

## Article

# The sanctuary of Cemmo: a tale of two monuments

Raffaella Poggiani Keller<sup>1</sup>, Paolo Rondini<sup>2\*</sup>

<sup>1</sup>Già Soprintendenza per i Beni Archeologici della Lombardia, Milano, Italy.

<sup>2</sup>Università degli Studi di Pavia, Dipartimento di Studi Umanistici.

## Parole chiave

- Santuario calcolitico
- rituali
- iconografia
- recinto murario protostorico
- età del Bronzo Finale
- Valle Camonica

## Keywords

- Chalcolithic sanctuary
- rituals
- iconography
- prehistoric wall enclosure
- Final Bronze Age
- Valle Camonica

\* Corresponding author:  
[paolo.rondini@unipv.it](mailto:paolo.rondini@unipv.it)

## Riassunto

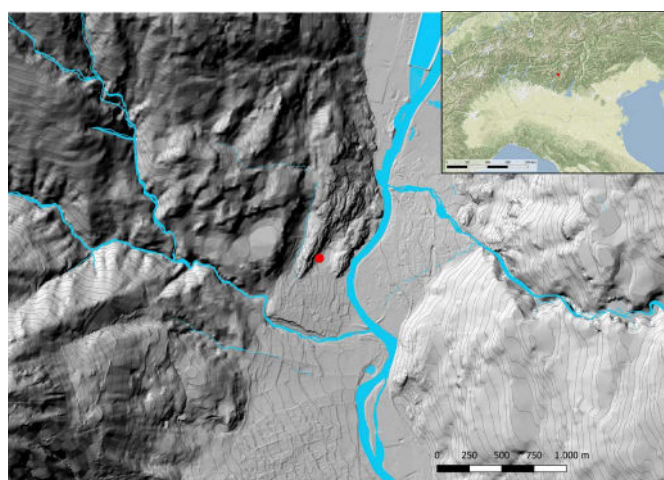
Il contributo prende in esame le fasi recenti della frequentazione del santuario megalitico dell'età del Rame di Cemmo-Pian delle Greppe, quando nel Bronzo Finale l'area, prima occupata da un allineamento n-s di monoliti calcolitici, viene ristrutturata e monumentalizzata, costruendo un recinto murario che ingloba gruppi di monumenti ancora eretti e altri ne utilizza come elementi simbolici della struttura che rimane visibile e in uso fino ad età romana. Ci soffermiamo pertanto su due monumenti: la stele Cemmo 11/19, che ha un'interessante storia di continuità, restando visibile e oggetto di culto fino ad età romana avanzata, e la stele Cemmo 17 deposta capovolta alla base del recinto murario ed espressione di un rito di fondazione. Lo studio offre uno spaccato della lunga vita del luogo di culto e cerimoniale, specialmente nelle fasi successive al primo impianto, concentrando l'attenzione su due monoliti istoriati di eccezionale qualità iconografica e seguendone il percorso attraverso i secoli.

## Abstract

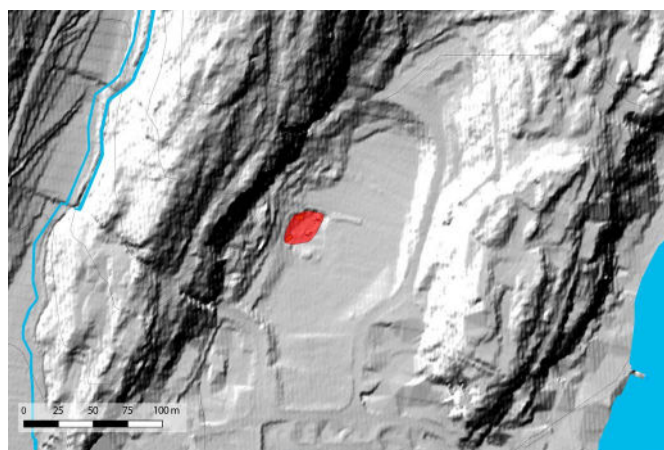
This paper examines the later phases of frequentation at the Copper Age megalithic sanctuary of Cemmo-Pian delle Greppe. During the Final Bronze Age the area, which first included a north-south alignment of chalcolithic carved monoliths, was then restructured and monumentalized by building a wall enclosure that incorporated groups of still standing monoliths, while using others as symbolic elements for the structure, which was visible and in use until roman times. We therefore focus on two monoliths: the Cemmo 11/19, which has an interesting history of continuity, remaining visible and an object of worship until late roman times, and the Cemmo 17, which was instead placed upside down at the base of the wall enclosure, an expression of a foundation rite. The study offers insight into the long life of the ceremonial site, especially in the phases following its first instalment, and draws attention to two previously unpublished engraved monoliths of exceptional iconographic quality, while following their long path through the centuries.

## Introduction: the sanctuary of Cemmo, historical notes and context (RPK)

The Superintendence for Archaeological Heritage of Lombardy carried out a research project between 2000 and 2013 at the site of Cemmo - *Pian delle Greppe* (BS).<sup>3</sup> The site has been known since 1909 for the presence of the two boulders Cemmo 1 and Cemmo 2 that represent the first discovery of rock art in Valle Camonica. The research unearthed a ceremonial place founded in the Copper Age, abandoned during the Bronze Age and returned to by the late Bronze and throughout the Iron Age until the late Roman age. The chalcolithic sanctuary is characterized by the two large carved boulders and a NE-SW alignment of monoliths,<sup>4</sup> and is located in the municipality of Capo di Ponte (BS), at the bottom of the valley at the foot of a high cliff, dominated by the Concarena massif, in a depression that had an ephemeral pool of water at its center.<sup>5</sup>



**Figure 1:** Site positioning in the municipality of Capo di Ponte (BS). / Il posizionamento del sito nel territorio comunale di Capo di Ponte (BS) (Lidar-DTM GIS Elaboration).



**Figure 2:** The area of the sanctuary (red) in the small valley on the hydrographic right flank of the Oglio river. / L'area del santuario (in rosso), nella vallecola sul fianco idrografico destro del fiume Oglio (Lidar DTM 1m GIS).

The site has been the subject of repeated research since the 1930s (excavations Marro, Graziosi and Battaglia; Poggiani Keller 2000; Marretta & Poggiani Keller 2005; Tarantini & Poggiani Keller 2009), in 1962 (Anati 1972) and in 1983-85, after the fortuitous discovery of the stela "Cemmo 3" (De Marinis 1988, 1994), but it manifested itself in all its articulation and duration with the excavations conducted by the Superintendence, consequent to the establishment of the National Archaeological Park of the Boulders of Cemmo (Poggiani Keller 2000, 2009a, 2017).

The sanctuary, founded in the Copper Age, is located at a site which was already frequented in the Ancient Mesolithic evidenced by layers and holes (US 300) which contained lithic slabs and microlithic instruments (Martini et al. 2016), and was also frequented in the Recent Neolithic, as is evidenced by a sunken oval-shaped structure (t. 316), found at the south of Cemmo 1, attributable to the Square Mouthed Vases culture - style of the engravings and impressions.

The founding of the sanctuary during the Chalcolithic seems to have taken place discontinuously with the last Neolithic frequentations, which were likely only temporary settlements, and for which more precise dating is currently underway. On a comparative basis, we can assume that the site's foundation took place similarly to what was found at the sanctuaries of Ossimo Pat and Borno-Valzel de Undine, in the first half of the 4th millennium BC (Poggiani Keller 2017). The presence of ceramic sherds with passing and non-passing holes marks this first frequentation phase, which seems to correspond to the installation of the alignment of stelae (US 254 and assimilated, such as US 404).

The layout of the sanctuary of the Copper Age, arranged through several phases, is placed in the proximity of the two large landslide engraved boulders known as Cemmo 1 (fig. 24) and 2, that had not been carved during the previous Mesolithic and Neolithic habitations. East of the carved front of the two boulders, arranged up to a distance of 9-10 meters with a horizontal plane, was occupied by a linear alignment of monoliths placed on a NE-SW axis, contiguous to each other and engraved, with only few exceptions, on the east-facing side.<sup>6</sup> The alignment, identified only in short segments because of later events, was contained in the back by a curb of stones (US 407) and enclosed to the front by a moat (US t. 497) 2.20/2.30 m. wide and 0.40 m. deep.



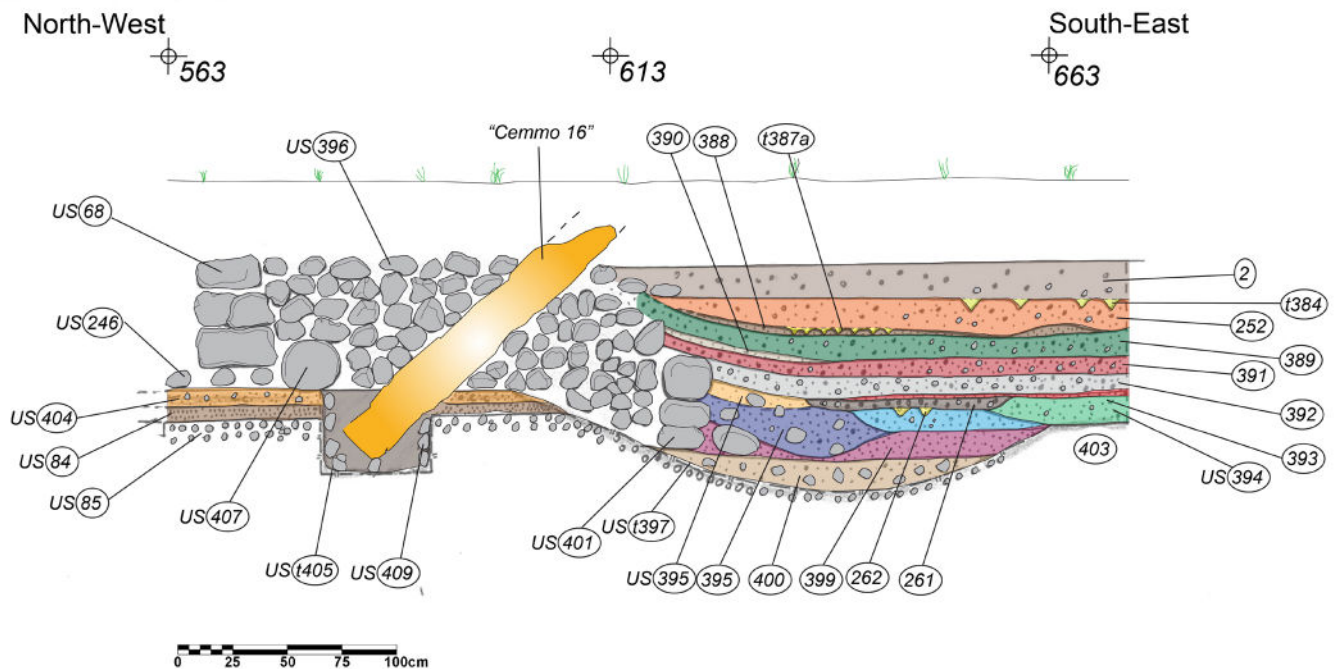
**Figure 3:** Cemmo. The southern segment of the NE-SW alignment of monoliths Cemmo 26, 24, 16, 25. / Cemmo. Il segmento meridionale dell'allineamento NE-SW dei monoliti Cemmo 26, 24, 16, 26 (Photo, from south, by F. Magri).

<sup>3</sup> The works for the edition of the sanctuary of Cemmo, whose excavation was directed by Raffaella Poggiani Keller, proceed in concert with SABAP of Bergamo and Brescia (Dr. Cristina Longhi and Serena Solano) and the Direzione Regionale Musei di MiBACT (Dr. Maria Giuseppina Ruggiero). All the photos, tracings and drawings were prepared by PR, except when specified.

<sup>4</sup> The excavation has unearthed 23 monoliths or fragments of monoliths (Cemmo 3-11; 13-19; 21-27) as well as a portion of large, engraved, boulder (Cemmo 20) north of Cemmo 1. The installation of the monuments, as evidenced by the stratigraphic data and the various phases of engraving of the monuments, lasted for several centuries, during the third millennium BC until the beginning of the second (ancient Bronze Age) when the first life cycle of the sanctuary ends.

<sup>5</sup> This can be deduced from the palynological analyses carried out by Cesare Ravazzi - CNR IDPA on two cores that have reached the depth of 10 meters. Both elements - rock face and water - are to be considered connotative in the choice of sites for the placement of chalcolithic megalithic sanctuaries that characterize two valleys of Lombardia, Valtellina and Valle Camonica.

<sup>6</sup> The erection of the individual monuments took place presumably over a few centuries: this data is not so much obtained from the stratigraphy, many of them having been found in secondary collocation, but from the ongoing study of the iconographic sequence.



**Figure 4:** Profile 1, traced SE-NW through the Cemmo 16 monolith. The containment curb to the west (US 407) and the moat to the east (US t397) can be observed. / Sezione 1, tracciata SE-NW attraverso il monolito Cemmo 16. Si possono notare la spalletta litica a ovest (US 407) e il fossato a est (US t397) (Original drawing by F. Magri, digitally redrawn by PR).

It is not excluded that, in addition to the main alignment, there could also have been other groupings of monoliths,<sup>7</sup> but this possibility is not easily verified, due to the subsequent renovation and monumentalization of the sanctuary, which occurred during pre-prot history and beyond.

This structuring of the sanctuary is similar to that of other coeval sanctuaries in the valley: the presence of NE-SW or N-S alignments of monoliths is also detected at Ossimo - Anvòia and Ossimo - Pat.<sup>8</sup>

In Cemmo, as a place of worship and ceremonial activities, some ritual actions were also observed, partly shared by other sites and partly entirely original, about which a paper has already been published (Poggiani Keller 2016): the manipulation of monoliths in terms of repeated re-engraving over time and tampering with parts, the special cult reserved to one engraved stone (the Cemmo 20, relocated inside a stone fence), the evidence of crushing and deposition of human bone.

Cemmo also shares general patterns with other sanctuaries: its foundation and use throughout the Copper Age, interruption at the beginning of the Early Bronze age (see also Ossimo - Anvòia, Ossimo - Pat, Ossimo - Passagròp, Borno - Valzel de Undine), resumption of attendance between Late Bronze and Iron Age (see also Ossimo - Pat, Borno - Valzel de Undine); while, in the face of the definitive abandonment with the Romanization that characterizes even the most enduring sanctuaries (i.e., Ossimo - Pat and Borno - Valzel de Undine), Cemmo lasted until the late Roman age.

After the first abandonment on the threshold of the Early Bronze Age, the site saw renewed use from the late Bronze Age and throughout the Iron Age, albeit with different intensity and with probable interruptions,<sup>9</sup> until the late Roman age.

In this period, activity at the sanctuary terminated and some

stelae that were still visible became the object of vandalism or were removed in their entirety (Fig. 7): six of them were placed in a pit (US t. 35) dug in the body of the wall (the Cemmo 6 to 11), two (Cemmo 15 and 18) were piled up along the eastern front of the wall and carefully concealed under a layer of river pebbles (US 28). These last actions, which marked the definitive abandonment of the megalithic site of worship, took place between the late Roman period and the Early Middle Ages and could be related to the fight against the idolatry of the stones, the *saxorum veneratio*, widely documented in the Alpine area until after the 11th century AD. But the memory of the ancient pagan place of worship seemed to still reverberate, with the nearby founding of the Romanesque *Pieve* dedicated to Saint Siro, the well-known patron of the fight against paganism.

During the sanctuary's long life, it is possible for us to retrace the events of activities (original foundation, possible repositioning or significant use) and disuse of the carved monoliths (abandonment and tampering, secondary storage, definitive concealment): a sequence of actions also relevant to other places of worship in Valle Camonica, such as Ossimo - Anvòia (Fedele 2015) and summarized hereby the biography of the two monuments Cemmo 17 and 19/11.

### The sanctuary of Cemmo during the Bronze Age and beyond (RPK)

After an abandonment of about 8 centuries, during the final phase of the Bronze Age, around the end of the 2<sup>nd</sup> millennium BC, the site was re-occupied, and the space in front of the two boulders (Cemmo 1 and 2) monumentalized through the construction of a semicircular wall (US 70) that enclosed the space in front of the boulders and incorporated traits of the alignment of stelae raised in

<sup>7</sup> A clue can be found in the presence of a deep pit of spoliation, NE of Cemmo 1 (US t. 316), perhaps concerning the original location of the huge Cemmo 20 fragment.

<sup>8</sup> Respectively, see, with previous bibliography, the writings by Francesco Fedele and Raffaella Poggiani Keller in Poggiani Keller 2017: 40-43 and 44-55.

<sup>9</sup> The interventions of the Iron Age are limited, on the basis of ceramic finds, between the middle and advanced Iron Age and see a succession of transformations (extension of the wall to the south, levelling of the internal frequentation level with gravel cons, opening of a canal that runs inside the wall fence, creation of a circular area with signs of hoeing around the boulder Cemmo 1). In the same era extensive transformation work affect the entire basin, that in the southernmost part is terraced (Poggiani Keller 2000).

<sup>10</sup> In particular, the upper part of Cemmo 19, bearing the figure of a radiant sun, was broken (hence the name of Cemmo 11) and laid in the pit with the other five stelae.



the Copper Age. This wall was built with irregular stones and reused-monoliths, apparently free of any binding material, wide at the base 2.50 meters and preserved in height up to 1.20 meters.

The stratigraphic excavation of portions of the wall has made it possible to document that this was the result of progressive interventions, the first of which was the construction of the western facing wall (US 68), consisting of large stones including inornate slabs and fragments of stelae. The eastern-facing wall (US 67), on the other hand, poorly preserved and more irregular due to widespread collapses, was completed at a later date, while the inside (US 396) of the wall was filled with medium-sized stones. With regard to this phase, we have some finds in stratigraphic relation to this structure and the subsequent layers, as well as one  $^{14}\text{C}$  date.<sup>11</sup>

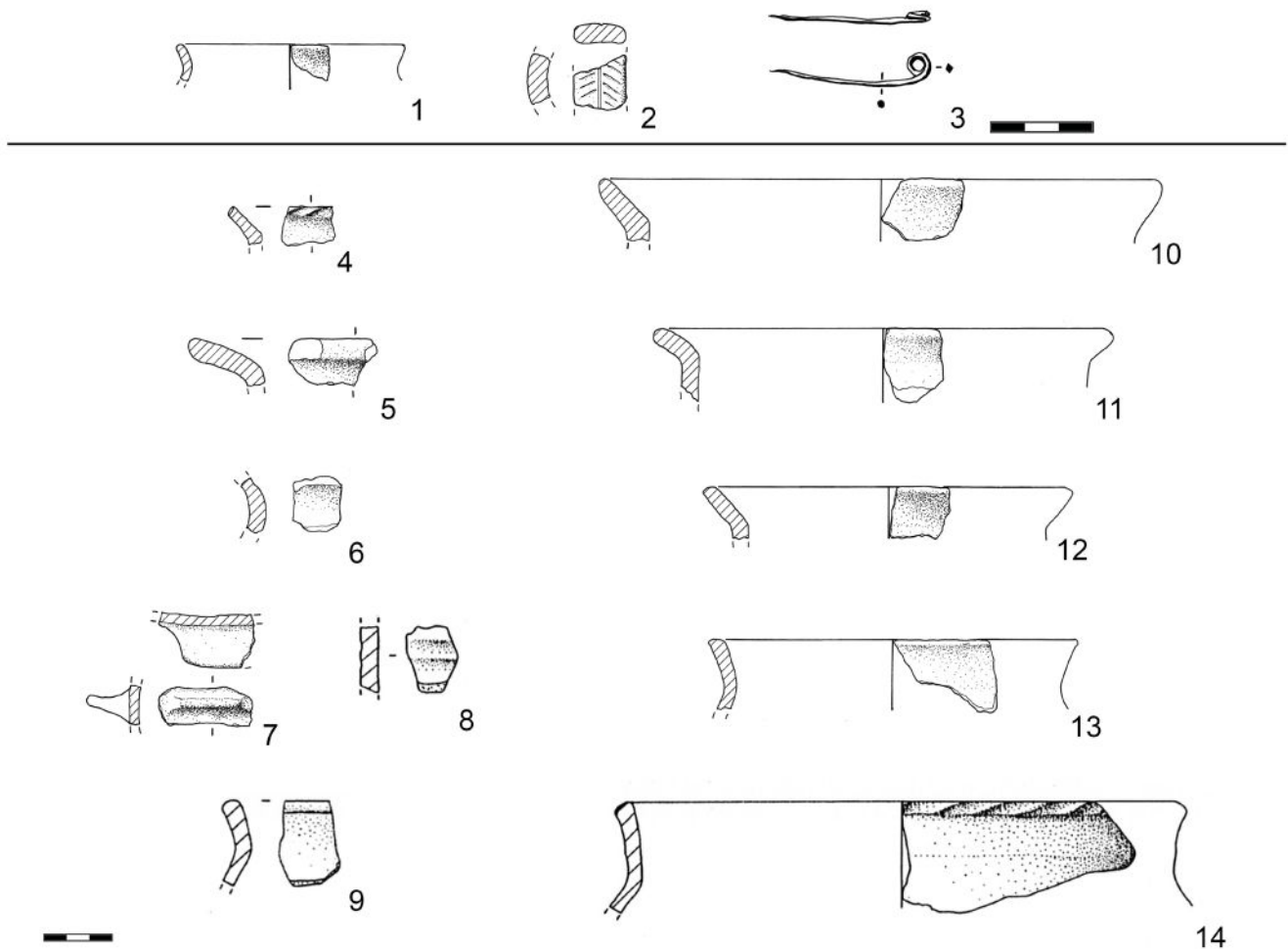
As mentioned, the wall partially incorporated and preserved<sup>12</sup> a section of the original Copper Age monolith alignment, set on a NE-SW axis, namely the southern part, which is formed by the four monoliths Cemmo 26, 24, 16 and 25, found in their original positions (Figure 3). The alignment is contained to the west, as seen in the section (Figure 4), by a curb of stones, and is limited to the east by a moat.

A second section of the alignment, placed at a distance of 10 m northeast of the first one, consists of the two stelae Cemmo 11/19 and 21, still *in situ* and sharing the same orientation (Fig. 7).

Other monoliths (Cemmo 7, 13, 17), the smaller ones, were reused in the construction of the wall, both at the time of its foundation<sup>13</sup>



**Figure 5:** The wall fence that at the end of the Bronze Age monumentalizes the area in front of Massi Cemmo 1 and 2, seen from the north. In the foreground the foundation level of the Copper Age, US 254. / Il recinto murario che alla fine dell'età del Bronzo monumentalizza l'area antistante i Massi Cemmo 1 e 2, vista da nord. In primo piano, il livello basale dell'età del Rame, US 254. (after Poggiani Keller 2009: 213).



**Figure 6:** Artefacts from the sanctuary area, Final Bronze Age (4-14) and Medium Iron Age phases (1-3). / Manufatti dall'area del santuario, età del Bronzo Finale (4-14) e media età del Ferro (1-3). (Drawings: 9; 14 F. Magri. 1-8; 10-13 PR.)

<sup>11</sup> Related to the US 328: LTL8076A 2870±50 BP, cal. 1220 BC (95,4%) - 910 BC.

<sup>12</sup> It should be noted that the stratigraphic investigation, for conservation reasons, kept the wall *in situ*, proceeding with partial checks on the portions of alignment "contained" within it, signalled by the fact that the top part of some monoliths protruded from the head of the wall, as described below.

<sup>13</sup> As for example Cemmo 17, about whose symbolic use we will say later.

and in the subsequent renovations of the site, the last of which is ascribed to the Roman age. In this period, having the frequentation level arisen consistently higher, a road seemingly passed through the area and over the Bronze Age wall in an eastward direction. The wall was thus rearranged in historical times with a cobbled top (US 9) from which the upper parts of Cemmo 15, 16, 18 and 19 protruded (Fig. 7).

In the context of the centuries-old events of the sanctuary, we consider it of particular interest to describe the different contexts of finding of the two monoliths, because they are two clear examples of the different meanings that these monuments retained in the local societies which, despite having abandoned the construction of outdoor sanctuaries with standing stones, maintained their memory to the extent that they were perpetually attended and respected in their symbolic elements. Both the monoliths have been carved with ploughing scenes.

#### *The context of the "Cemmo 17" monolith.*

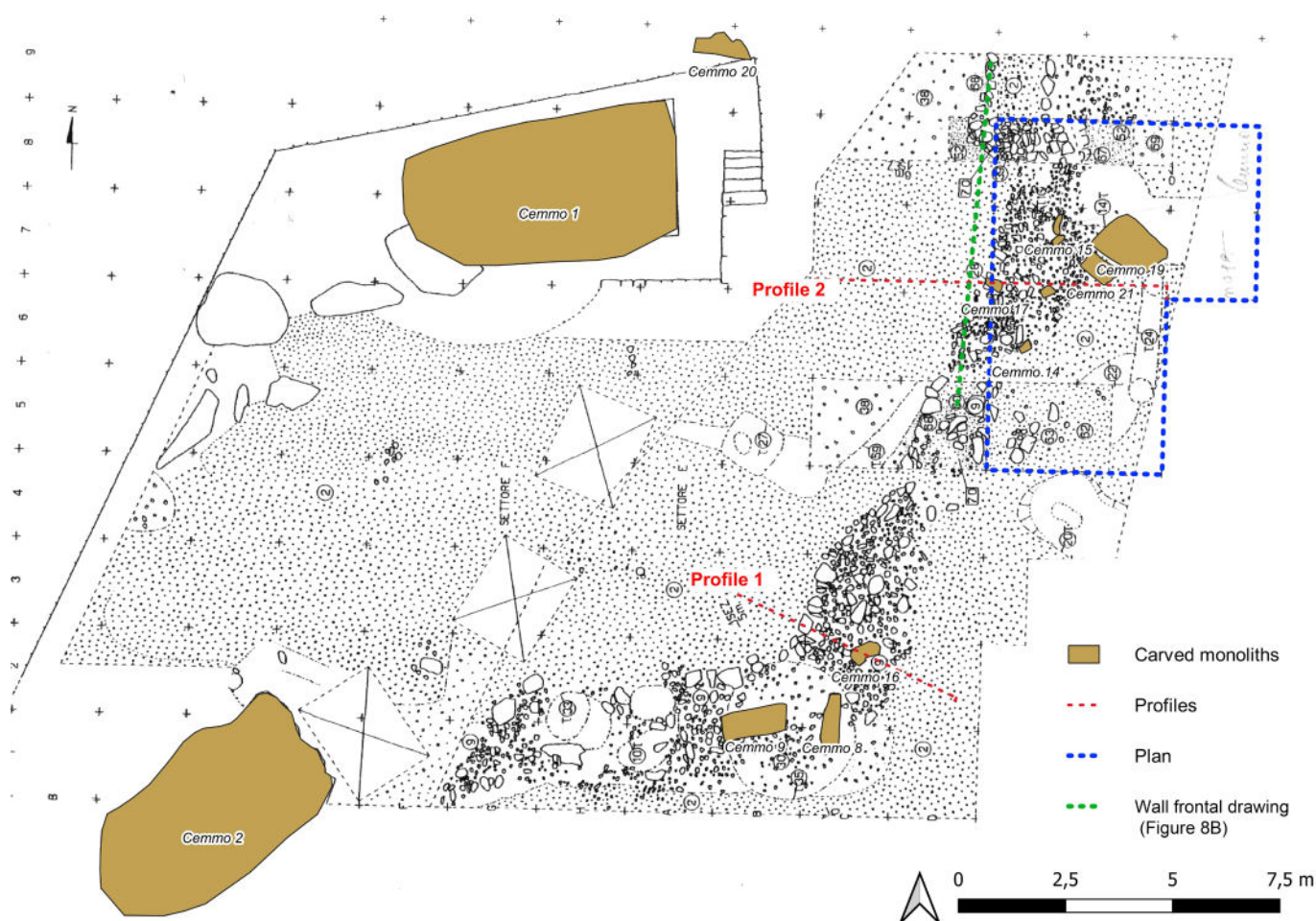
When, in the late Bronze Age, the wall was built incorporating some segments of the NE-SW alignment of the chalcolithic monoliths, some smaller monoliths were removed from their primary position and, in particular "Cemmo 17", were laid upside down at the base of the wall.

This monolith was only recognized as engraved during the drawing (Figure 9B) of the western front of the wall. Later, thanks to a small stratigraphic trench opened outside the wall (Figure 10), its exact context was clarified: the monolith was tilted from west to east by about 60°, in contact with the bottom of the trench for the wall which was cut in US 79,<sup>14</sup> the layer representing the frequentation level of the last attendance of the sanctuary, dated from late Chalcolithic to Early Bronze Age, on the back side of the alignment of the stelae. The monolith had also sunk into the underlying US 254 copper age layer which seals the sterile substrate.<sup>15</sup>

The face-down placement of the engraved side of the monolith as the basal stone of the wall built in the Bronze Age seems to be an expression of a rite of foundation that renews the hierophany that in the past had consecrated the sacred space.<sup>16</sup> It is also possible that the very symbology of the monolith 17, one of the only three found in the sanctuary that depicted a scene of ploughing,<sup>17</sup> could be related to its choosing for this particular purpose.

The wall itself, built to define an area that channelled the focus on the two large carved boulders Cemmo 1 and 2, also has a particular meaning, indicative of the consecration of space (Eliade 1954, ch. X: 141) or conveying the affirmation of its renewed continuity over time.

The use of engraved stones loaded with strong symbolic value at the time of the foundation of structures connected with a san-



**Figure 7:** Cemmo, Settore E: general plan and positioning of the profiles, detail plan and location of the monoliths in relation to the wall of the Final Bronze Age. / Cemmo, Settore E: planimetria generale con posizionamento delle sezioni (figg. 4, 8), della planimetria di dettaglio (fig. 12) e posizione dei monoliti istoriati in relazione al muro del Bronzo Finale. (Reworked after Poggiani Keller 2000)

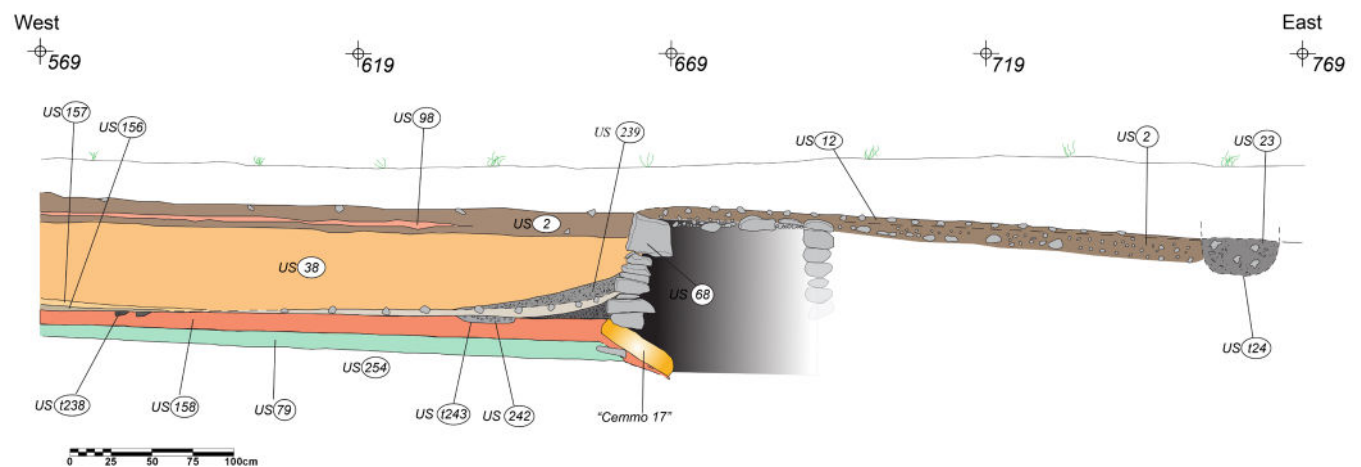
<sup>14</sup> Among the finds coming from this US we remember the pin with small oval copper leaf head that can be combined with the oar headed pins (Rudernadeln) of the early Bronze Age (text by M. Baioni in Poggiani Keller 2009: 220).

<sup>15</sup> This US is ascribed to an initial phase of the Copper Age.

<sup>16</sup> On the subject of living and concrete space for the so-called primitive people, see Cantoni 1963: 118-127.

<sup>17</sup> The other ploughing scenes are depicted on the Cemmo 11/19, 16 and on boulders Cemmo 1 and 2.

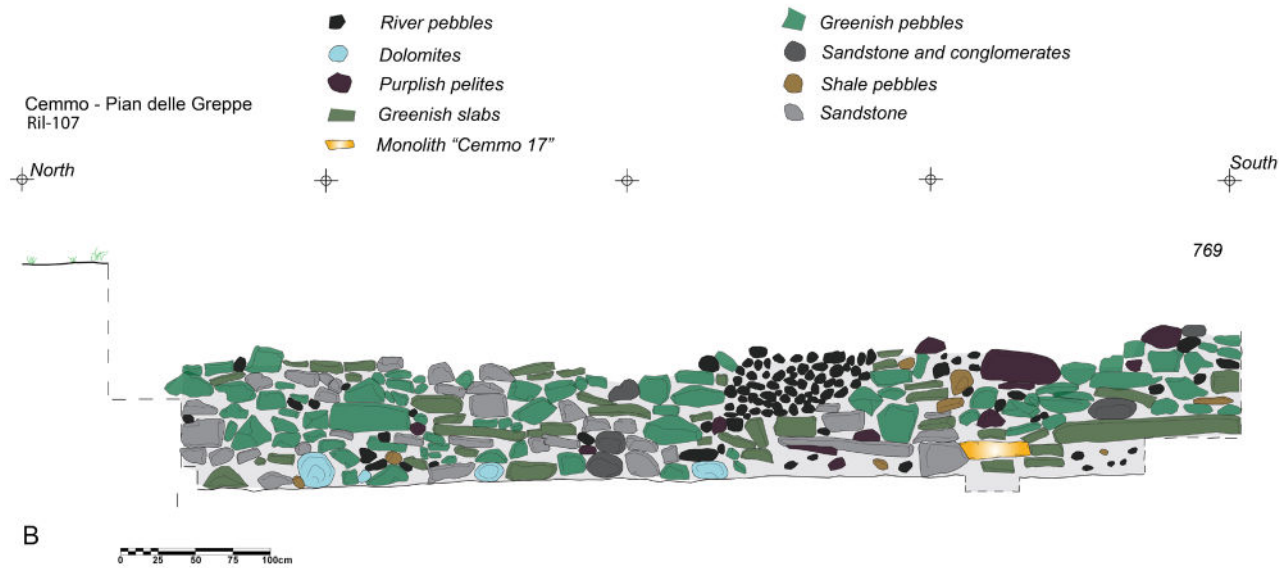




**Figure 8:** Profile 2, traced E-W through the Final Bronze Age wall fence and the monolith Cemmo 17 in secondary position. / Sezione 2, tracciata E-W sul recinto murario del Bronzo Finale e sul monolito Cemmo 17 in collocazione secondaria (Digital drawing on sketch by F. Magri).



A



B

**Figure 9:** The western side of the Final Bronze Age wall fence. A - photo from west (F. Magri). B - drawing with lithologies indicated. / Il lato occidentale del recinto murario del Bronzo Finale. A - fotografia da ovest (F. Magri). B - disegno con diverse litologie (Digital drawing on sketch by F. Magri).

ctuary during its lifespan, or in carrying out an action rife with ritual connotations, such as the foundation of a city, is largely attested.

Limiting ourselves to few but significant examples, we recall similar situations: the use of laying engraved stones with the carved part face down, in the stone structures of the mounds-cenotaph and votive circles of the megalithic chalcolithic sanctuary of Ossimo – Pat,<sup>18</sup> in Valle Camonica, as well as at the sites of the Alpine megalithism of Aosta St. Martin de Corléans (Mezzena 1997; de Gattis et al. 2018) and of Sion – Petit Chasseur (Gallay 1989), which exhibit the use, certainly symbolic, of chalcolithic anthropomorphic stelae as building elements in tombs of a later chronological phase. In other situations, linked to the foundation walls of a city, we draw from Mezzena (1997: 100 with referenced bibliography) the data of the re-use, even symbolic, of an older stela in the construction of the gateway to the walls of Troy I.



**Figure 10:** The monolith Cemmo 17 right after its discovery at the bottom of the wall fence. Il monolito Cemmo 17 al momento della scoperta alla base del recinto murario. (Photo from south: F. Magri).

#### *The context of Cemmo 11/19.*

On the other hand, Cemmo 11/19 has an interesting history of continuity, as it always remained fixed in its original position, albeit slightly oblique, and was progressively covered and incorporated by subsequent stratification. From a stratigraphic point of view, it can be established that it remained partly visible, and possibly the object of worship, until the late Roman age, when its head (Cemmo 11) still protruded from the contemporary layer<sup>19</sup> also affected by the presence of a road and a canal (t. 302<sup>20</sup>).

At the time of the definitive abandonment of the sanctuary in the late Roman age, the only part still visible of the monument was truncated and thrown along with five other whole stelae inside the huge pit t. 35, which had been dug for this purpose into the body of the wall near the large stela Cemmo 9 (Poggiani Keller 2000; 2017), just south of the preserved alignment section of the four monoliths Cemmo 26, 24, 16 and 25. This is the reason the head of this monument was initially named Cemmo 11, until excavations unearthed the remaining body of the monolith, which then took the name of Cemmo 19 only to be found later that they belonged together. The body of the monolith was found in its original location, at the northern sector of the site,<sup>21</sup> next to Cemmo 21,<sup>22</sup> along with which it formed a segment of the original NE-SW alignment. The stratigraphic context of these two monuments was verified in a very limited section (1 square meter) so as to not compromise the stability of the wall. Thus, with some uncertainty, the stratigraphic sequence of Cemmo



**Figure 11:** The discovery of monolith Cemmo 19 in its context. / La scoperta del monolito Cemmo 19, nel suo contesto (Photo from N-NE: F. Magri).

19 was reconstructed (Figure 13). Its chronology is fixed in the first 10 cm in US 329, a natural gravelly sandy layer, with little trace of anthropogenic frequentation. The monolith was surrounded, along the western side, by a row of stones that are part of the curb that enclosed the back of the aligned stelae, as already observed in the case of the four monuments still preserved in their original location, at the southern sector of the site.

The stratigraphic analysis revealed the story of a progressive concealment of the monument after the abandonment of the site, a result of natural colluvial deposits that gradually covered it, leaving most of it visible during the Bronze and Iron ages, while in the late Roman age, only the head was visible. Given the colluvial nature of the stratigraphic units, they are devoid of dateable finds and anthropogenic remains, or with very little evidence, in secondary context and insignificant for the purpose of a chronological understanding. It is therefore limited to assuming a chronological sequence for large phases, made on a stratigraphic basis. We can emphasize specific dating of the Final Bronze Age (LTL8076A), which was obtained by way of a natural charcoal sediment sample from US 328 which covers the stela implant level. These data are in line with the period attributed to the construction of the wall indicated above, an intervention that evidently deeply affected the chalcolithic planting of monoliths until it almost reached their level of foundation.

<sup>18</sup> These stones were depicted with the so-called first topographic figures, namely fully pecked geometric areas and sets of cup-marks (Poggiani Keller 2009: 230, 233)

<sup>19</sup> From the filling of the channel, formed by UUSS 303, 301 and 64 inf.

<sup>20</sup> It has not been clarified, due to the strong run-off suffered by the area, whether it was an artificial channel connected with the construction of the Roman road which still preserved wagon grooves, or whether it was the result of erosion.

<sup>21</sup> In the square n. 719.

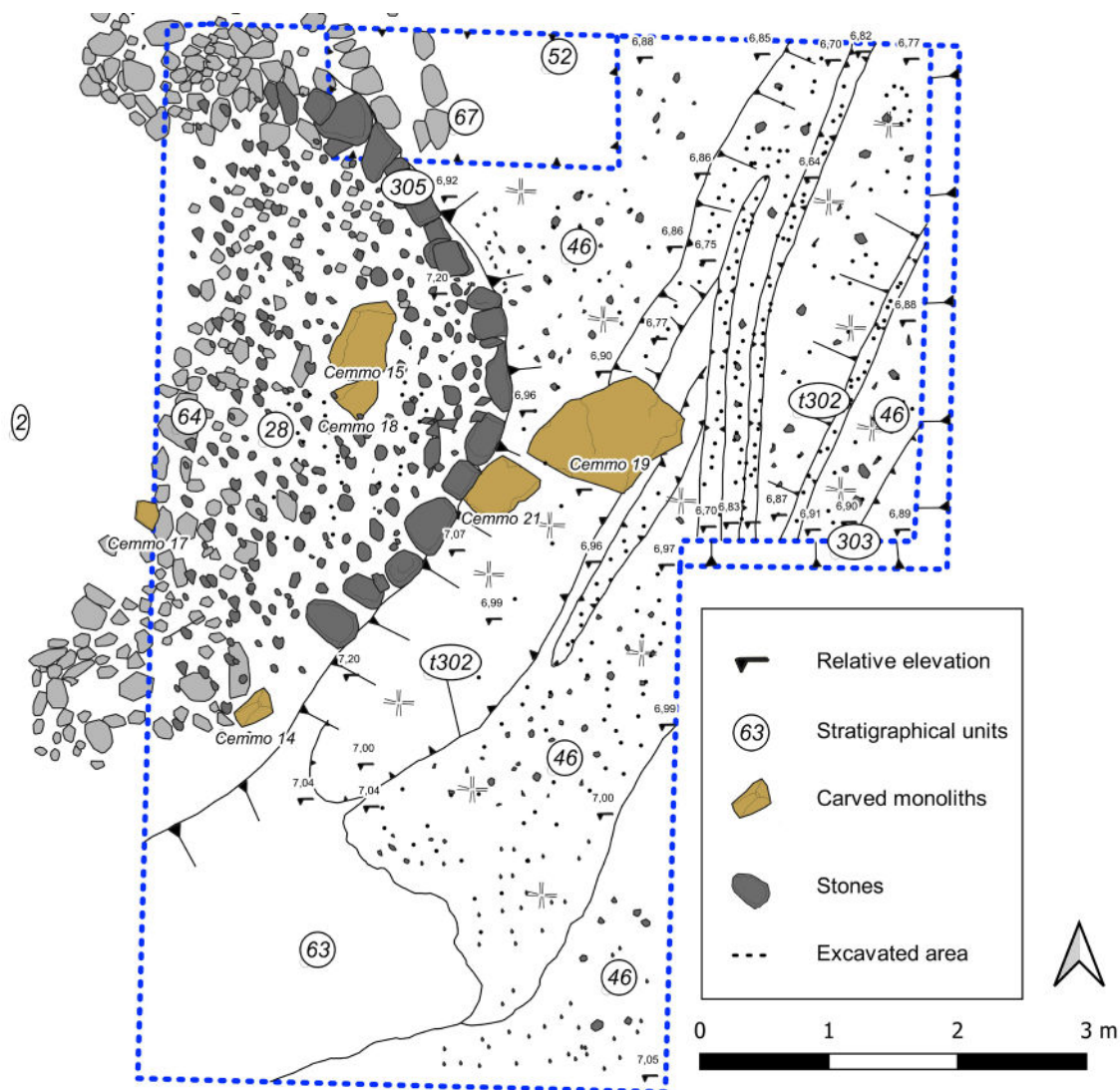
<sup>22</sup> Cemmo 21, also partially fractured in the top part, is preserved in the entirety of its carved set of figures which represent the motif with double "gendarme" hat, two big sets of concentric circles, double spiral pendant and four collars. It too was found in square n. 719.



### The Copper Age monoliths in Valle Camonica: a short presentation (PR)

The carved monoliths<sup>23</sup> of Valle Camonica<sup>24</sup> are stone blocks of various sizes and lithology<sup>25</sup>, placed within consecrated spaces and erected in vertical positions next to each other.<sup>26</sup> These monuments have been found in numerous parts of Valle Camonica, often in secondary collocation,<sup>27</sup> while the only contexts with monoliths *in situ*

to date known are the sanctuary of Cemmo (Capo di Ponte) and those on the Ossimo-Borno plateau: Pat (Poggiani Keller 2009b and Rondini 2018, with previous literature) and Anvòia (Fedele 2013, with previous literature). The monoliths were selected, transported to the consecrated grounds and decorated through the carving of a series of figures on the stone surface, executed by pecking it with lithic tools.<sup>28</sup> The initial engraving took place at an unspecified time between their placement in the sacred area and their erection in a vertical



**Figure 12:** Detail plan of the northern sector E, i.e. the context of finding of "Cemmo 19" and other monoliths. / Planimetria di dettaglio del settore E settentrionale, in particolare il contesto di ritrovamento di "Cemmo 19" e altri monoliti istoriati. (Digital Drawing on sketch by F. Magri).

<sup>23</sup> This neutral definition includes the more widely used "boulder-menhir" and even the morphology-driven "statue-stela". With regard to the terminological question, see Fedele 2007.

<sup>24</sup> Although the monoliths form a unitary group with those of Valtellina (see Martinotti 2018, with cited literature), we will only refer in this brief introduction to the characteristics of those from the Valle Camonica. For the documentation of the published carved monoliths, the references are: Casini 1994; Casini et al. 1996; Fedele & Fossati 1996; 2012; Casini & Fossati 2007; Marretta 2007; Poggiani Keller 2009a, 2009b, 2011; Sansoni 2013; Fedele et al. 2014; Rondini 2018; Caimi et al. 2019; Casini et al. 2020. For a general overview in english language, see: Marretta 2014. With regard to the number of occurrences and the comparisons related to the monoliths from Ossimo-Pat, only the monoliths published, or in any case currently exhibited at the MuPre – National Museum of Prehistory of the Valle Camonica, will be recalled here, to offer the reader the complete verifiability of the annotations contained herein.

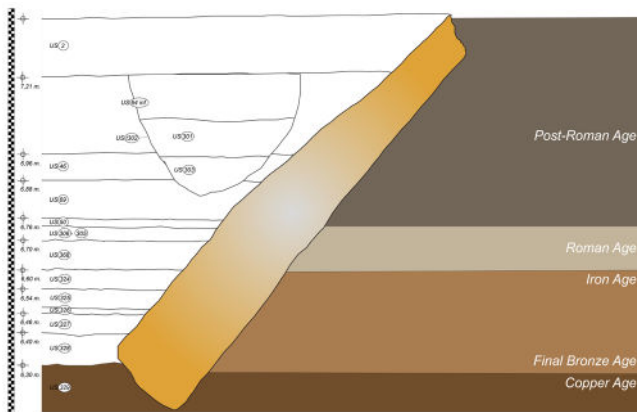
<sup>25</sup> The most widely used stone is fine-grained sandstone, but metamorphic stone blocks or larger grain conglomerates, and even granitoids, are seldom exploited (the lithological study on the monoliths from Cemmo and Ossimo – Pat is currently ongoing, curated by Sergio Chiesa – CNR IDPA). Monoliths can be natural boulders or processed stone slabs. Dimensions can range from the almost 3 meters in height of the major monoliths (Pat 4, Cemmo 9) to the less than fifty centimeters of the smaller ones (Pat 20). For a partial review of the lithologies in use see Fossati 2007, for a study on a particular case Danesi et al. 2014.

<sup>26</sup> Mobile monoliths were not the only recipient for the iconographic manifestations of the Copper Age in Valle Camonica. Monumental compositions from this period are also known on immovable boulders (Cemmo, Corni Freschi, Lozio Camerata) and on rock surfaces (Foppe di Nadro, Paspardo), but their number is significantly lower than monoliths.

<sup>27</sup> Among others, this is the case of the intact or fragmentary monoliths of Borno, those of Bagnolo/Ceresolo in the Municipality of Malegno, the ones of Piancogno, Ossimo Inferiore, Cedegolo and Cevo, Lozio, Capo di Ponte-San Salvatore.

<sup>28</sup> But, as we will see, the technique of realization of the camunian monoliths is more complex and involves different ancillary methods such as the preparatory scratching and the scratching passed over (polissoir). To date, no trace of painting has been demonstrated.





**Figure 13:** Visual reconstruction of the stratigraphic and chronological sequences of the later phases of the life of monolith Cemmo 19. / Restituzione grafica della sequenza stratigrafica e cronologica delle fasi di vita del monolito Cemmo 19.

position, while the subsequent phases of engraving probably took place on the already erected monument.<sup>29</sup> All monoliths have a main side, defined by the presence of a greater number of figures and the recurrence of some very precise symbology, such as the figure of the sun, but they could also be carved on the other faces. The main side was always the one facing east, as we see in the best preserved contexts such as Ossimo-Pat and, in part, Cemmo. As already mentioned, one of the defining features of the Copper Age monoliths of Valle Camonica<sup>30</sup> is their repeated carving over time, with numerous cases of overlap between figures performed at different stages. The study of the overlaps between the figures is the main tool for relative chronological analysis of these monuments, while the analysis of the context - where available - and the comparison between the depicted objects and their real counterpart are the only means for absolute chronology. The chronotypological and stylistic organization of these monuments has also been called style III A,<sup>31</sup> and is divided into three main moments: IIIA1 corresponding to the Italian Copper Age 2 – Remedello Culture in northern Italy (3000-2500 BC); IIIA2 corresponding to Copper Age 3, concurrent with spread of the Bell-Beaker culture (2500-2200 BC); IIIA3, dated to the beginning of the Bronze Age (around 2200-2000 BC). New methods for obtaining absolute chronology for these monuments are being developed and could yield positive results in the future (Galli et al. 2020).

### Methodology of documentation and study (PR)

The documentation of Cemmo's monoliths was carried out according to the protocol developed and formalized in 2018,<sup>32</sup> specifically to produce documentation of the monumental complexes of Cemmo and Ossimo-Pat. The "Digital Rocks" method places the definitive tracing of the carvings, executed in a digital vector environment articulated on different layers, as the final moment of the documentation process. It is divided into two main steps, namely the collection of the documentary base and the subsequent analysis. The former includes all the different methods of documentation

of rock art currently available, which are divided between "primary" (*frottage*, artificial light night photography, 3D modeling) and "secondary" (contact tracing, detail photogrammetry with macro lenses). The product of each documentation method is implemented in the digital drawing environment as an active basis, while the analysis is performed through the secondary processing of the *frottages* and the 3D mesh analysis. For further clarity, especially related to the physical overlaps between the figures, oblique light detail photographs, taken at night and with macro lenses, are used. The final tracing is presented in two-dimensional black/white duotone, to facilitate the immediate understanding of the different figures and to maintain continuity with the previous literature, but its digital nature allows for further reworking.

Our approach to the study of monoliths considers the monuments as individuals, each with an evolutionary history of its own. Since these are complex and layered iconographic compositions, the deconstruction of their different realization phases has been entrusted to a stratigraphical analysis, exactly as in any archaeological excavation. Each figure has been assigned an identification number (Figures 14 and 18) and, on the basis of the physical relationships of overlap and sub-position, a first raw stratigraphic diagram has been constructed. Later, groups of figures forming complex scenes clearly meant as unitary, such as horizontal or vertical herds of animals of the same species, rows of men holding hands or the ploughing scenes, were regrouped, and the matrix thus refined. All data has been managed within the "Harris Matrix Composer" stratigraphic processing system,<sup>33</sup> and the result of this elaboration was then compared with both the general chronotypological grid and with the other monuments of the same style, to elaborate the presentation of the realization phases.

A factor of great importance in the study of the carved monoliths of the Copper Age is the notion of space, and of its limits. Unlike open air rock art, which usually develops on large surfaces interrupted only by their disappearance under soil level, the engraved monoliths have clear physical limits, either natural or artificial, as in the case of the processed ones. The assessment of the relationship between the figures and their physical support is an essential factor in understanding the iconographic evolution of a monument, while following its transformation through the various steps that mark its life cycle. For this purpose, and especially with regard to monolith 11/19, the interpretative model of the "active space" was developed, according to which the portions of the monolith that are considered suitable to receive engraved figures (the active space) may vary during the life of the monument. Another category of analysis that has been implemented in the study of the carving phases is that of the "associative" or "dissociative" relations between the figures. As the monoliths from Valle Camonica are almost always the outcome of a repeated addition of figures in the same space, it is therefore important to observe not only the relationship between the figures and the space, but also that between the figures themselves. An associative relationship provides for harmonic arrangement between the figures, and concerns compositions with a sense of shared active space, even in the presence of some physical overlaps between the figures that are part of it. On the other hand, a dissociative relationship occurs when the space is managed significantly differently from the previous organization, so that the new figures are executed with manifest carelessness of the previous ones and their disposition.

In conclusion, the identification and organization of the different

<sup>29</sup> This deduction comes both from the observation of the monuments (see *infra*, Cemmo 17), both from the study of the contexts with monoliths in their primary location, such as Ossimo – Pat, where there has been no documented evidence of widespread movement of the engraved monoliths.

<sup>30</sup> This feature is also present in the Valtellina monoliths, although to a slightly lesser extent.

<sup>31</sup> Although the original designation of the style III is due to Emmanuel Anati, the most widely used chronological grid is that proposed by Raffaele de Marinis in 1994 (de Marinis 1994), later repeated and specified several times by the same author together with Stefania Casini and Angelo Fossati (Casini et al. 1996; 2014).

<sup>32</sup> See Rondini 2018, with the cited literature, for a history of rock art documentation methodologies in Valle Camonica, an analysis of the different tracing methods and the presentation of the "Digital Rocks" protocol. Even the monoliths from Cemmo and Ossimo already previously published in Poggiani Keller 2009 and 2011 will be re-documented and studied following the new methodology.

<sup>33</sup> Version 2.0b. The program was developed by Imagination Computer Services, in collaboration with Ludwig Boltzmann Institute and Universität Wien. An interesting feature of the program is that it automatically validates and highlights the cyclical relationships between figures, that is, those that are logically and physically impossible, not allowing overrides and automatically reporting errors.

engraving phases of the two monoliths were elaborated firstly on the basis of the stratigraphic diagram (the matrix), then calibrated on the analysis of the active space and finally considering the relationship (associative or dissociative) between the contiguous phases.

### Monolith No. 17: iconography, chronology, interpretation (PR)

Cemmo 17 is a slab of brownish sandstone,<sup>34</sup> of irregular rectangular shape, so far only partially published through photography and a short catalog note (Poggiani Keller 2011).

The top part has a slight narrowing, while on the sides it shows some fractures and missing parts, certainly due to post-depositional events when it was inserted into the bottom of the foundation of the Bronze Age wall (US 68). Although it is evidently ruined in the upper part, where some partially incomplete figures are recognizable on the left and right, the compositional space is symmetrical, and the monolith can be considered substantially whole. Cemmo 17 measures 100 cm in height, with a maximum width of 35 cm and an average thickness of 15 cm and includes a total of 48 figures. The iconographic analysis made it possible to split the engraving of the monument into four phases (Fig. 17), presented as follows.

*First phase:* the first action performed on the monument is the creation of a composition of weapons, with pseudo-anthropomorphic characteristics<sup>35</sup> and probably of masculine gender.<sup>36</sup> Placed in the lower part and arranged horizontally with the tip to the left, a triangular blade dagger with crescent-shaped pommel is clearly discernable (De Marinis 1994: 71-77) with a four-part rectangular appendix, and a row of four rivets in the end, which could be interpreted as a scabbard.<sup>37</sup> The sheathed dagger, though less frequently attested than the free one, is a recurring element in the Copper Age iconography of Valtellina but it is extremely rare in the monuments of Valle Camonica.<sup>38</sup> In the upper right part there is a long straight vertical rod, superimposed by numerous successive figures, with a largely missing summit. Thanks to the straight line of the rod and the enlarged circular head that seems to proceed with a trapezoidal blade to the right, this figure is clearly interpretable as a stone axe with eyelet head, the type “1” according to Casini’s typology (Casini 1998: 276). Its position in the general compositional space closely resembles the depiction on the upper right of the fragment Cemmo 4. The analysis of the overlaps also places in this first phase the canid, a wolf or perhaps a fox, placed at the bottom, under the dagger, but the absence of physical relationship with the dagger also admits its execution just after the weapons or, less likely, before them. The presence of the triangular blade dagger and the stone axe, both comparable to real-world objects, places this phase in the first half of the third millennium BC, connecting it to the Remedello culture (3000-2500 a.C.): stylistically, based on the grid elaborated by Raffaele de Marinis (1994), it is a composition of style III A1.

*Second phase:* the second phase, which introduces three anthropomorphic and two zoomorphic figures, marks a dissociative relationship with the first phase: the figures of men denote a different

use of the active space of the monolith, which is no longer the body of a pseudo-anthropomorphic composition but becomes symbolically the cosmos, which welcomes every type of symbolism. From top to bottom, there is a pair of men in the center of the monument with long triangular torsos, legs spread open, contrapositional feet and three-fingered hands. We cannot say for sure whether sex is highlighted, due to the subsequent addition of animal figures, which cover the central parts of the bodies. Just above the head of the right anthropomorph there is a solar figure, a circle with long rays, a recurring symbol on other monuments in Valle Camonica<sup>39</sup> which places the pair of anthropomorphs in a celestial or semi-celestial sphere, in direct relationship with the solar deity. The stratigraphic diagram also assigns two small quadrupeds to this phase, one half-hidden on the right and one with an elongated body on the left, both facing the right, both very small in size. Finally, the ploughing scene on the lower part also belongs to this phase, portraying the physical relationship with the subsoil offering the ideal semantic counterpart to the solar symbology described above, and concludes the symbolic representation of the life cycle. The ploughman has a triangular bust and spread legs, holds a plough with a long curved beam, short stilt, and a pointed curved ploughshare with both arms, which covers the figure of the previously mentioned canid. The two yoked oxen have elongated bodies, short straight limbs and long horns. The top bovine has a slightly curved back, with a raised posterior, just as the lower one which, however, has a lesser level of realization than all the other figures, with uncertain, less precise blows, and a rather poor overall construction, especially in the short legs. This can probably be attributed to its creation at a time after the monument was put into place and its consequent vertical position. We can suppose that the engraving of a figure on the lower part of a slab already fixated vertically, almost in contact with the consecrated soil, must have caused some technical difficulty to the engraver. The figures of the second phase, even without offering valid standpoints in terms of absolute chronology, are assigned by de Marinis, Casini and Fossati’s classifications (de Marinis 1994; Fossati 1994; Casini et al. 1996) to the second style (III A2), contemporaneous with the spread of the Bell Beaker culture in northern Italy (2500-2200 a.C.). This chronological attribution was done based on a single case of overlap<sup>40</sup> and on the occurrence of similar figures (e.g. the anthropomorphs with triangular bust and open arms with three-fingered hands) on monumental compositions considered exclusive to the style in question, such as Cemmo 3 and Ossimo 9.

*Third phase:* according to the overlaps, the third phase is marked by the appearance of wild animals in the central body of the monument. The figures of running cervids dominate the scene, either directed towards the left and right sides: there are both cervids with long stylized antlers or without antlers, and animals with a more stocky and short bodies, such as those at the top or the one on the right. The active space is now less structured: the pair of anthropomorphs in direct relationship with the sun no longer represents the vertex of the composition, and the relationship with both the earlier phases is markedly dissociative. Animal figures follow one another in the center of the monolith, single or arranged in pairs of male and female, as in the case of the two deer with antlers with females in tow.

<sup>34</sup> The shape of the monument would also allow it to be called “stela”. Here, for lexical coherence, we will continue with the definition of “monolith”. Cemmo 17 since 2014 is part of the stable exhibition path of MUPRE – National Museum of Prehistory of the Valle Camonica, in the Section *The Manifestations of the Sacred. Megalithic Sanctuaries*, in Capo di Ponte (State number: ST165903). In 2011 it was exhibited in Trento in the exhibition *Le grandi vie delle civiltà. Relations and exchanges between the Mediterranean and central Europe from Prehistory to Romanity* (Poggiani Keller 2011: 460-461).

<sup>35</sup> I refer with this definition to the compositions, exclusive to the Valle Camonica and Valtellina, in which the anthropomorphic intent can be deduced exclusively from the presence of real objects, both weapons, garments and jewelry, arranged in the compositional space of the monolith that, devoid of physical characterizations, becomes itself a human body. For an analysis of the body in European stelae and menhirs: Robb 2009.

<sup>36</sup> The gender characterization of carved monuments from Valle Camonica, developed by various scholars (lastly, with previous bibliography, Casini & Fossati 2013) on the basis of the type of figures they carry compared to contemporary funerary grave goods, is a complex topic whose evaluation is outside the scope of this work, but which will be the subject of future considerations (see Talalay 2005; Robb & Harris 2017).

<sup>37</sup> Although this interpretation is the most likely, it should be noted that dagger sheaths are usually depicted differently, using a more geometric-shaped, or sometimes sinuous, scabbard, with fully pecked body and sometimes arched terminal part.

<sup>38</sup> It occurs, to date, only on Cemmo 1.

<sup>39</sup> We can mention Ossimo 7 – 8 – 9, Cemmo 3 – 4.

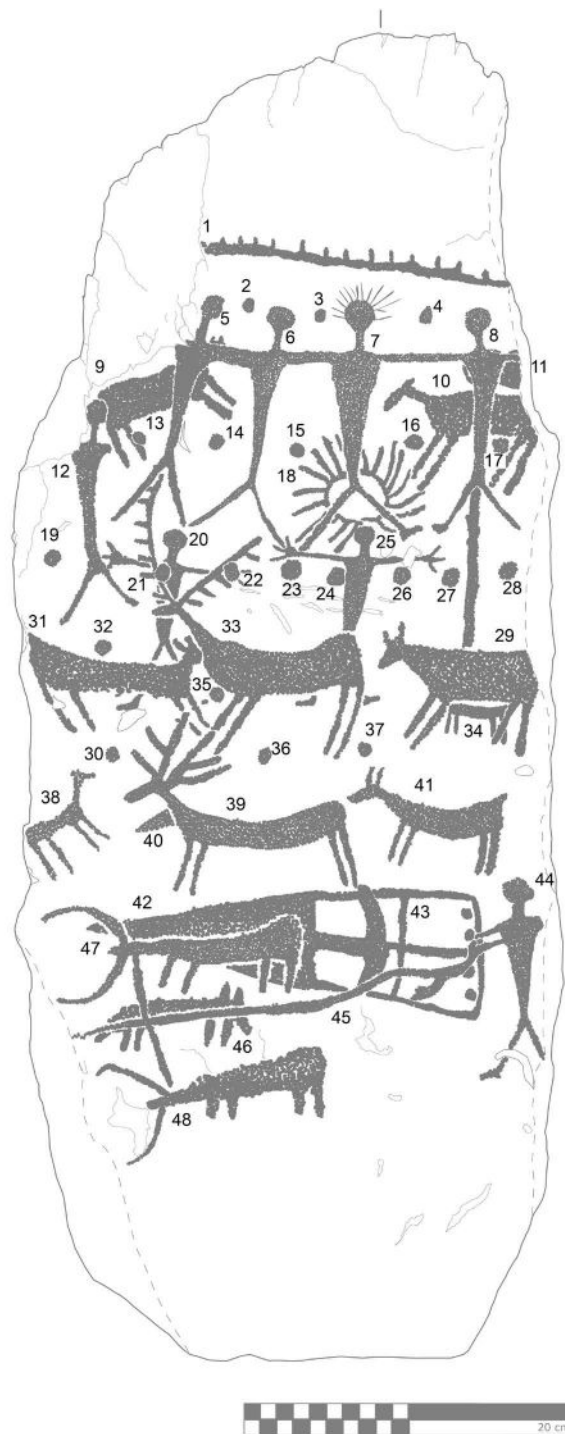
<sup>40</sup> This is the overlap of a man with open hands and free body on triangular blade axe on the fragment Ossimo C1.



As can be seen in the matrix, the last addition to this phase is given by the appearance of the lower cervids running to the left, of which the male with antlers covers the legs of the two central cervids and has the unusual characteristic of having the hind legs, executed with polissoir technique, placed with an opposite inclination to the front ones. This morphological trait is quite rare, having been found only on the Borno 1 boulder (sides B and D) so far and, with some doubts related to the precarious state of conservation, on the recently published stela of Piombarda 1 in Valtellina (Casini et al. 2020). Despite the contemporary overlaps, the figures of this phase seem to share the same general placement in the active space and a markedly dissociative relationship with the previous figures, and thus form a unitary phase. Chronologically, it is difficult to express an opinion on

this phase, though it is surely later than the previous one. By how much, it cannot be said.

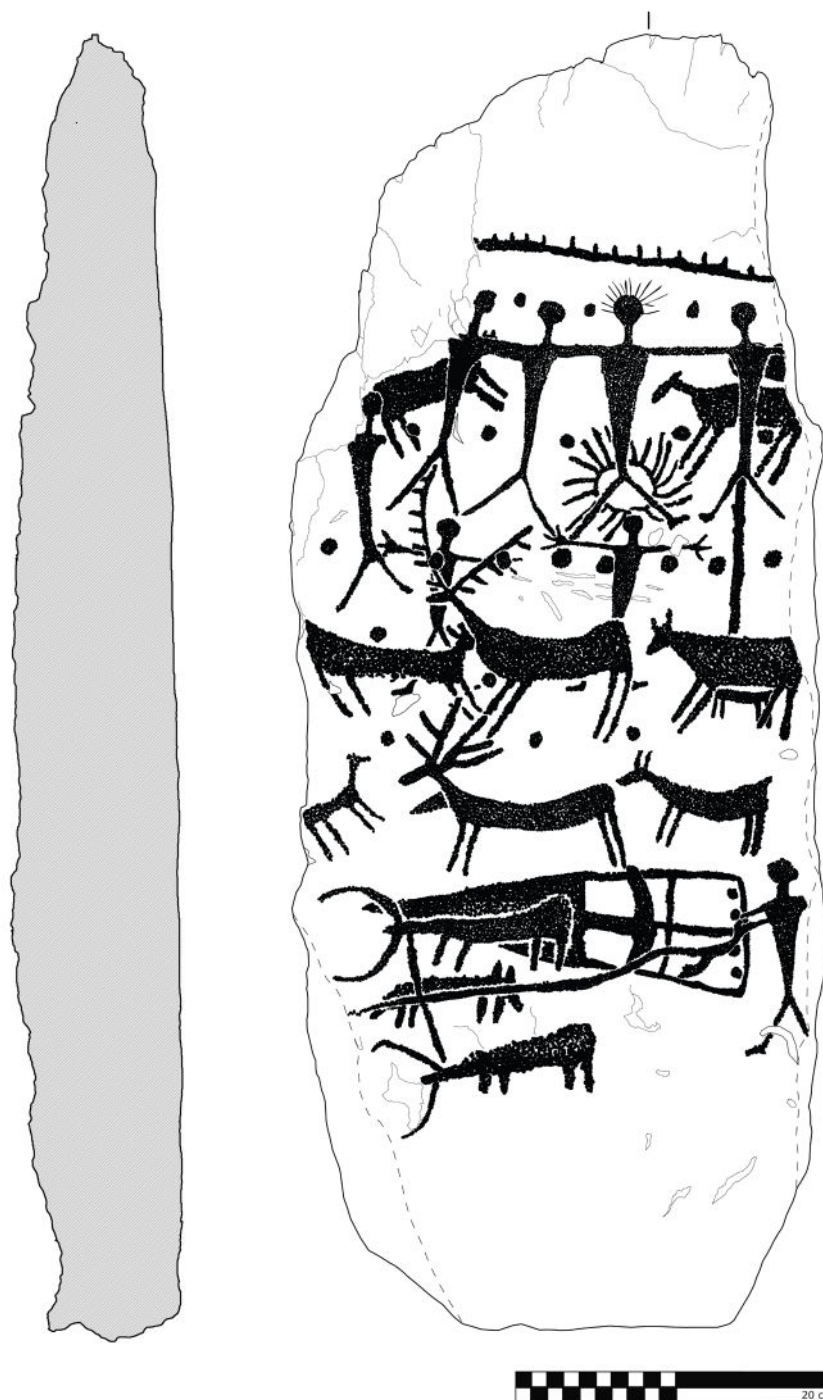
*Fourth phase:* the fourth phase welcomes the end of the life cycle for the monolith. From top to bottom, there is an indented horizontal line, a row of anthropomorphs holding hands, an additional anthropomorph and various dots organized in lines. The layout of the rows of men holding hands with long triangular busts and wide legs is well known in monumental compositions, such as Cemmo 3, Ossimo M14 and Campolungo 2 and, in each case, represents the last executive phase. On Cemmo 17 only the row of four men at the top is complete, while the second row seems to have only been started with the image of an incomplete anthropomorph on the left. Of the four great men, the third from the left has a radiating



**Figure 14:** Cemmo 17: Photo with artificial lighting and tracing with figure numbers. Cemmo 17. / Fotografia con luce artificiale e rilievo con numeri di figura.

crown<sup>41</sup> performed using a scratching technique (Fig. 16). This could be due to a case of mixed techniques but is more likely just an incomplete figure. In support of this hypothesis, we recall the Ossimo M14 monolith,<sup>42</sup> where in some figures of this same phase, otherwise made by pecking, some details are created using a similar light scratching,<sup>43</sup> such as with limbs and hands or even the perimeter of partially pecked busts, and worked as a preparatory design for the subsequent pecked, definitive realization.

The human figures are interspersed with a double row of dots, placed at the level of the heads and abdomens. The dots mark, as punctuation in a text, the rhythm of human figures and, in addition to a possible but obscure symbolic meaning, they could also function as a graphic guide for the engraver.<sup>44</sup> Cemmo 17 only has one row of connected men, but the presence of more dots below may indicate that other rows were also underway, but were somehow never made: the final stage of the evolutionary trajectory of this monument



**Figure 15:** Cemmo 17: tracing. / Cemmo 17: rilievo.

<sup>41</sup> Morphologically this crown, with rays directly outpouring from the head of the anthropomorph, is very similar to that present on Cemmo 3.

<sup>42</sup> This feature has already been noted by Francesco Fedele (Danesi et al. 2014: 32), who interprets the graffiti execution as a preparatory drawing. This same engraving technique is found also in Iron Age contexts, such as Dos dell'Arca – Rock 10 (Rondini & Marretta 2019: 22-27).

<sup>43</sup> The graffiti passed over (polissoir) is instead a realization technique used both in the figures of the monumental compositions (Cemmo 23), and in the rock art of other chronological phases, as well highlighted in the recent study of Seradina I Roccia 12 (Marretta 2018).

<sup>44</sup> This same function can also be postulated for Cemmo 11/19, where this same phase is present and is not concluded, as well as for Ossimo M14 and M12, and also Campolungo 2.

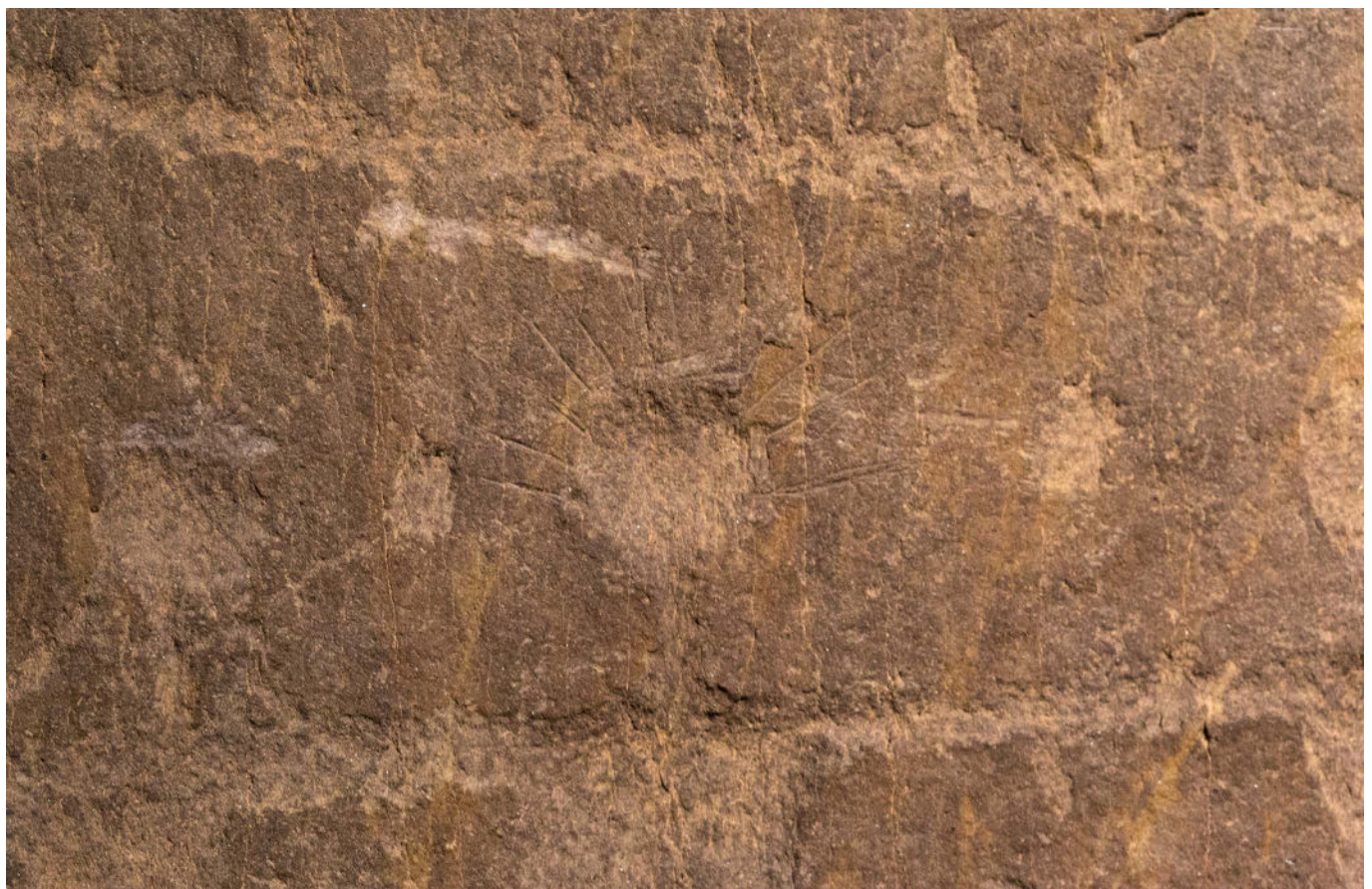


is therefore considered incomplete, a visible testimony of the sudden interruption of its life. This phase is intended as the third great dissociative moment in the composition of the monument: the rows of linked men interspersed with dots cover each figure indiscriminately, occupying all the available space and positioning themselves as absolute ruler of the semantic space. The only figure associated with them is the indented line that dominates the image, an ideal limit of human space and threshold towards the celestial one. From a chronological point of view, these figures do not offer useful holds for an absolute chronology, not having any identifiable real-world objects. However, they correspond, on a typological basis, to the final stage of style III A, the so called III A 3, which is fixed by de Marinis, Casini and Fossati at the beginning of the Early Bronze Age, towards the end of the third millennium BC (Casini 1994: 173; Casini et al. 1996: 238; Casini & Fossati 2013: 168).

*Chronology and interpretation.* The Cemmo 17 monolith shows four phases, marked by three distinct iconographic shifts. During its first phase it was decorated with a life-size composition of weapons, which did not reflect a balanced symmetrical structure, leaving a large empty space in the center, though their relationship with the active space of the monument is dynamic and functional to the pseudo-anthropomorphic depiction of a warrior in arms. From the second phase onwards, the appearance of triangular body anthropomorphs in the ploughing scene and in the “solar couple” marks the deactivation of the space as a pseudo-anthropomorphic body and inaugurates it, with a sudden shift, as a cosmological palimpsest. At this point, Cemmo 17 is organized on a vertical central axis, and the symbolism of the depictions refers to the absolutes of the relationship of man with the sun and the earth, which is as direct as it is manifest: the right man’s head basically touches the sun, the source of life, while the ploughman cuts and digs through the earth, enabling him to create life. The arrival of the large game in the center of the monolith inaugurates the third phase by breaking into the pre-

vious symmetry, and causing a complex sequence of overlaps, both on the previous figures, and between the animals themselves. The active space of the monument is chaotically occupied, and rightfully so, it being wildlife, while the presence of isolated animals above the already partially covered “solar couple” has the effect of symbolically canceling its vertex value. The last phase obliterates all the previous ones, according to a well-known scheme recurring also in other monuments, such as Cemmo 3, Ossimo M14 and Cemmo 11/19 itself. We therefore know that Cemmo 17 is inaugurated during the Remedello phase (Style III A1, 3000-2500 BC), but less certain is the absolute dating of its further steps and conclusion. According to the aforementioned chronological grid (de Marinis 1994; Casini et al. 1996) this would have taken place somewhere between the final Bell Beaker phase at the beginning of the Bronze Age (around 2200-2000 a.C), consistent with the abandonment of the sanctuaries and sacred places with monoliths.

The monument had a long life, going through several phases during which it changed iconography and, like other monuments at the site, its life was abruptly interrupted while it was still in development. The presence of a succession of different phases of use, marked by unmistakable iconographic shifts, is an analysis factor of enormous interest for the traditional chronotypological approach, but not only. In fact, from an interpretative perspective, the different phases of the monoliths of Valle Camonica seem to tell us that these monuments did not have a single life, but several. “Life of the monument” is meant here as its function, its role in the cult dynamics that were to animate the sacred spaces of the sanctuaries. We cannot ignore the fact that an anthropomorphic monument, even a pseudo-anthropomorphic one, must have had a profoundly different meaning and function from one fulfilled by a palimpsest monument, which houses numerous zoomorphic or anthropomorphic figures of various kind. In this sense, the act of recognizing different carving phases could correspond to the acknowledgement of the hypothetical alternation of phases in the “life of the monument” or it could



**Figure 16:** Cemmo 17: detail of the head with graffiti rays. / Cemmo 17: dettaglio della testa con raggi graffiti.

simply be a reflection of the different changes in village life, or clans, to which these monuments belonged. These problems are destined to remain open for now, but they need to become a consistent part, along with the typological and chronological analysis, of the objectives of research if we want to achieve a better understanding of these monuments of the Copper Age.

The reuse of Cemmo 17 as a foundational stone in the Bronze Age wall is also charged with symbolic significance, considering that the monolith was not destroyed but rather placed with the engraved face down, in direct contact with the soil.

### Monolith No. 11-19: iconography, chronology and interpretation (PR)

Cemmo 11/19<sup>45</sup> is one of the major monoliths at the site, both in size and number of figures, and is to date almost completely unpublished (Poggiani Keller 2011). It's a big slab of purplish sandstone<sup>46</sup> irregular in shape, but generally triangular, with a cusp-restricted summit and a more regular central body, probably the result of processing. It has a very particular composition. A natural detachment proceeding from the head down to the left of the base, separates

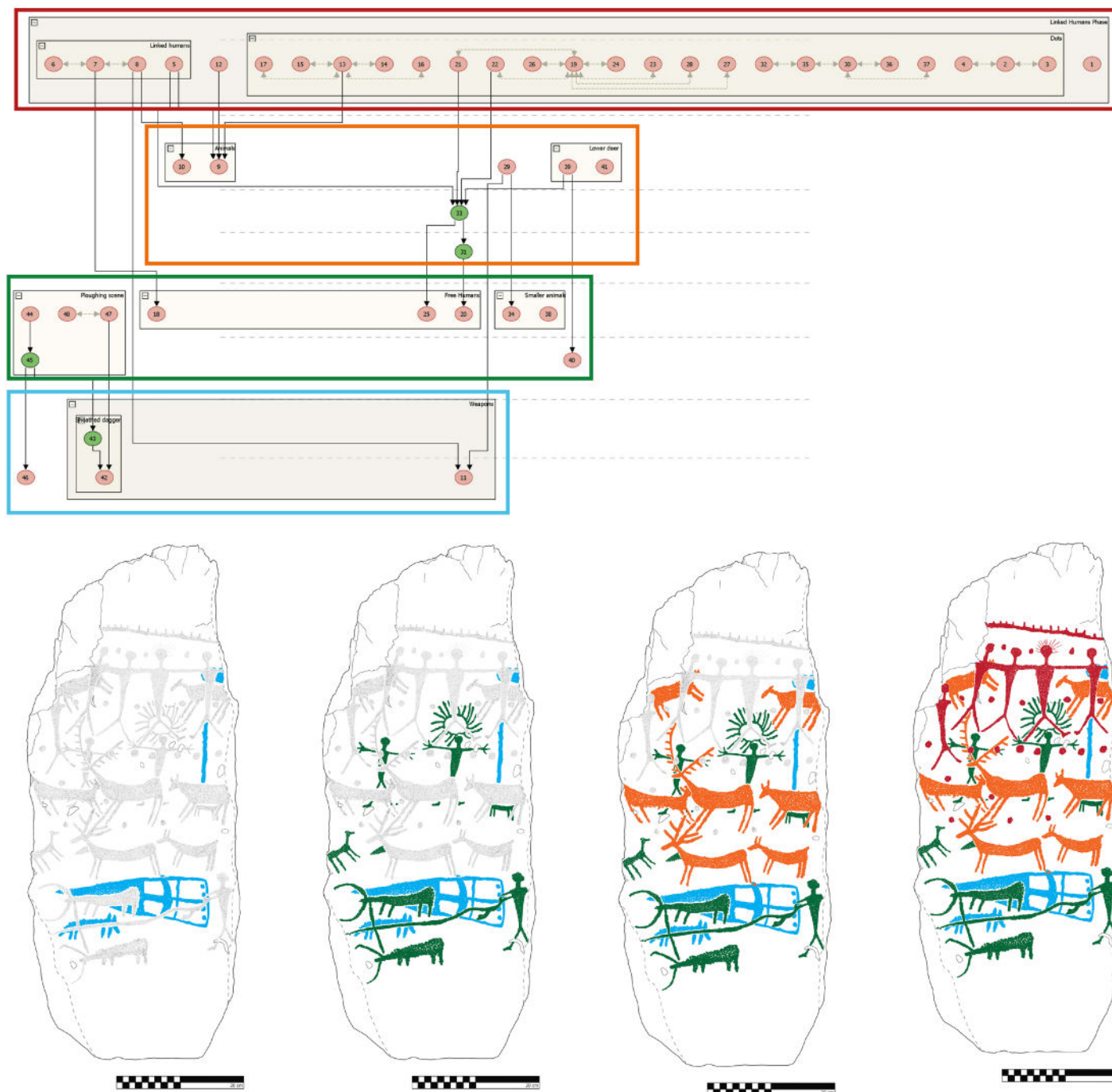


Figure 17: The engraving phases and the Matrix diagram for Cemmo 17. / Le fasi di incisione e il diagramma Matrix per Cemmo 17.

<sup>45</sup> Cemmo 11/19 is also part of the MuPre's stable exhibition itinerary – National Museum of Prehistory of the Valle Camonica, in Capo di Ponte (State Number: ST165913).

<sup>46</sup> The monolith has a particularly bright dark violet color in the smooth middle of the right where the engraved figures, scratching the smooth surface, expose the inner level of the rock which is a clearer color. In this way an interesting chromatic effect is formed that is somewhat reminiscent of the one, more marked and already the subject of study (Danesi et al. 2014), of Ossimo M14. In the coarser left half this effect does not occur.

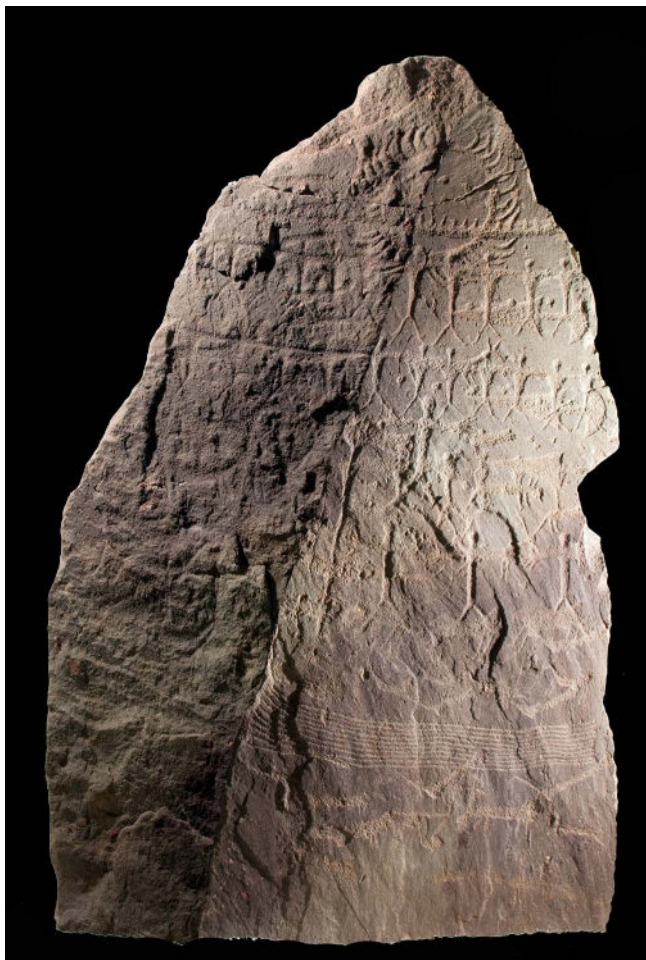


the naturally smooth right half from the very irregular and corrugated left one, and is perhaps the result of working and coarse roughing. The monolith presents, in addition to the showy "V" fracture that separates part of the head from the body, now recomposed through restoration work, some missing side parts in the middle right, as shown by the presence of some disfigured images. Cemmo 11/19 is carved on both the front and back side, for a total of 114 figures, and measures 182 cm in height, 112 cm in width, with a maximum thickness of 31 cm. According to iconographic analysis, the monument goes through six phases (Fig. 23), as described below.

*First phase.* The first depictions created on Cemmo 11/19 form a composition of objects that suggests a pseudo-anthropomorphic representation, oriented towards the male sphere.<sup>47</sup> What emerges from the analysis of the active space of this first phase is that the figures are set up on a median axis that only includes the right half of the monolith, morphologically characterized by a perfectly smooth surface, while the remaining part of the monolith, irregular and corrugated, is excluded from the composition (Fig. 20). On the right, at the top, there are three triangular blade daggers with crescent-shaped pommels, placed in vertical alignment, with the tips facing to the left. These are faithful reproductions of the well-known copper dagger typical of the Remedello culture (de Marinis 1994: 71). On the left is an axe with a large, rounded heel and a trapezoidal blade, facing to the right. Its real-world counterpart (Casini 1998: 276) is likely the same as the axe on Cemmo 17, i.e. a polished stone artifact which

dates to the Rame 2 phase (3000-2500 BC approximately) and is consistent with that of the daggers. In the lower part of the monolith there is a row of six parallel horizontal lines, also a known image on numerous other Copper Age monoliths in Valle Camonica,<sup>48</sup> and can be interpreted, when included in pseudo-anthropomorphic symbolic compositions, as a multi-threaded belt. This is an element of clothing that is recognized, with local differences, in all the major groups of chalcolithic statues-stelae of the Italian Alpine area, from the ones in Trentino to those of Aosta. All the elements at our disposal, from the placement of weapons in the upper-middle body with the cutting edges and tips facing inside to the belt in the lower part, suggest a clear intent of anthropomorphic representation, conveyed exclusively through the attributes and completely devoid of physical traits. Contrary to what would be assumed (Casini et al. 2014: 152), the figure of the sun is not ascribed to this phase. This is based on the observation of its relationship with the active space, as we will see, although this figure may be compatible with the pseudo-anthropomorphic composition from an interpretative point of view, if read as a symbolic signifier of the head, at the top of the compositional pyramid. The split between phase 1 and phase 2 in any case comes from semantic and compositional reasoning, but does not entail a chronological difference: in fact it is likely that these first two phases are both related to the same carving period, defined by the weapons of the Remedello culture (stile III A1, 3000-2500 a.C.).

*Second phase.* The depiction of the sun is executed as a lar-



**Figure 18:** Cemmo 11/19: photo with artificial lighting and tracing with figure numbers. / Cemmo 11/19: fotografia con luce artificiale e rilievo con numeri di figura.

<sup>47</sup> With regard to the gender issue, we apply the same disclaimer made for Cemmo 17.

<sup>48</sup> It occurs on the monoliths Bagnolo 1, Campolungo 1, Ossimo 8, M12, M19, C20, Cemmo 15, Pat 1 and 5. The only monolith outside Valle Camonica where it is present is the recently found stela Piombarda 1, from Teglio in Valtellina (Casini et al. 2020).

ge circle with curved rays facing upwards, placed at the top, in a dominant position and between the smooth part of the monument and the more irregular part on the left. From a compositional point of view, the appearance of the sun functions as an activator for the previously unused space, which was now available to be carved and thus becoming active. Animals are the other innovation of this phase: there are two long-bodied animals in the lower part, perhaps suids or bovids, while in the central part, at the top and on the back depictions of canids with short legs, long tail, upturned ears and elongated muzzle appear: they may be foxes, but their depiction in packs suggests that they could be wolves. There is a vertical sequence of six specimens to the left of the sun, facing to the right, while one pair stands to the right in the middle and another is present in the exact same position on the back of the monolith (Fig. 19). This phase has a partially associative relationship with the first one, but significantly moves the central compositional axis of the space to the center of the monolith and marks the entry of full-bodied figures into the progressive enrichment of the monument, which begins to lose its previous pseudo-anthropomorphic value.

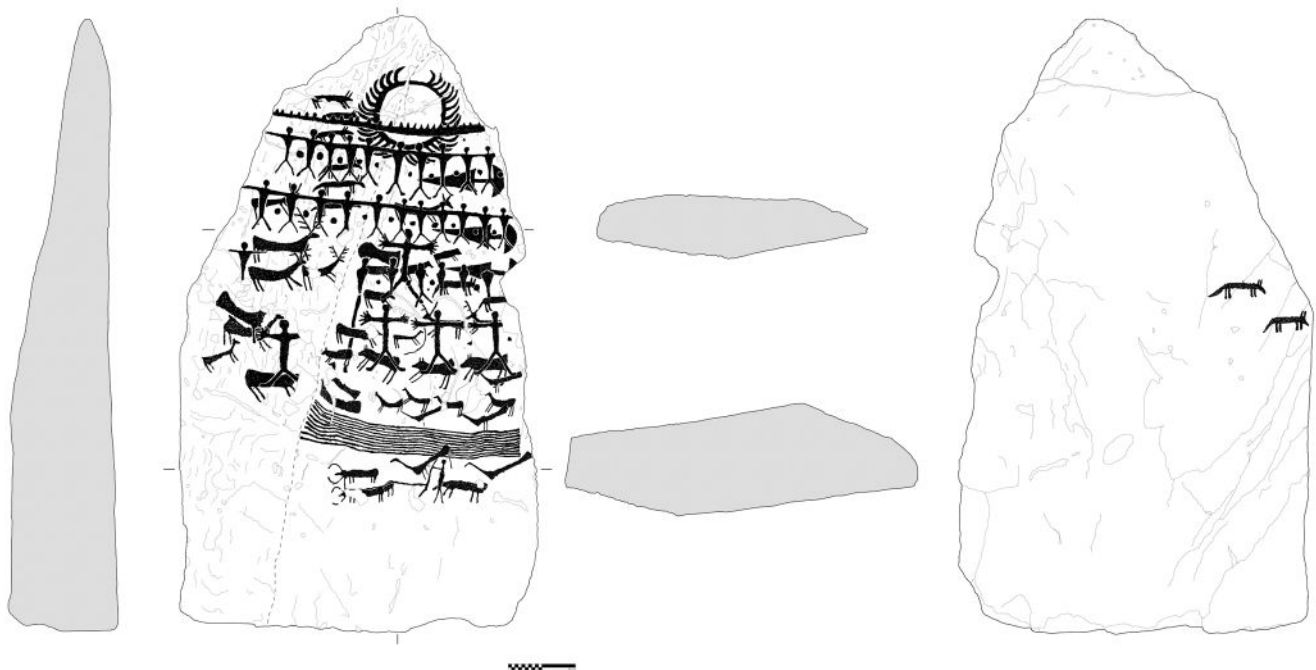
*Third and fourth phases.* With the third and fourth phases, the active frontal space sees the substantial inclusion of wildlife, represented by a large series of animals, while the rear space of the monument is definitively abandoned. The two phases are divided by virtue of the matrix sequence alone, motivated by the mutual physical overlaps, because the attempt to group animal figures on a stylistic basis, for example focusing on single anatomical details, has not been positively reflected in the logic of overlaps, leading to cyclic error. The animals are probably sequential additions, which had to obey ritual or social logic, the likes of those would be very difficult to imagine, let alone rationalize in modern times. Significant, however, is the appearance of the first anthropomorphic element of the monument, in the scene of the ploughman, in the lower part. As a general aspect of the monument, this is similar to what has already been seen in Cemmo 17: the plough extends from right to left. The man of Cemmo 11/19 seems to hold the stilt with one hand while keeping the other raised, but the presence of a gap in the surface makes it difficult to confirm or deny the hypothesis. The plow is simple, with

a 45° ploughshare, long curved beam, and yokes two bovids with long bodies, a barely raised rear, and wide horns. The man's body is tapered, not triangular. In phase 4, the two deer figures with antlers in the central part of the monolith are noteworthy, in particular for the detail that only the left antlers have lateral branching, while the right are smooth.

In Cemmo 11/19's phase 4, the possible first depiction of a new animal species in the rock iconography of style III A appears;<sup>49</sup> these are the five figures engraved in the lower part of the monolith (Fig. 19 and 21) with heavily inclined bodies, enlarged rears, their lower points bulging and bent at about 50°, long thin necks and short muzzles. Visible in three of them are two thin feet just hinted at, right behind the folding of the body (Fig. 21). The general shape of the bodies would seem to recall some features of the cervids, but they would be abnormally slender, unusually long, weirdly placed in the space, and without any trace of antlers or legs. Clearly this comparison is problematic. One other possible interpretation is that they could be depictions of birds, perhaps medium to large in size, such as some specimens of the family of *fasianids*: pheasants, grouses or the like, but this is still largely hypothetical.

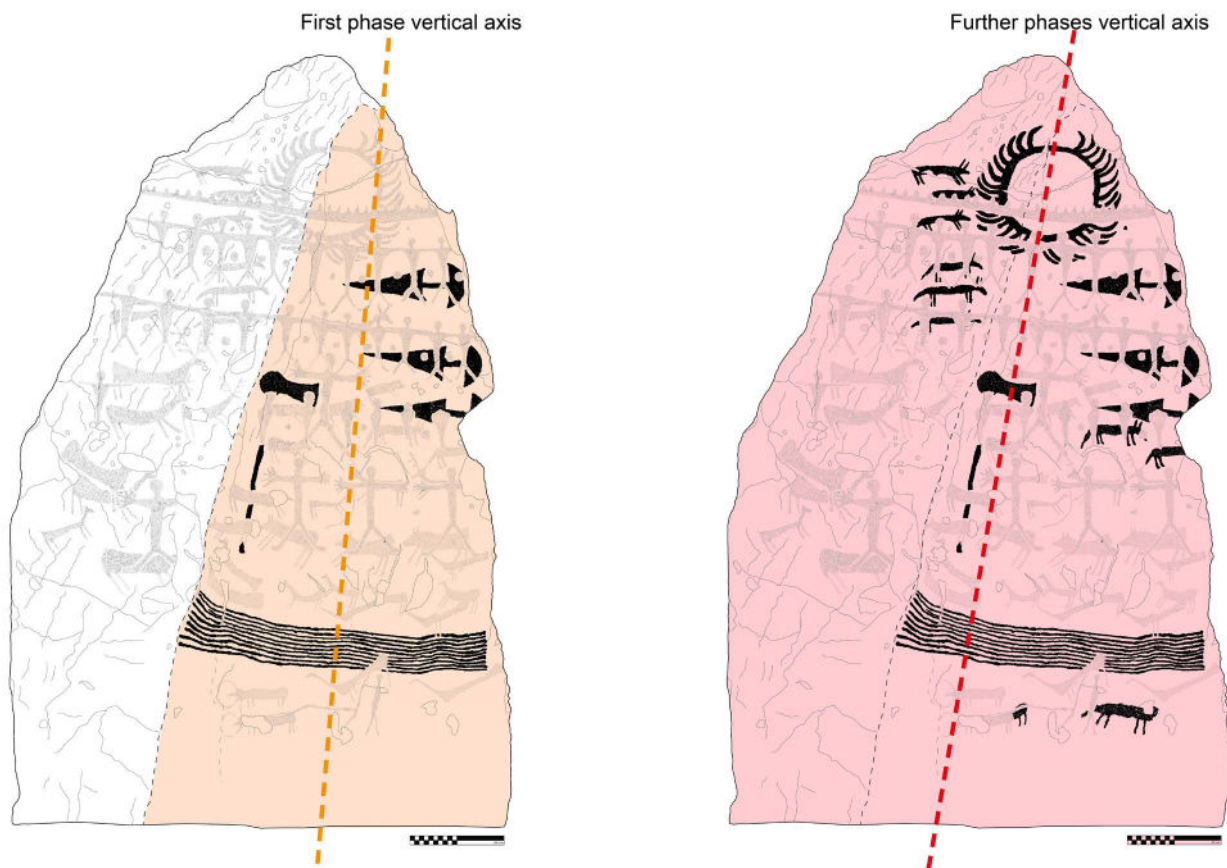
From a chronological point of view, phases 3rd and 4th do not offer any absolute hold, while from the compositional perspective we can see how the wild game enriches the active space of the monument, filling empty points and overlapping parts of the first two phases of figures in a dissociative relationship, though not a violent one. Animals are generally arranged along horizontal rows, and an element of strong interest is the conscious arrangement with respect to the two sides of the monolith. There is no row of animals that starts on one face and proceeds to the other: they all converge towards the median axis represented by the change of surface, but none of them crosses or overlaps it. Moreover, it is to be noted that the disposition of the animals on the right side of the monolith is quite different from the ones on the left. Where the former are orderly arranged in rows and engage on very few overlaps, the latter seem to be grouped more randomly, and with wider overlapping parts.

The ploughing scene at the bottom is similar to those on Cemmo 2 and Cemmo 16, Pat 4, Borno 1 - face B and most importantly,



**Figure 19:** Cemmo 11/19: tracing. / Cemmo 11/19: rilievo.

<sup>49</sup> The only other case of possible bird is present on the Cemmo 20 fragment, but the monument is still under study, and the preliminary sketch published so far (Casini et al. 2014: 154-155) does not meet the necessary scientific requirements to serve as basis to discuss its details.



**Figure 20:** Cemmo 11/19: analysis of the dynamic active space of the monolith. / Cemmo 11/19: analisi dello spazio attivo dinamico del monolito.

Bagnolo 2: these references can lead to placing at least the phase 3 of Cemmo 11/19 within the so-called Style III A1, or the long “Remedellian” phase of the camunian megalithic art. The introduction of the first anthropomorphic figure in the active space of the monolith definitively marks the closure of the pseudo-anthropomorphic symbolic phase: Cemmo 11/19 begins to function as a cosmological palimpsest, in which the figures are arranged cumulatively, and where the repeated execution of animals of different species is possibly bound to the performance of certain rituals. In this sense the monument is alive and taking part of the evolution of the life of the village or clan to which it belonged. In this new functional sense, the horizontal lines that were previously legible as a belt seem to assume the new function of plough lines, and directly referred to the plough scene that approaches them, with which they form an association also occurring on other monuments, such as Ossimo 8.

*Fifth phase.* Apart from the cervids on the top part, assigned to this phase by the sequence of overlaps<sup>50</sup> but that could also be referred of the previous stage, the fifth phase of the monument is marked by the appearance of five large anthropomorphs in the central part of the monument. These are pictured asexually, with enlarged linear bodies, legs spread with their feet facing out, large open arms and big hands with five fingers. Their technical realization is raw, the blows coarse and deep, generally lacking the executive finesse of the figures from the previous phases. Iconographically, they do not find a direct comparison to the monumental compositions of the so-called Style III A and nor even in the known repertoire of rock art from the same period (Fossati 1994; Arcà 2005). The posture of the body, with open arms and hands, resembles that of human figures often recurring in pairs or triads, as already seen in phase 2 of Cem-

mo 17, but the shape of the torso, which is not triangular here, and the limbs, which are not linear here, distinguish them. The position of the figures in space is strongly dissociative from the previous phases and does not seem to respect any canonical scheme: apart from the three nearby anthropomorphs, recalling the examples already mentioned on Ossimo 8, 9 or Campolungo 2, the presence of the other anthropomorphs ruins the symmetry in the composition. In the internal sequence of the monument this phase is to be considered mature and the figures, despite their uniqueness, can be juxtaposed to their companions with triangular bodies and open arms and hands, which are usually dated to the second moment of the III A style, coeval to the Bell Beaker culture (2500-2200 a.C.).

*Sixth phase.* Even the final phase of the monument is in a strongly dissociative relationship with all the previous ones, and here it is also represented by the rows of anthropomorphs with triangular busts and open arms, which appear to hold hands, and by the set of small dots at the abdomen level (Fig. 22).<sup>51</sup> As already noted in the analysis of Cemmo 17, the last iconographic phase of the monolith is also incomplete. The third row from above seems to have been begun, but not completed: on the far left there is a solitary anthropomorph without legs, while on the right half, at the same level, there are six torsos of which only one is equipped with legs, only five have heads, while one is completely limbless. There are two irregular dots even lower, a possible clue to a fourth row, just hinted at and never developed. Also in this monolith the rows of men are accompanied by an indented top line, by which it is associated from a compositional point of view because it determines its upper limit. From a semantic point of view, it is noteworthy that the indented line significantly obscures the image of the sun, replacing it by bounding the

<sup>50</sup> Being placed at the top of the composition, the two animals are superimposed only by the figures of men of phase 6, and do not overlap anything.

<sup>51</sup> This composition also occurs on Cemmo 3; Cemmo 15; Cemmo 16; Cemmo 18; Cemmo 20; Pat 1; Campolungo 2; Ossimo 12; Ossimo M14.



high vertex of the active space and thus dominating this last period of the monument's life. Chronologically, this sixth phase corresponds exactly to the fourth phase of Cemmo 17, to which we refer.

*Chronology and interpretation.* The iconography of Cemmo 11/19 exhibits an initially very strong relationship with its lithic support. The analysis of the first phase clearly shows how the use of space is constrained to the consideration of only the right half as "active": the pseudo-anthropomorphic composition is exclusive in this regard. The addition of the sun, as we have seen, enables the entirety of the space to be clad with figures, and the subsequent phases show a gradual growth of the front side that leads to a kind of final compositional *horror vacui*. Again, wild animal figures animate the central part of the life of the monument, with linear and vertical groupings of different species and sometimes, as is the case only with deer, overlapping. In respect to the figures of animals, we are still far from a firm hold on their meaning. They could have been totemic elements representing the ancestors (Casini et al. 2014: 156), but we cannot definitely rule out the possibility of a hunting cult in place (Whitehouse 1992: 40-42). This of course would be related to an activity now completely symbolic and devoid of any practical needs, being the Copper Age societies fully operational without the meat supply produced by hunting. Other interpretations might be hypothesized, better suited to the complex set of religious and social practices which was probably intertwined to these monuments, but the topic is complex and deserves a dedicated work, following to the complete publication of the entirety of the monuments.

The ploughing scene is also placed in the lower register, in an almost direct contact with the ground, and constitutes with the sun a dichotomic relationship of strong symbolic value. The fifth phase is enigmatic: the previously never seen large figures of anthropomorphs with open arms and hands are arranged without symmetrical order and seem to lack a precise iconographic plan. On the contrary, the symbolic closure of the monolith in the sixth phase is very orderly

and shows a strong ideological separation from all the previous phases. The obliteration of the solar figure, along with the covering and wide-ranging iconographic plan, cause a general reorganization of the monument, one that no longer takes into account any of the previous phases. Cemmo 11/19 also had a long life and a sudden end, but perhaps because of its size it was not subsequently reused or obliterated: unlike Cemmo 17, the monument remained in its original seat, slightly leaning forwards but clearly visible even in the centuries of abandonment and reorganization of the site. That is, of course, until its beheading, which took place in late Roman times, in the wider context of the violent de-sacralization of the place of worship.

## Discussion (PR)

The two monoliths have very similar trajectories: their respective initial and final phases are almost completely identical, while there are some differences in their intermediate evolutions. This is not the place to definitively assess the function of these monuments (Casini & Fossati 2013; Casini et al. 2014; Marretta 2014; Robb 2009, 2020), which is the ultimate theme to which it will be necessary to return in the future, following the publication of the full study of the complexes of engraved monoliths of Cemmo and Ossimo-Pat. However, a brief comment is necessary. Firstly, it can be reiterated the concept that many of these monuments appear to have changed function in the unfolding of their life cycle. Of course, there are also monoliths in Valle Camonica which are the result of a single iconography, organic and unitary, such as Cemmo 6 or 10, Ossimo 10 and Campolungo 1, but most of the camunian monoliths are the result of a long process of accumulation and juxtaposition of depictions. It therefore seems clear that the succession of the different carving phases, especially when marked by a shifting use of the active space, must have been mirrored by a change in the function of the monument. The two monoliths have very similar trajectories: their respective ini-



**Figure 21:** Detail of the figures on Cemmo 11/19. / Dettaglio delle figure su Cemmo 11/19.



tial and final phases are almost completely identical, while there are some differences in their intermediate evolutions. This is not the place to definitively assess the function of these monuments (Casini & Fossati 2013; Casini et al. 2014; Marretta 2014; Robb 2009, 2020), which is the ultimate theme to which it will be necessary to return in the future, following the publication of the full study of the complexes of engraved monoliths of Cemmo and Ossimo-Pat. However, a brief comment is necessary. Firstly, it can be reiterated the concept that many of these monuments appear to have changed function in the unfolding of their life cycle. Of course, there are also monoliths in Valle Camonica which are the result of a single iconography, organic and unitary, such as Cemmo 6 or 10, Ossimo 10 and Campolungo 1, but most of the camunian monoliths are the result of a long process of accumulation and juxtaposition of depictions. It therefore seems clear that the succession of the different carving phases, especially when marked by a shifting use of the active space, must have been mirrored by a change in the function of the monument, which in turn is perhaps the sign of a social change taking place.<sup>52</sup> The depictions were to be linked to a series of ritual actions carried out by the society to which the monuments were referred. The same monuments perhaps recorded key moments in the unfolding of the life of one or more villages, or human groups (clans). In this sense, the enormous variety found in the iconographic structures of the carved monoliths of Valle Camonica reflects a concept that will be necessary to expand and better articulate in the future, namely that each monument travels in a vital arc of its own, as it is a unique and direct witness to an original series of events of which almost every

trace has been lost. It is clear that recurrent compositional and associative patterns are identifiable, and it is certainly possible and useful to build a relative chronotypology of the figures. Nonetheless, it is the author's strong conviction that, beyond their chronological value, it is essential to consider that the figures engraved on these monuments had a meaning and function<sup>53</sup> and were part of a system of rituals and ceremonial actions, that had to be understood and shared by the society at the time (Lewis-Williams & Pearce 2005).

From the point of view of the history of the site, the study of the last phase of the two monuments, represented by the rows of anthropomorphs and dots, poses fundamental questions about the chronology and circumstances in which Cemmo's Copper Age frequentation concluded. Chronologically, we know from the authors themselves (de Marinis 1994: 77; de Marinis & Fossati 2012, 285) that the stylistic dating of the last carving phase instyle III A at the beginning of the Early Bronze Age may not be as firm as that of the previous phases, that were anchored to precise comparisons with real objects. However, context analysis with the material culture of the Sanctuary of Cemmo testifies that this absolute dating would appear to be correct, as it is reflected in the absolute chronology of the sanctuary, wherein attendance stopped at the beginning of the Early Bronze Age.<sup>54</sup>

Finally, on a larger and bolder interpretative scale, we could perhaps imagine the concluding stages of the two monuments, significantly incomplete, as the signal of an unexpected and rather sudden conclusion not only of their life, but also of the sanctuary itself.



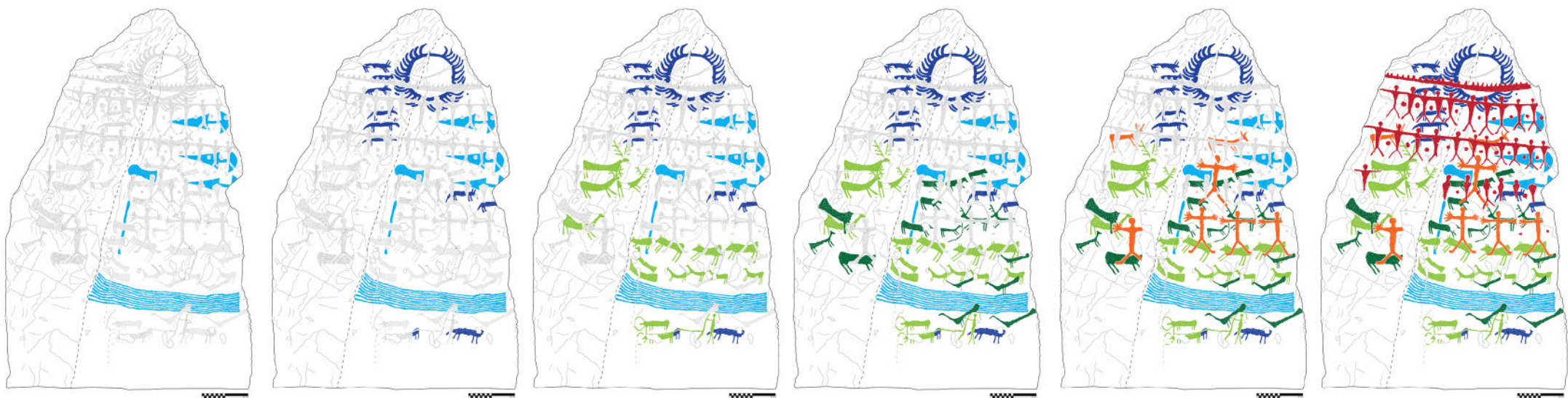
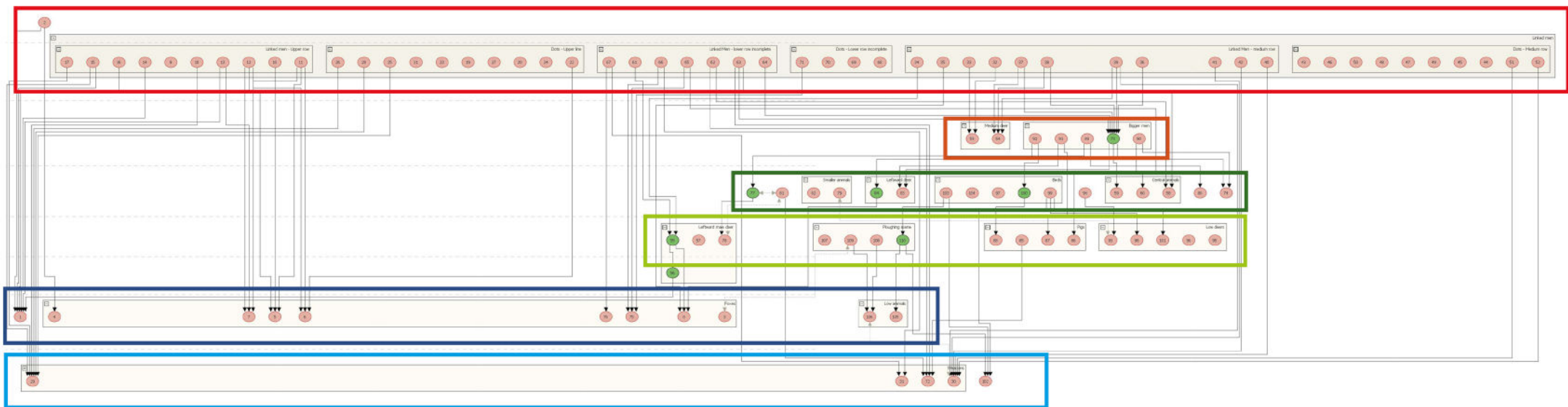
**Figure 22:** Cemmo 11/19: detail with oblique lighting of the sixth phase men carved on the first phase dagger. / Cemmo 11/19: dettaglio con luce radente degli uomini della sesta fase incisi su pugnale della prima fase.

<sup>52</sup> For other considerations on the matter, see de Marinis & Fossati 2012 and Leonardi 2012

<sup>53</sup> It is not the purpose of this work to join the debate about the performative aspect, which would seem more correctly related to the previous manifestations of symbolic rock art of the Neolithic age (Jones 2012), a topic often overlooked in Northern Italy.

<sup>54</sup> As exemplified by the oar-headed bronze pin (Rudernadel) found in the US 79 (see the study of M. Baioni in Poggiani Keller 2009a: 220)





**Figure 23:** The engraving phases and the Matrix diagram for Cemmo 11/19. / Le fasi di incisione e il diagramma Matrix per Cemmo 11/19.



## Conclusions (RPK, PR)

This article describes the context and iconographic analysis of just two of the monuments at the site of Cemmo, and precedes the monograph which is underway and will describe the long history of research (from 1909 and intermittently until 2013), providing complete illustration of the finds<sup>55</sup> and the monoliths as well as an in-depth look at the long life of the sanctuary.

The extent of the excavation has, in fact, brought on a significant turning point in the research and understanding of the general structure of Cemmo and its chronological development. This contribution, although limited to two contexts and two monoliths as part of the wider sacred complex, offers an insight into the long life and the ceremonial procedures, as well as the rituals that characterized it and that, in an emblematic way, represents foundation, re-foundation, continuity and the end of a place of worship.

In this sense, only a joint processing of excavation data and those deriving from the iconographic study of all the carved monoliths can provide the tools suitable for the best possible understanding of this fundamental archaeological complex.

## Acknowledgements

The authors are grateful to Dr. Cristina Longhi and Serena Solano (SABAP of Bergamo and Brescia) and Dr. Maria Giuseppina Ruggero (Direzione regionale Musei di MiBACT). We also are grateful to Shae N. Jensen for the English language editing.

## Bibliography

- Anati E., 1972 – I Massi di Cemmo. Edizioni del centro, Capo di Ponte.
- Arcà A., 2005 – Archeologia rupestre in Valcamonica: *Dos Cüi*, un caso di studio. *Rivista di Scienze Preistoriche* – LV, 2005:323-384.
- Caimi R., Gambarri I., Martinotti A., Pace F., Ruggiero M.G., 2019 – Ritrovamento di una stele incisa nell'età del Rame a Sondalo (SO), località Migiondo. Prima nota. *Notiziario dell'Istituto Archeologico Valtellinese*, 17. Sondrio: 5-23.
- Cantoni R., 1963 – *Il pensiero dei primitivi*. Il Saggiatore, Milano, 351 pp.
- Casini S., 1994 (ed.) – *Le Pietre degli Dei*. Bergamo, 224 pp.
- Casini S., 1998 – Analisi delle figure di asce sulle stele della Valcamonica e Valtellina (stile III A). *Archéologie en Languedoc*, 22: 271-284.
- Casini S. & Fossati A.E. (eds) 2007 – *Le Pietre degli Dei*. Statue stele dell'età del Rame in Europa. Lo stato della ricerca. Atti del Convegno Internazionale di Brescia, NAB, 12 (2004), 389 pp.
- Casini S. & Fossati A.E., 2013 – Immagini di dei, guerrieri e donne. Stele, massi incisi e arte rupestre dell'età del Rame in Valcamonica e Valtellina. In: de Marinis R.C. (ed.) – *L'età del Rame. La pianura padana e le Alpi al tempo di Ötzi*. Catalogo della Mostra, Brescia: 161-196.
- Casini S., de Marinis R.C., Fossati A.E., 1996 – Stele e massi incisi della Valcamonica e della Valtellina. In: Casini S., de Marinis



**Figure 24:** The boulder Cemmo 1 at sunset, with artificial lighting. / Il masso Cemmo 1 al tramonto, con luce artificiale.

<sup>55</sup> In addition to the authors of this contribution, the working group for the study of materials will be composed by Domenico Lo Vetro-University of Florence and collaborators (knapped and polished lithic industry), Claudio Giardino-University of Salento (analysis of metal finds), Sergio Chiesa-CNR IDPA (lithology of monoliths), Mauro Rottoli-Laboratory of Archaeobiology of the Civic Museums of Como (paleobotanic remains) and, for geological and palinological studies, Claudio Balista and Cesare Ravazzi-CNR IDPA.



- R.C., Pedrotti A. (eds) – Statue-stele e massi incisi nell'Europa dell'età del Rame. *Notizie Archeologiche Bergomensi*, 3, (1995): 221-250.
- Casini S., de Marinis R.C., Fossati A.E. 2014 – Aspetti simbolici dello stile III A in Valcamonica e Valtellina: ipotesi interpretative. In: De Marinis R.C. (ed.) – Le manifestazioni del sacro e l'età del Rame nella regione alpina e nella pianura padana. Studi in memoria di Angelo Rampinelli Rota. Atti del Convegno, Brescia, Palazzo Broletto, 23-24 maggio 2014. Brescia: 147-166.
- Casini S., Fossati A.E., Simonelli M.G. 2020 – Una nuova stele dell'età del Rame in Valtellina, località Piombarda, San Giovanni di Teglio (Sondrio). *Notizie Archeologiche Bergomensi*, 26, (2018), Bergamo: 5-26.
- Danesi A., Poggi D., Fedele F. 2014 – Selezione del litotipo e ricerca di effetto cromatico nell'età del Rame: il caso del monolito Anvòia 14 (Ossimo, Valcamonica). *Notizie Archeologiche Bergomensi*, 22: 31-44.
- De Gattis G., Curdy Ph., Ferroni A.M., Martinet F., Poggiani Keller R., Raiteri L., Sarti L., Zidda G., Mezzena F. (eds.), 2018 – *Area megalitica di Saint-Martin-de-Corléans. Una visione aggiornata*, Documenti 13. Le Château Edizioni, Aosta, 575 pp.
- De Marinis R., 1988 – Due nuovi frammenti istoriati da Cemmo (Capo di Ponte, Valcamonica). In: Il Parco delle Incisioni Rupestri di Grosio e la preistoria valtellinese, Atti I Convegno Archeologico Provinciale, Grosio 25-27 ottobre 1985. Sondrio: 117-150.
- De Marinis R. C., 1994 – La datazione dello stile III A. In: Casini S. (ed.) – *Le pietre degli dei*. Bergamo 1994: 69-87.
- De Marinis R. C. & Fossati A. E., 2012 – La stele Cemmo 3. *Preistoria Alpina*, 46, II: 283-285.
- Eliade M., 1954 – *Trattato di storia delle religioni*. Boringhieri, Torino, 538 pp.
- Fedele F., 2007 – Monoliths and human skeletal remains: ritual manipulation at the Anvòia ceremonial site, Ossimo (Val Camonica, Italy). In: Casini & Fossati 2007: 49-66.
- Fedele F., 2013 – Il sito cerimoniale di Anvòia a Ossimo (Valcamonica). In: de Marinis R.C. (ed.) – *L'età del Rame. La pianura padana e le Alpi al tempo di Ötzi*. Catalogo della Mostra, Brescia: 197-207.
- Fedele F., 2015 – Life and Death of Copper Age Monoliths at Ossimo Anvòia (Val Camonica, Italian Central Alps), 3000 BC – AD 1950. In: Diaz-Guardamino M., Garcia-Sanjuán L., Wheatley D. (eds). – *The Lives of Prehistoric Monuments in Iron Age, Roman, and Medieval Europe*. Oxford University Press, 2015: 225-247.
- Fedele F. & Fossati A.E., 1996 – Centro culturale calcolitico dell'Anvòia a Ossimo (Valcamonica): scavi 1988-1995. In: Casini S., de Marinis R.C., Pedrotti A. (eds) – *Statue-stele e massi incisi nell'Europa dell'età del Rame*. *Notizie Archeologiche Bergomensi*, 3, (1995): 251-257.
- Fedele F. & Fossati A.E., 2012 – L'area cerimoniale di Anvòia a Ossimo, Valcamonica: i monoliti simbolici e il loro contesto. *Preistoria Alpina*, 46, II: 189-199.
- Fedele F., Fossati A.E., Giorgi A. 2014 – Il monolito M1 di Plasagròp ("Ossimo 6"). *Notizie Archeologiche Bergomensi*, 21, (2013): 51-63.
- Fossati A.E., 2007 – Morfologia, litotipi e funzioni delle statue stele del gruppo Valcamonica-Valtellina. *Bulletin d'Etudes Préhistoriques et Archéologiques Alpines*, XVIII: 77-90.
- Gallay A., 1989 – *Le site préhistorique du Petit Chasseur (Sion, Valais). Secteur oriental*, *Cahiers d'Archéologie Romande*, 7-8. Lausanne, 132 and 255 pp.
- Galli A., Panzeri L. Rondini P., Poggiani Keller R., Martini M. 2020 – Luminescence Dating of Rock Surface. The Case of Monoliths from the Megalithic Sanctuary of Ossimo-Pat (Valle Camonica, Italy). *Applied Sciences*, 10, 2020.
- Jones A. M. 2012 – Living rocks: animacy, performance and the rock art of the Kilmartin region, Argyll, Scotland. In: Cochrane A., Jones A. M. (eds) – *Visualising the Neolithic: abstraction, figuration, performance, representation*. Oxbow Books, Oxford: 79-88.
- Leonardi G., 2012 – Il capo, il sole e il villaggio: spunti interpretativi sul rapporto tra iconografia e ideologia sociale dall'età del Rame alla media età del Bronzo. In *Giulia Fogolari e il suo "repertorio... prediletto e gustosissimo"*. *Aspetti di cultura figurativa nel Veneto antico*. Atti del Convegno di Studi, Este-Adria 19-20 aprile 2012. *Archeologia Veneta*, XXXV, 2012 (2013): 30-51.
- Lewis-Williams J.D. & Pearce, D. 2005 – *Inside the Neolithic mind: consciousness, cosmos and the realm of the gods*. Thames & Hudson, London, 320 pp.
- Marretta A., 2007 – Nuove statue-stele dal versante orientale della media Valcamonica: il sito di Campolungo (Cedegolo) e un frammento dalle Foppe di Nadro. In: Casini S., Fossati A.E. 2007: 235-251.
- Marretta A., 2014 – When it all begun. The Copper Age roots of Valcamonica rock art. *Adoranten* 2014: 52-67.
- Marretta A., 2018 – *La Roccia 12 di Seradina I: documentazione, analisi e interpretazione di un capolavoro dell'arte rupestre alpina*. Capo di Ponte, 333 pp.
- Marretta A. & Poggiani Keller R., 2005 – *Bibliografia sull'arte rupestre e sui contesti e ritrovamenti preistorici e protostorici della Valle Camonica. Quaderni del Parco Nazionale delle Incisioni Rupestri*, 1, Capo di Ponte, 133 pp.
- Martini F., Lo Vetro D., Timpanelli L., Magri F., Poggiani Keller R., 2016 – Mesolithic findings from the area of the engraved boulders at Cemmo (Lombardia, Italia). *Preistoria Alpina*, 48: 89-92.
- Martinotti A., 2018 – Immaginario e ideologia nell'arte rupestre dell'età del Rame in Valtellina (Lombardia). *Rivista di Scienze Preistoriche*, LXVIII, 2018: 75-108.
- Mezzena F., 1997 – La Valle d'Aosta nel Neolitico e nell'Eneolitico. In: Atti XXXI Riunione Scientifica Istituto Italiano di Preistoria e Protostoria La Valle d'Aosta nel quadro della Preistoria e Protostoria dell'arco alpino centro-occidentale. Firenze: 17 - 138.
- Poggiani Keller R., 2000 – Il sito culturale di Cemmo (Valcamonica): scoperta di nuove stele. *Rivista di Scienze Preistoriche*, L, 1999-2000. Firenze: 229-259.
- Poggiani Keller R., 2009a – Cemmo: il sito storico della scoperta dell'arte rupestre e le novità delle ricerche in corso. In: Poggiani Keller R. (ed.) – *La valle delle incisioni. 1909-2009 cento anni di scoperte 1979-2009 trenta anni con l'UNESCO in Valle Camonica*. Tipografia camuna, Brescia: 211-221.
- Poggiani Keller R., 2009b – Il santuario di Ossimo - Pat. In: Poggiani Keller R. (ed.) – *La valle delle incisioni. 1909-2009 cento anni di scoperte 1979-2009 trenta anni con l'UNESCO in Valle Camonica*. Tipografia camuna, Brescia: 223-235.
- Poggiani Keller R., 2011 – Il santuario calcolitico di Cemmo e le stele "Cemmo 10, 11/19 e 17". In: *Le grandi vie delle civiltà. Relazioni e scambi fra Mediterraneo e il centro Europa dalla Preistoria alla Romanità*, Catalogo Mostra Trento-Castello del Buonconsiglio 1 luglio-13 novembre 2011/ Monaco di Baviera- Archäologische Staatssammlung München 16 dicembre 2011-27 maggio 2012. Trento: 459-461.
- Poggiani Keller R., 2016 – I santuari dell'età del Rame di Cemmo, Ossimo-Pat, Borno e Corni Freschi di Darfo B. T. Organizzazione, cronologia e rituali. *Bulletin du Musée d'Anthropologie préhistorique de Monaco*, 56-2016. Monaco: 47-67.
- Poggiani Keller R. (ed.), 2017 -MuPRE - Museo Nazionale della Preistoria della Valle Camonica. Guida breve. 168 pp.
- Robb J., 2009 – Persons of Stone: Stelae, Personhood, and Society in Prehistoric Europe. *Journal of Archaeological Method and Theory*, 16 (3): 162-183.
- Robb J., 2020 – Art (Pre)History: Ritual, Narrative and Visual Culture in Neolithic and Bronze Age Europe. *Journal of Archaeological Method and Theory*, 27 (3): 454-480.
- Robb J. & Harris O.J.T., 2017 – Becoming gendered in European Prehistory: was Neolithic gender fundamentally different? *American Antiquity*, 83 (1): 128-147.
- Rondini P., 2018 – Digital Rocks. An integrated approach to rock art recording: the case study of Ossimo – Pat (Valle Camonica), monolith 23. *Archeologia e Calcolatori*, 29: 259-278.
- Rondini P. & Marretta A., 2019 – Il sito protostorico di Dos dell'Arca (BS): la campagna di scavo e documentazione 2018 dell'Uni-

- versità di Pavia (Progetto Quattro Dossi – fase II). *Fold&r – Fasti Online Documents & Research*, 444:1-38.
- Sansoni U. 2013 – La stele di Cevo e il frammento Furloni. In: de Marinis R.C. (ed.) – *L'età del Rame. La pianura padana e le Alpi al tempo di Ötzi*. Catalogo della Mostra, Brescia: 209-219.
- Talalay L., 2005 - The Gendered Sea. Iconography, Gender, and Mediterranean Prehistory. In: Blake E., Knapp B. (eds.) – *The Archaeology of Mediterranean Prehistory*. Blackwell Publishing: 130-155.
- Tarantini M. & Poggiani Keller R., 2009 – La “riscoperta” dei Massi di Cemmo. In: Poggiani Keller R.(ed.) – *La valle delle incisioni. 1909-2009 cento anni di scoperte 1979-2009 trenta anni con l'UNESCO in Valle Camonica*. Tipografia camuna, Brescia: 61-75.
- Whitehouse R., 1992 – *Underground Religion: Cult and Culture in Prehistoric Italy*. Accordia Research Centre, London, 216 pp.