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Between hearths and volcanic ash: The SU 13 palimpsest of the Oscurusciuto rock shelter (Ginosa e Southern Italy): Analytical and interpretative questions

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Table. S1: RMUs description. Ref.n.= number of refitted pieces; $\mathrm{C}=$ cortical flakes; $\mathrm{M}=$ management of convexities flakes; $\mathrm{P}=$ aims of the reduction sequences (target objects); $\mathrm{A}=$ Phase of abandon which means cores; $\mathrm{I}=$ indeterminate items; TOT= total number of pieces.

| RMU | Ref. N. | Description of raw material |  |  |  |  | Technological composition |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lithological Class | Cortex <br> Thickness | Cortex <br> Texture | Cortex Color | Surface Color | C | M | P | T | A | I | E |
| 1 | 7 | Fine chert | Thin | Rough | Grey | Light grey | 3 | 18 | 6 | 0 | 1 | 30 | 58 |
| 2 | 0 | Fine chert | 1 | 1 | 1 | Pinkish grey | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| 9 | 0 | Fine chert | Thick | Rough | Grey | Grey | 1 | 8 | 1 | 0 | 0 | 1 | 11 |
| 12 | 0 | Middle chert | Thin | Smooth | Whitish | Grey | 5 | 23 | 4 | 0 | 1 | 9 | 42 |
| 18 | 2 | Middle chert | 1 | 1 | 1 | Grey | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 31 | 0 | Middle chert | Thin | Smooth | Brown | Light green | 1 | 16 | 2 | 0 | 1 | 5 | 25 |
| 41 | 0 | Middle siliceous limestone | 1 | 1 | 1 | Yellow | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 53 | 0 | Middle chert | Thick | Smooth | Yellow | Yellow green | 0 | 11 | 3 | 0 | 0 | 4 | 18 |
| 55 | 2 | Fine quartzarenite | Thin | Smooth | Beige | Dark grey greenish | 3 | 17 | 9 | 1 | 0 | 8 | 38 |
| 56 | 2 | Middle quartzarenite | Thin | Smooth | Greenish brown | Olive green | 3 | 37 | 0 | 0 | 0 | 22 | 62 |
| 64 | 0 | Middle quartzarenite | Thin | Smooth | Brownish | Pinkish grey | 0 | 11 | 3 | 3 | 0 | 5 | 22 |
| 66 | 0 | Coarse chert | Thin | Smooth | Beige | Brown | 1 | 3 | 5 | 0 | 0 | 5 | 14 |
| 91 | 2 | Middle siliceous limestone | Thin | Rough | Brown | Dark olive green | 3 | 4 | 1 | 0 | 0 | 2 | 10 |
| 96 | 2 | Middle siliceous limestone | Thin | Smooth | Olive green | Olive green | 2 | 5 | 3 | 0 | 0 | 3 | 13 |
| 132 | 0 | Fine jasper | Thin | Rough | Greenish | Green | 1 | 24 | 3 | 0 | 0 | 13 | 41 |
| 134 | 0 | Fine jasper | Thin | Rough | Green | Green | 1 | 15 | 1 | 0 | 0 | 15 | 32 |
| 136 | 0 | Fine jasper | Thin | Rough | Bluish green | Bluish grey | 2 | 2 | 2 | 0 | 0 | 4 | 10 |
| 137 | 0 | Fine jasper | Thin | Smooth | Reddish grey blue | Black brown green | 5 | 19 | 2 | 0 | 0 | 10 | 36 |
| 139 | 0 | Fine jasper | Thin | Rough | Yellow green | Black green red | 0 | 9 | 2 | 0 | 0 | 3 | 14 |
| 143 | 0 | Fine jasper | Thin | Smooth | Yellow orange | Greenish yellow | 5 | 15 | 1 | 0 | 0 | 7 | 28 |
| 146 | 2 | Middle siliceous limestone | Thin | Smooth | Light brown green | Greenish grey reddish brown | 1 | 8 | 4 | 0 | 0 | 2 | 15 |
| 161 | 0 | Fine jasper | Thin | Smooth | Brown | Brown | 1 | 11 | 3 | 0 | 0 | 3 | 18 |
| 177 | 4 | Fine jasper | Thin | Smooth | Brown | Reddish brown | 9 | 8 | 5 | 0 | 0 | 9 | 31 |
| 193 | 2 | Middle siliceous limestone | Thin | Smooth | Beige | Black striped dark green | 1 | 23 | 3 | 1 | 0 | 17 | 45 |
| 197 | 0 | Fine jasper | Thin | Smooth | Light green | Black striped green | 3 | 11 | 0 | 0 | 0 | 19 | 33 |
| 255 | 0 | Middle siliceous limestone | Thin | Smooth | Brown | Bluish brown | 0 | 6 | 1 | 0 | 0 | 8 | 15 |
| 259 | 0 | Fine jasper | Thin | Smooth | Greenish | Brown inner part greenish | 0 | 2 | 3 | 0 | 0 | 5 | 10 |
| 263 | 0 | Middle siliceous limestone | Thin | Smooth | Brown | Bluish brown | 1 | 6 | 2 | 0 | 0 | 9 | 18 |
| 264 | 0 | Middle siliceous limestone | Thin | Smooth | Black | Black | 1 | 13 | 19 | 2 | 1 | 5 | 41 |
| 269 | 0 | Fine jasper | Thin | Smooth | Light brown | Black orange striped green | 7 | 10 | 2 | 0 | 1 | 7 | 27 |
| 279 | 0 | Fine jasper | Thin | Smooth | Brownish yellow | Green | 1 | 8 | 2 | 1 | 0 | 1 | 13 |


| 280 | 0 | Fine jasper | Thin | Smooth | Greenish | Green | 2 | 6 | 3 | 0 | 0 | 5 | 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 283 | 0 | Fine jasper | Thin | Rough | Yellow | Green | 7 | 16 | 1 | 1 | 1 | 25 | 51 |

## Supplementary data



Fig. S1: Refitting distances with error bars.


Fig. S2: Close-up photograph of the (micro) stratigraphic profile of hearth SU 78; (b) Scan of a petrographic thin section processed from an intact block sampled in correspondence of the box in figure (a). Note several micro-fabric units ( mFU ), a chert flake (ch) deposited in the wood ash layer ( mFU 4 ), bone fragments (b), a coprolite (cpl) in the rock shelter deposit (mFU3), and the passage features (p.f.) cutting through 3 mFU ; (c) Photomicrograph (planepolarised light) of the micro-stratigraphic boundary between the laminated wood ash layer ( mFU 4 ) and the underlying dark brown rock shelter deposit (mFU3a). Note the sharp but irregular boundary (bd) between the two mFUs . Bone (b) and weathered charcoal (c) fragments are abundant in mFU3a; (d) Photomicrograph from the boxed area in figure (c) showing a domain of wood ash characterized by the presence of rhomb shaped oxalate pseudomorphs composed of pyrogenic calcite (r).


Fig. S3: Cut-outs of the digital scans in plane-(PPL) and cross-(XPL) polarised light of the petrographic thin sections prepared from intact blocks of hearths SU 12, SU 77, SU 80, SU 82, and SU 83 . Note the wood ash layers at the top and the underlying discolored layers diffusing into lighter color rock shelter sediment.


Fig. S4: Photo imported RMU. RMU 41 consists of a single target piece, a long convergent flake, made in a variability of siliceous limestone unique in the level. RMU 2 where two items, a Levallois retouched flake and a debordant flake in a very fine texture flint (probably imported). RMU 18 two fragments of an elongated flake.


Fig. S5: Photo RMU 1. 34 micro-flakes and micro-fragments are not included in the photo.


Fig. S6: Photo RMU 56. 46 micro-flakes and micro-fragments are not included in the photo.


Fig. S7: Photo RMU 137. 14 micro-flakes and micro-fragments are not included in the photo.


Fig. S8: Photo RMU 177. 8 micro-flakes and micro-fragments are not included in the photo.

## K Function - Burned faunal remains



## K Function - Faunal remains DC 2



K Function - Lithic finds DC 1


K Function - Lithic finds DC 3


## K Function - Faunal remains DC 1



K Function - Fuanal remains DC 3-4


## K Function - Lithic finds DC 2



## K Function - Lithic finds DC 4-5



Fig. S9: K function of the burned faunal remains (a), Dimensional Classes of faunal remains (b-d) and Dimensional Classes of lithic finds (e-h).


K Function - RMU 12


K Function - RMU 53


K Function - RMU 56


K Function - RMU 66


K Function - RMU 9


K Function - RMU 31


K Function - RMU 55


K Function - RMU 64


K Function - RMU 91


Fig. S10: K function of the RMU 1 (a), RMU 9 (b), RMU 12 (c), RMU 31 (d), RMU 53 (e), RMU 55 (f), RMU 56 (g), RMU 64 (h), RMU 66 (i), RMU 91 (l).


K Function - RMU 134


K Function - RMU 137


K Function - RMU 143


K Function - RMU 161


K Function - RMU 132


K Function - RMU 136


K Function - RMU 139


K Function - RMU 146


K Function - RMU 177


Fig. S11: K function of the RMU 96 (a), RMU 132 (b), RMU 134 (c), RMU 136 (d), RMU 137 (e), RMU 139 (f), RMU 143 (g), RMU 146 (h), RMU 161 (i), RMU 177 (1).


K Function - RMU 255


K Function - RMU 263


K Function - RMU 269


K Function - RMU 280


K Function - RMU 197


K Function - RMU 259


K Function - RMU 264


K Function - RMU 279


K Function - RMU 283


Fig. S12: K function of the RMU 193 (a), RMU 197 (b), RMU 255 (c), RMU 263 (d), RMU 259 (e), RMU 264 (f), RMU 269 (g), RMU 279 (h), RMU 280 (i), RMU 283 (l).

