boar (1), deer (1), wolf (1), phallus (1), and are differently grouped. A wolf decorates GRM 1011, a composition of a deer and horse characterises a face of GRM1018, whose opposite side has bovid. A second bovid figure is on GRM3001. The isolated unidentifiable animals are on GRM3002, and on GRM1023, which is further decorated by the body of a feline. Last, on GRM1020 and 24, two more figurative themes are recognised, respectively the phallus and the boar.

All of the pieces were found during the old excavations and the stratigraphic position is known only for four of them: GRM1011 and GRM1020 were unearthed within the C1 layer, and GRM1023,24 within the C2 layer, according to the stratigraphic system elaborated by Blanc (1928) (Fig. 2). All the others finds are from disturbed layers or clandestine excavations.

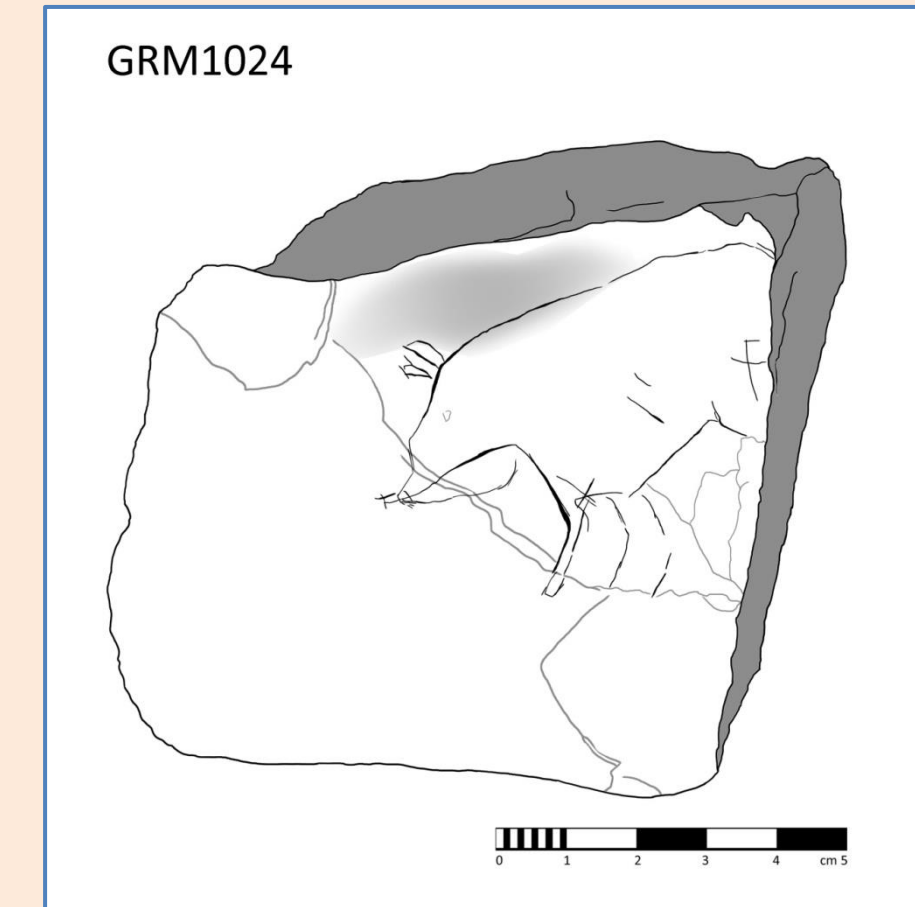


Fig. 3 Tracing of GR1024 portraying a boar incised on a limestone fragment (tracing: D. Sigari).



Fig. 4 Comparisons led to suggest a interpretation of the incised animal on GRM1011 as a wolf (tracing: D. Sigari).

The chronocultural issue and the palaeoenvironmental context

Considering the chronological reference, the here discussed objects were found during a cold phase, corresponding to the Younger Dryas. At this time the vegetation surrounding the cave was characterised by the presence of *Artemisia*, abundance of the pioneer *Juniperus* and the presence of other arboreal plants such as *Tamarix* and *Quercus* (Russo Ermolli *et al.* 2021). The mammal assemblage confirms the existence of an open environment with sparse forest, lived by animals, whose strong symbolic is well witnessed by the artistic production: *Cervus elaphus*, *Bos primigenius*, *Equus hydruntinus*, *Sus scrofa* (Fig. 3), *Vulpes vulpes*, *Canis lupus* (Fig. 4), *Meles meles*, *Felis silvestris* and *Lynx* sp.

Is it a matter of style?

The figurative themes were differently portrayed. Some are done by remarking only the main outline, other have the body filled with groups of parallel lines or by reticulate motifs. Moreover, some figures were probably painted too. A variety in making the figures can be noted in the attention paid to the different parts of the body, highlighting variability in the style of figures, similarly to what recognised in numerous late Pleistocene sites in Europe.

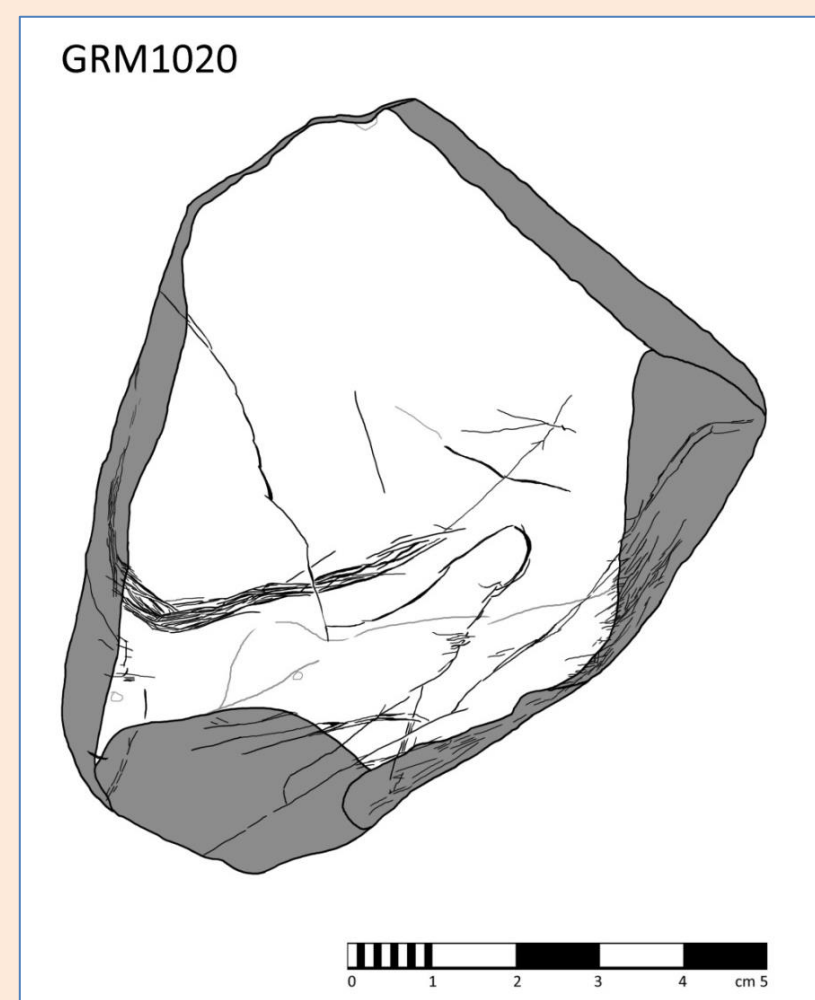


Fig. 8 A phallus characterises the GRM1020 stone fragment. Traces of ochre were found on the surface of the fragment (tracing: D. Sigari).

Concluding remarks

The GR art shows a complexity that is still far to be fully understood. However, the systematic review of the portable art objects is highlighting a complexity that places GR in the middle of a wider cultural and artistic phenomenon at the end of the Pleistocene, with potential connections at large scale too, questioning if the symbols, and so the ideas, or the people moved over a long distances network system. To further support and argument these conclusion the application of statistical analysis (PCA, MCA and MVA) is considered as a next step so to validate or not the obtained results.

Acknowledgments

The work is funded by the Fyssen Foundation, TRACES lab and the Grandi Scavi Sapienza 2015 - 2022. We are sincerely grateful to all the colleagues of the Grotta Romanelli team, and the supporting institutions: SABAP Brindisi e Lecce, the municipality of Castro, Museo Archeologico di Castro, Museo delle Civiltà, Museo Archeologico di Taranto, ISIPIU, RAMAN Lab of the ISPC-CNR in Milano.

References

- Blanc, G.A., 1928. Grotta Romanelli. II. Dati ecologici e paleontologici. *Atti Della I Riunione Dell'Istituto Italiano Di Paleontologia Umana. 21-24 Aprile 1927, Firenze*. Istituto Italiano di Paleontologia Umana, Firenze, pp. 365–518.
- Graziosi, P., 1932. Nuovi elementi per lo studio dei graffiti di Grotta Romanelli. Le incisioni della Cova del Parpallò (Valenza). *Arch. per l'Antropologia e l'Etnologia* LXII, 142–146.
- Russo Ermolli, E. *et al.*, 2021. The pollen record from Grotta Romanelli (Apulia, Italy): New insight for the Late Pleistocene Mediterranean vegetation and plant use. *Rev. Palaeobot. Palynol.* 297, 104577.
- Sigari, D. *et al.*, 2021. Birds and bovids: new parietal engravings at the Romanelli Cave, Apulia. *Antiquity* 95, 1387–1404.