Cultural landscapes, social networks and historical trajectories: A data-rich synthesis of Early Bronze Age networks (c. 2200-1700 BC) in Abruzzo and Lazio (Central Italy)

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Chapter 6
Underground place-making: Early Bronze Age cave use

> "Certainly, we advocate the continued production of contextualizing regional syntheses of archaeological caves and their associated ancient landscapes ... and, within these, we recommend that scholars attempt to move beyond the traditional distinction between 'economic' (or 'domestic') and 'ritual' uses of caves" (Bergsvik & Skeates 2012, 8).

Cave use in the Italian peninsula has long been a concern and strongly debated in terms of settlement versus ritual practices in the study of the Neolithic, the Copper Age and the Bronze Age, with a particular focus on Central Italy (Cremonesi 1976; Radmilli 1977; Tusa 1980; Barker 1981; Guidi 1989/1990; Whitehouse 1990; Skeates 1991; Guidi 1991/1992; Grifoni Cremonesi 1994; Skeates 1994a; Miari 1995; Cocchi Genick 1996b; Di Fraia & Grifoni Cremonesi 1996; Grifoni Cremonesi 1996a; Cocchi Genick 1998, chapter 7, 1999a; Grifoni Cremonesi 1999, 2007; Whitehouse 2007). Scholars working on caves in Abruzzo have had a strong voice in this debate, with a preference for the scenario of a predominantly ritual character of late prehistoric cave use, in the case of a number of key sites that demonstrate a continuity of these cult places from the Neolithic into the Bronze Age (Cremonesi 1976; Radmilli 1977; Di Fraia & Grifoni Cremonesi 1996). The debate seems to have been resolved in favour of the ritual stance, since the focus in archaeological fieldwork had definitely shifted from caves to open-air sites as settlement locations in the 1960s (Chapter 7). Nonetheless, the persistent use of the term 'open-air site' (Italian: "sito all'aperto") for anything but caves shows that 'local' terminology still captures the traditional focus on caves as settlements. The other side of the shift in research focus from caves to open-air sites is that very few caves have been excavated to modern standards. Nonetheless, recently a number of rescue excavations have been carried out to prepare for present-day cave use (mainly the exploitation of caves as a tourist attraction). Recent developments also include the strong increase of speleological exploration as a leisure activity, which has resulted in the increase of archaeological finds from very deep spaces of caves. The proliferation of high-quality information from caves gives us the opportunity to go beyond traditional questions of integrity (both of individual researchers and of evidence from complicated stratigraphies and contexts). It helps to overcome the tendency to make generalisations and, instead, focus on the specifics of cave use.

The first section deals with such generalisations, both geographical and chronological in character. In geographical terms, arguments in studies of later prehistoric cave use are often based on caves from Central Italy (or the Italian peninsula) as a whole, generally without exploring regional differentiation. In the overview of the evidence for EBA cave use in Abruzzo and Lazio (§6.1) the focus will be on patterns in the spatial distribution of caves across physical and cultural landscapes. In chronological terms, studies of later prehistoric cave use are often compilations that consider Neolithic through Bronze Age cave use in total and do not distinguish between Bronze Age (sub)phases. Here I will present and compare trajectories (or place histories) of caves that are subdivided by Neolithic and Copper Age, as prior histories (or ancestral connotations) of these natural places, and EBA episodes of cave use by subphase (§6.1). The second section will address the specifics of cave use in terms of depositional practices, which are seldom a focus of research in themselves because of the prevalence of geographical and chronological generalisations in studies of later prehistoric cave use (see above). Usually, only a broad contextual distinction is made between 'non-ritual' and 'cultic and/or funerary' forms of cave use, whereas detailed discussions selectively focus on those caves with peculiar instances of deposition (e.g. Cocchi Genick 1998, chapter 7). Here all EBA cave assemblages from Abruzzo and Lazio will be compared indiscriminately, in terms of their constituent elements (i.e. classes of objects and substances) by way of a polythetic classification (§6.2). The resulting patterns of differentiation will be interpreted in terms of 'polythetic' groups that can be compared among themselves and related to distinctive forms of place-making. These will subsequently be compared with 'polythetic' groups that emerge from EBA open-air assemblages (Chapter 7).

On the basis of these analyses (§6.1; §6.2), it is possible to extend the debate from one that is concerned with caves as a circumscribed class of later prehistoric contexts (or a type of place) in the Italian peninsula as a whole, to cave use as a historically specific form of place-making in the wider

context of EBA cultural landscapes and social networks. To this end, 'multi-sited' questions will be raised in the final section (§6.3), to be addressed in the synthesis, including the wider cosmological significance of caves (Chapter 8). Another major issue that will not be addressed in this chapter, is the (potential) use of caves for pastoralist practices as a seasonal subsistence strategy. From a network perspective, the discussion of faunal samples from cave assemblages cannot be disconnected from faunal samples from open-air sites (§7.4).

6.1 Caves in cultural landscapes: spatial distributions and trajectories

The study of cave use as a form of place-making in EBA cultural landscapes asks for a twofold approach, one geographical and the other chronological. The analysis comprises an overview of the spatial distribution of EBA cave use in Abruzzo and Lazio (Figure 6.1), in order to establish which caves were used and therefore represented nodes in EBA networks (Figures 6.2 & 6.3). At the same time, a comparison will be made between trajectories of cave use (from the Neolithic to EBA2) in Abruzzo and Lazio (Tables 6.1, 6.2, 6.3 &6.4). The aim is to establish whether EBA cave use followed the spatial distribution of Neolithic and Copper Age cave use, or alternatively also entailed (new) place-making and abandonment of prior places. This analysis of trajectories of cave use will help to shed light on the presence or absence of an ancestral connotation in notions of these places (§6.2).

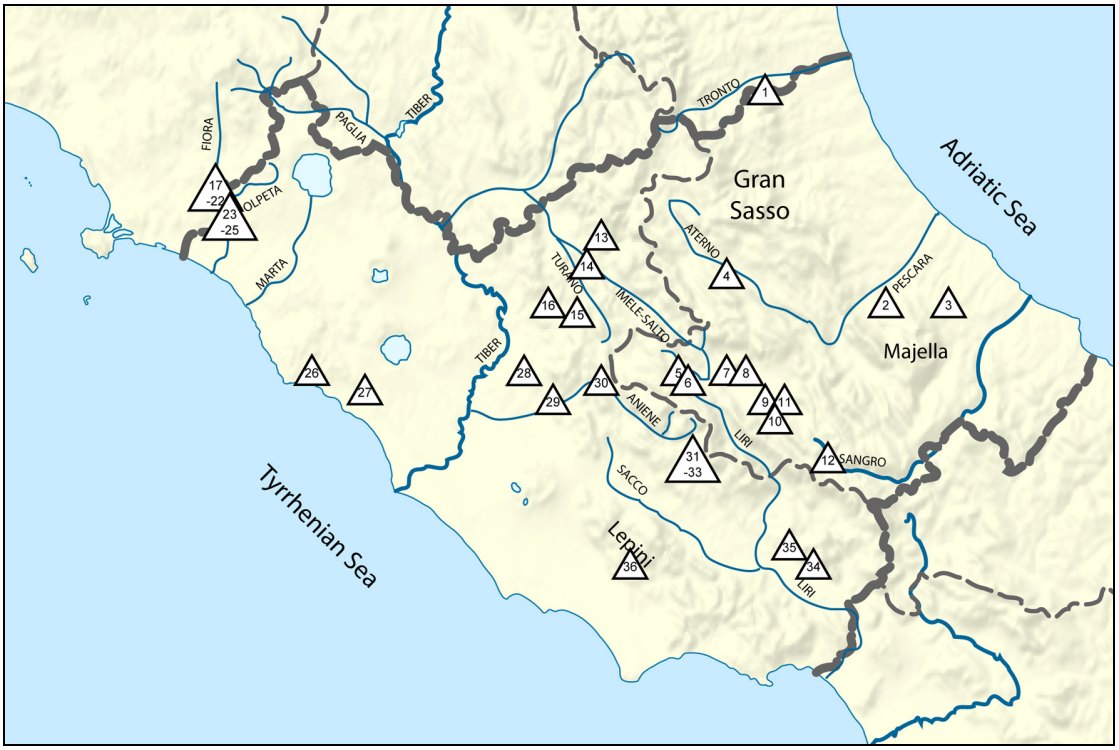

Figure 6.1: map (adapted from http://commons.wikimedia.org/wiki/File:Italy_map-blank.svg) showing the spatial distributions of (potentially) EBA cave use in Abruzzo and Lazio [nos. refer to Appendix 3]. Larger icons refer to groups of caves, smaller icons to 'isolated' caves.

6.1.1 Coastal Abruzzo

In 'coastal' Abruzzo the occurrence of caves is physically circumscribed to the mountainous areas, i.e. the eastern side of the GRAN SASSO MOUNTAINS, which define the region to the west, and the MAJELLA MOUNTAINS that separate (and connect) the provinces of Pescara (PE) and Chieti (CH). Obviously, the occurrence of caves is linked to erosive agents, i.e. mainly rivers running from these mountains, that have laid bare (or created access to) subsurface spaces in the physical landscape. In 'coastal' Abruzzo EBA cave use [#1-3] is more circumscribed (Figure 6.1) than the overall distribution of caves. The diachronic pattern is that the few caves with evidence for EBA episodes of use follow the distribution of Copper Age cave use, whereas Neolithic cave use is more widespread (Table 6.1). Only a select group of the caves with evidence for Neolithic use 'persisted' in Copper Age and EBA cultural

landscapes. This diachronic pattern highlights that the two persistent places (GROTTA SANT'ANGELO [#1]; GROTTA DEI PICCIONI [#2]) that feature prominently in the debate about later prehistoric cave use in the Italian peninsula as a whole, are actually 'special cases' and cannot be regarded as representative of cave use in general. These persistent places require a historically specific interpretation in the context of EBA networks.

	Neolithic	Copper Age	EBA1	EBA2
northeastern Gran Sasso Mountains (TE)				
Grotta di S. Maria Scalena (TE)	X			
[#1] Grotta Sant'Angelo (TE)	X	X	?	X
southeastern Gran Sasso Mountains (PE)				
Grotta La Queglia (PE)	X			
northern Majella Mountains (PE)				
Grotta Buco Maledetto (PE)	?		?	?
[#2] Grotta dei Piccioni (PE)	X	X	X	X
Grotta Scura (PE)	X			
Grotta del Mortaio (PE)	?			
Grotta dell'Angelo (PE)	?			
eastern Majella Mountains (CH)				
[#3] Grotta del Colle (CH)	X	X	?	?
southern Majella Mountains (CH)				
Grotta della Pineta-Corpi Santi (CH)	?			

Table 6.1: overview (incorporating Fugazzola Delpino et al. 2004) of later prehistoric (Neolithic-EBA) trajectories of cave use in coastal Abruzzo [nos. refer to Appendix 3 & Figure 6.1].

The diachronic pattern is a strong indication that EBA cave use in coastal Abruzzo took place at persistent nodes in networks (Figure 6.1). Such a sense of persistence in these places is underscored by the fact that GROTTA DEI PICCIONI [#2] breaks the overall pattern of low archaeological visibility of EBA1 contexts in Abruzzo (§3.1). In other words, cave use was linked to prior places, with a history deep into the Neolithic, following a selective pattern that was established in the context of Copper Age networks (Table 6.1). However, given the duration of the periods (Neolithic, Copper Age) and subphases (EBA1, EBA2) used as units of analysis, persistence in trajectories of cave use should be substantiated in terms of the 'continuous' character or episodic character of the respective depositional practices. Here I will focus on 'special' features in EBA cave use,[144] whereas assemblages will be discussed 'in full' as part of their polythetic classification (§6.2).

The persistent place of GROTTA SANT'ANGELO [#1] (Figure 6.1) was used most frequently in the Neolithic, but the existence of Copper Age and EBA layers seems to indicate an uninterrupted trajectory (Table 6.1). Apart from the evidence for secondary burial and treatment of human remains (§5.2.1), 'special' features can be found in a number of pits with depositions. Some of these pits reportedly included cereal remains and one pit contained a complete EBA2 vessel. Placing pits at GROTTA SANT'ANGELO was a practice that had already been established in the Neolithic. Significantly, both later Neolithic and Copper Age and Bronze Age pits could reach considerable depths. This practice seems to refer to a deliberate attempt at making a connection with the history of the place in the tangible form of earlier cave deposits, including the retrieval of ancestral substances (i.e. objects and human remains). This means that the disarticulated human remains from the Copper Age-EBA layers discussed earlier (§5.2.1) should actually be radiocarbon dated to corroborate their status as either Neolithic or later, Copper Age and EBA ancestral substances. The assemblage of GROTTA SANT'ANGELO [#1] resembles the other cave in coastal Abruzzo that can be characterised as a persistent place (GROTTA DEI PICCIONI [#2]) in many respects, except for the absence of funerary evidence in Bronze Age layers from the latter.

Traditionally, GROTTA DEI PICCIONI [#2] (Figure 6.1) has been interpreted as a shelter or seasonal settlement, notwithstanding the acknowledgment of ritual features. However, this interpretation disregards its long and deep history as a place for cult and burial since the Neolithic. The interpretation in terms of dwelling is mainly based on a break in the trajectory of cave use, suggested by the presence of a sterile layer separating the Neolithic from the Copper Age-Bronze Age deposits, the latter including burnt wattle-and-daub fragments and 'post-holes' interpreted as the remains of

[144] For a general discussion of the structure of archaeological records in relation to ritual practices at a particular cave (GROTTA SANT'ANGELO), see Di Fraia 1996b, 181-189.

houses (Cremonesi 1976). Recently, the sterile layer has been identified as made up of burned coprolites, connecting it with occupation of the cave in a domestic or pastoralist sense (Boschian 2000, 64-66). One may argue that the presence of dung as fuel does not necessarily mean that domestic animals were present inside the cave. In this respect, domestic use of GROTTA DEI PICCIONI seems contradicted by its relatively inaccessible position high up the gorge of the ORTA river (Skeates 1991, 129). One particular feature at GROTTA DEI PICCIONI is a pit that was placed as a connecting element, engaging with the history of the place, through the sterile layer. This pit contained a large and complete EBA2 vessel (Cremonesi 1976, 330-331), which recalls the EBA2 act of deposition at GROTTA SANT'ANGELO (see above).

Finally, late prehistoric cave use at GROTTA DEL COLLE [#3] (Figure 6.1) is not as well-documented but still indicates a long trajectory of use since the Neolithic (Table 6.1), probably more intermittent than at GROTTA SANT'ANGELO and GROTTA DEI PICCIONI. The limited EBA assemblage from GROTTA DEL COLLE [#3] does include a complete cup, which arguably indicates an act of deposition. The presence of a karstic feature such as stalactites (D'Ercole et al. 1997, 91 [fig. 1]) seems to have been a significant element in its 'persistent' use as a cult place.

	Neolithic	Copper Age	EBA1	EBA2
upper Farfa valley (RI)				
[#15] Grotta Pila (RI)	X	X	?	?
[#16] Grotta Rocco di Prospero (RI)	X			?
Turano valley (RI)				
[#14] Riparo Liliana (RI)				X
Salto valley (RI)				
Riparo di Grotti (RI) [Mattioli 2006]	?	?		
Velino valley (RI)				
[#13] Campo Avello (RI)	X	?	?	?
upper Liri valley (AQ)				
Riparo Monte La Difesa (AQ)	X			
[#5] Grotta Beatrice Cenci-Oveto (AQ)	X	X	?	?
Grotta del Monte Arunzo (AQ)	X			
[#6] Grotta Cola I (AQ)	X		?	?
Grotta Cola II (AQ)	X	?		
Fucino basin (AQ)				
[#7] Grotta di Monte Salviano (AQ)		X	X	
[#8] Grotta Di Ciccio Felice (AQ)	X	X	?	X
Grotta Continenza (AQ)	X	X		
Grotta San Nicola (AQ)	X			
[#9] Grotta La Cava (AQ)	?	X	X	X
[#10] Grotta Maritza (AQ)	X	X	X	X
Grotta La Punta (AQ)	X	X		
[#11] Grotta di Ortucchio (AQ)	X	X	X	
Grotta La Penna (AQ)	?			
upper Sangro valley (AQ)				
[#12] Grotta del Fauno (AQ)			?	?
western Gran Sasso-upper Aterno valley (AQ)				
Grotta a Male (AQ)		X		
Grotta delle Marmitte (AQ)	X	X		
[#4] Grotta delle Stiffe (AQ)				X
Riparo di Rava Tagliata (AQ) [Mattioli 2011]	?	?		
western Majella-Sulmona basin (AQ)				
Riparo di Pacentro (AQ)	?			

Table 6.2. overview (incorporating Fugazzola Delpino et al. 2004) of later prehistoric (Neolithic-EBA) trajectories of cave use in the intermontane region [nos. refer to Appendix 3 & Figure 6.1].

6.1.2 The intermontane region

Given the physically circumscribed occurrence of caves in relation to mountains, it is not a coincidence that they are more evenly distributed and abundant in the intermontane region than in the 'coastal' regions (Figure 6.1). In other words, late prehistoric cave use seems to have been a more consistent phenomenon in the intermontane region. Nonetheless, considerable differentation can be found in the number of caves in use between the 'northern' province of Rieti (RI) [#13-16] and the 'southern' province of L'Aquila (AQ) [#4-12] (Table 6.2; Figure 6.1). Despite the higher number of caves with evidence for later prehistoric use, the same diachronic pattern as in 'coastal' Abruzzo (§6.1.1) can be discerned, i.e. a decrease in the number of caves with evidence for Neolithic, Copper Age and EBA

episodes of use. This is even the case in the micro-region with the highest number of caves, i.e. the FUCINO BASIN (Table 6.2). Caves that started their (later prehistoric) trajectory in the Copper Age are exceptions, but this group does include two caves (GROTTA DI MONTE SALVIANO; GROTTA A MALE) that are characterised by funerary use (§5.1.2) and were both apparently abandoned before/in EBA1 (Table 6.2).

The diachronic pattern is not only that evidence for EBA cave use (Figure 6.1 [#4-16]) concerns fewer places than before (Table 6.2). The respective assemblages also tend to be more limited, consisting predominantly, if not exclusively, of limited amounts of ceramics. In this respect, the typochronological classification of ceramics in the recent synthesis of the FUCINO BASIN (Ialongo 2007) has been invaluable in resolving issues of chronological ambiguity, as well as the relative invisibility of EBA1 ceramics (§3.1). Still, some cave assemblages in the intermontane region can only be dated to "generically EBA", thereby perhaps creating a false sense of EBA continuity in trajectories of cave use, such as at GROTTA BEATRICE CENCI [#5] and GROTTA COLA I [#6] (Table 6.2). The generally limited assemblages indicates that EBA cave use in the intermontane region would have been largely intermittent, episodic in character, rather than persistent and consistent. There is a tendency to interpret the relative scarcity of EBA evidence as the remains of a 'fleeting' form of cave use connected with mobile patterns of pastoralism dictated by the rhythms of seasonality in mountainous areas (§6.2; §7.4). However, despite the predominance of limited cave assemblages, there are strong indications that EBA cave use in the APENNINES was ritual (to a lesser extent funerary) in character. These instances will be discussed by micro-region, again with a focus on 'special' features, whereas the assemblages will be discussed 'in full' as part of their polythetic classification (§6.2).

The province of Rieti

Out of the four caves listed in the Rieti (RI) province (Figure 6.1 [#13-16]) only one assemblage is definitely EBA in date (Table 6.2). It concerns a rock shelter (RIPARO LILIANA [#14]), in connection with the intermontane TURANO valley, that has been interpreted as a cult place, including a fire-place. RIPARO LILIANA breaks the diachronic pattern in cave use (see above), in the sense that it is a new, EBA2 place without an earlier trajectory of use. Episodes of EBA cave use cannot be substantiated in the other three cases. The reportedly EBA evidence for cave use in the upper FARFA valley (GROTTA PILA [#15]; GROTTA ROCCO DI PROSPERO [#16]), a TIBER tributary on the watershed with the drainage area of the intermontane TURANO river, has been redated to the Middle Bronze Age (Cocchi Genick 1998, 18). The assemblage from a rock fissure (CAMPO AVELLO [#13]) in the VELINO valley may include EBA acts of deposition in a prior place, but has not been published in detail.

The UPPER LIRI valley

The source area of the LIRI river is situated to the west of the FUCINO BASIN, on the watershed with the major intermontane TURANO and IMELE-SALTO rivers (Figure 6.1). The UPPER LIRI valley connects to southern Lazio, where it flows through the Frosinone (FR) province into the Tyrrhenian at the border with Campania. Cave use in the UPPER LIRI valley [#5-6] follows the general, diachronic pattern, with consistent evidence for Neolithic episodes, followed by a considerably lower number of Copper Age and EBA episodes (Table 6.2). Only one cave in this micro-region (GROTTA BEATRICE CENCI [#5]) is characterised by a seemingly persistent trajectory of use from the Neolithic through EBA. This particular cave incorporates a seasonally fluctuating lake, a characteristic that probably was the focus of depositional practices. Its limited assemblage includes the larger part of a vessel, that is of similar type as the complete vessel found in a crevice at one of the other caves in the micro-region (GROTTA COLA I [#6]). The latter is an isolated, EBA act of deposition in a Neolithic place (Table 6.2). Moreover, the vessel from the crevice at GROTTA COLA I has been reported wih a handle that is similar to the handle on the complete large EBA2 vessel at GROTTA DEI PICCIONI (Cosentino et al. 2001a, 146) found in a pit (§6.1.1). This could suggest that both larger vessels in the UPPER LIRI valley should be dated to EBA2, rather than generically EBA (Table 6.2). Both prior, Neolithic places with evidence for EBA use in this micro-region (GROTTA BEATRICE CENCI; GROTTA COLA I) are also similar in consisting of larger spaces, characterised (and shaped) by subsurface flows of water (Cosentino et al. 2001a, 145 [fig. 3-4]).

The FUCINO BASIN

The majority of caves with EBA evidence in the intermontane region surround the large (former) lake in the closed FUCINO BASIN (Figure 6.1 [#7-11]). This micro-region had already been a core area of

Neolithic and Copper Age cave use (Table 6.2), including a tradition of funerary cave use (§5.1.2). However, EBA cave use is not as well-documented and the respective assemblages tend to be more limited in size. There has been a tendency to interpret such a lack of evidence for Bronze Age cave use in the FUCINO BASIN as the result of subsequent use of the same places until modern history, which would have obliterated the surface layers of late prehistoric (i.e. Bronze Age) deposits. However, a recent synthesis (Ialongo 2007) has demonstrated that the trajectories of the majority of Copper Age places more or less persisted (GROTTA DI MONTE SALVIANO [#7]; GROTTA DI CICCIO FELICE [#8]; GROTTA LA CAVA [#9]; GROTTA MARITZA [#10]; GROTTA DI ORTUCCHIO [#11]).

Ialongo (2007) builds on the final publication of cave assemblages in the FUCINO BASIN (Cosentino et al. 2001a) and sheds light on the respective trajectories of cave use. In this respect, the earlier overview (Cosentino et al. 2001a, 134 [fig. 2]) had created a false sense of continuity between the Copper Age, EBA and MBA, in lumping EBA and MBA cave use together. Arguably, the reason to adopt such a generalising interpretive strategy is (and implicitly puts emphasis on) the relative scarcity of EBA evidence. It should also be stressed that both these syntheses (Cosentino et al. 2001a; Ialongo 2007) had not been available to Cocchi Genick (1998) at the time of compiling her synthesis. GROTTA MARITZA is the only cave in the FUCINO BASIN included in Cocchi Genick's synthesis (1998). Despite the relatively high number of caves with EBA evidence, the diachronic pattern of a decrease in the number of caves (i.e. abandonment) (Table 6.2), as well as in the size of EBA assemblages, can be discerned in this micro-region, too. A distinctive characteristic of caves in the FUCINO BASIN is that they can be linked to adjacent EBA open-air sites, reportedly settled communities, at the lake-side (§7.1.2). Here I will argue that EBA cave use in this micro-region can be characterised as mainly ritual in character on the basis of the following features.

GROTTA DI MONTE SALVIANO [#7], one of two caves situated to the west of the FUCINO lake, was discussed already as a funerary context (§5.1.2). Its limited EBA1 ceramic assemblage shows connections over long distances and its depositional context was limited to caves.[145] These characteristics suggest that deposition of these ceramics was ritual in character, in line with the exceptionality of an EBA context of burial (Chapter 5). The other cave assemblage to the west of the FUCINO lake (GROTTA DI CICCIO FELICE [#8]) consists of a few EBA2 vessel types with similar, arguably ritual characteristics.[146] Typochronologically, cave use at GROTTA DI MONTE SALVIANO [EBA1] and GROTTA DI CICCIO FELICE [EBA2] seems to have been consecutive and in both cases, arguably, episodic in character. The majority of caves with EBA assemblages in the micro-region are situated to the south of the FUCINO lake.

One of these assemblages (GROTTA DI ORTUCCHIO [#11]) consists of an atypical handle and an isolated fragment of a decorated EBA1 vessel [subphase BA1A].[147] The latter represents an outlier in the spatial distribution of 'Bell Beaker' type ceramics and in all likelihood indicates the deposition of a 'non-local' object.[148] Similarly, the ceramics in the EBA assemblage from GROTTA LA CAVA [#9] show long-distance connectivity (including other caves in Central Italy). The presence of a complete EBA2 'miniature' vessel strengthens the ritual connotation of the assemblage.[149] The cave that seems to

[145] The limited assemblage consists of a vessel type that has only been found in two caves in southern Tuscany (Ialongo 2007, 163-165 [tipo 41] = Cocchi Genick 1998 [tipo 135A], i.e. POGGIO LA SASSIOLA & GROTTINO DI ANSEDONIA), and another vessel type with a parallel at a cave on the other side of the lake and at another cave in southern Tuscany (Ialongo 2007, 162 [tipo 34A] = Cocchi Genick 1998 [tipo 113A], i.e. BELVERDE-SANTA MARIA & GROTTA MARITZA).

[146] The large fragment of a vessel (GROTTA DI CICCIO FELICE) finds a parallel in a smaller, relatively complete (possibly miniature) vessel from a cave on the other side of the lake (GROTTA LA CAVA) (Ialongo 2007, 160 [tipo 29A]), whereas another vessel type shows parallels (including caves) with northern Tuscany (Ialongo 2007, 153-154 [tipo 12] = Cocchi Genick 1998 [tipo 40], i.e. LASTRUCCIA, CANDALLA-RIPARO DELL'AMBRA & RIPARO DELLE FELCI).

[147] The fact that the atypical handle (Ialongo 2007, 166 [tipo 47A]) finds a parallel in the late Copper Age-EBA1 [subphase BA1A] open-air site (ORTUCCHIO-STRADA 28) in the vicinity (Chapter 7) suggests that the deposition of the 'Bell Beaker' type vessel would have been linked to this particular community.

[148] In this respect, the isolated find represents the only fragment of a 'Bell Beaker' type vessel from a known context in Abruzzo. Two other fragments of vessels with Bell Beaker type decoration are known from the enigmatic VALLE DELLA VIBRATA contexts (Peroni 1971, 247 [fig. 55.4]; Di Fraia 1996a, 483, 485 [fig. 1.5]; D'Ercole 1997a, 54). Ialongo (2007, 174 [tipo 71]) observes that the decorative technique differs from 'classic Bell Beaker' styles of decoration and suggests that it represents a local product of later date, contemporary with local traditions on the Tyrrhenian side of the peninsula (§3.2). Cocchi Genick (1998) does not refer to the 'Bell Beaker' type fragment, although it had been published in the proceedings edited by herself (Cocchi Genick 1996), perhaps favouring a late Copper Age date.

[149] The EBA1 [subphase BA1A] vessel type finds a parallel at the Copper Age-EBA1 [subphase BA1A] open-air site (ORTUCCHIO-STRADA 28) in the vicinity and in one of the few comprehensive 'Bell Beaker' assemblages in northernmost Lazio (Ialongo 2007, 158 [tipo 24A] = Cocchi Genick 1998 [tipo 59B], i.e. TORRE CROGNOLA). One of the EBA2 vessel types mainly finds parallels in caves in northern Tuscany (Ialongo 2007, 151 [tipo 4] = Cocchi Genick 1998 [tipo 7], i.e. GROTTA DEL

have been used most consistently (GROTTA MARITZA [#10]) had already been interpreted as a persistent cult place by Cocchi Genick in the light of its connections to other caves in Central Italy (1998, 329). Her interpretation has been substantiated by Ialongo's classification (2007) of the fuller assemblage of ceramics.[150]

Similar to the west of the FUCINO lake (see above), a sequence can be discerned in the use of the caves to the south. GROTTA DI ORTUCCHIO [subphase BA1A] was 'abandoned' in favour of GROTTA MARITZA [subphases BA1B & BA2], with simultaneous, episodic use of GROTTA LA CAVA [subphases BA1A & BA2]. Overall, EBA cave use in the FUCINO BASIN was episodic in character and focused on ceramics deposition, often showing typological affinities over long distances and particularly connected to caves elsewhere in Central Italy (see above). It is not clear whether the evidence for funerary cave use at GROTTA DI MONTE SALVIANO [#7], to the west of the lake, had a counterpart at GROTTA LA CAVA [#9], to the south of the lake (§5.1.2). Strengthened by the relatively recent find of GROTTA DI MONTE SALVIANO [#7] and Neolithic and Copper Age traditions of funerary cave use, D'Ercole (1997a, 54) has interpreted EBA cave use in intermontane Abruzzo as predominantly funerary in character, but this generalisation cannot be substantiated in the micro-region with the strongest tradition of funerary cave use (§5.1.2). Given the relatively large size of its EBA assemblage, including both 'local' and 'non-local' vessels, GROTTA MARITZA [#10] seems to have been the principal cult place in the FUCINO BASIN.

Upper stretches of 'Adriatic' rivers

Trajectories of cave use (GROTTA A MALE; GROTTA DELLE MARMITTE) in the GRAN SASSO show a break after the Copper Age (Table 6.2). This is particularly significant at GROTTA A MALE, a newly established, Copper Age place where funerary and ritual practices did not seem to have continued given the absence of EBA ceramics from excavations (Pannuti 1969; Damiani et al. 2003). Because of this gap, the primary burials in niches (without grave goods) and disarticulated human remains throughout the cave (D'Ercole 1998a, 15) are probably Copper Age or MBA, not EBA in date (Appendix 2 [#5]). Similarly, the fragmented (bronze?) dagger that had been attributed provisionally to an EBA type (D'Ercole 1997, 56 [tav. 1.6], 61 [no. 6]), is MBA1 in date and was not taken into consideration here. Speleological and clandestine finds of ceramics from the deeper and inaccessible spaces of GROTTA A MALE have been dated to the Copper Age (Damiani et al. 2003, 327). Cave use in the larger area of the UPPER ATERNO valley only seems to have been resumed with EBA2 ceramics deposition at GROTTA DELLE STIFFE [#4] (Table 6.2). Arguably, this place was selected for deposition as a source of a tributary of the ATERNO river, in the form of an impressive waterfall fed by a subsurface flow of water.[151] The entrance of the cave may have been opened up for deposition following a change in hydrological regimes of the subsurface stream from year-round to one which would have been more seasonal, due to the EBA2 'dry event' (§3.4). Finally, potentially EBA cave use has not been substantiated at GROTTA DEL FAUNO [#12], in connection with a tributary of the UPPER SANGRO river (Figure 6.1), and is based on an 'ambiguous' radiocarbon date (§3.3).

6.1.3 Coastal Lazio

EBA cave use in 'coastal' Lazio shows an uneven spatial distribution (Figure 6.1), largely but not exclusively determined by the physically circumscribed occurrence of clusters of caves. In this respect, Neolithic cave use is not only more consistent in terms of numbers of caves, but also shows a spatial distribution that is more widespread, including the use of 'isolated' caves (Tables 6.3 & 6.4). Two larger groups can be discerned in the overall distribution of EBA cave use in the region (Figure 6.1). One group is situated in northernmost Lazio [#17-25] and seems to have been an 'extension' of cave use in southern Tuscany (§6.1.4). The other group can be found in the interior, pre-APENNINE parts of

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FARNETO, CANDALLA-RIPARO DELLE FELCI, ROMITA DI ASCIANO, PODERE CIRENE, MONTE FIORE) and the other (a smaller, relatively complete vessel) in a large fragment at another cave in the micro-region (GROTTA DI CICCIO FELICE) and in the open-air assemblage (ORTUCCHIO-STRADA 28) in the vicinity (Ialongo 2007, 160 [tipo 29A]).

[150] EBA1B: Ialongo 2007, 162 [tipo 34A] = Cocchi Genick 1998 [tipo 113A]; Ialongo 2007, 162 [tipo 38] = Cocchi Genick 1998 [tipo 123A]. EBA1B-2: Ialongo 2007, 151 [tipo 7B] = Cocchi Genick 1998 [tipo 77]. EBA2: Ialongo 2007, 154 [tipo 15]; Ialongo 2007, 154-156 [tipo 21] = Cocchi Genick 1998 [tipo 78]; Ialongo 2007, 169 [tipo 56] = Cocchi Genick 1998 [tipo 172B]; Ialongo 171 [tipo 63] = Cocchi Genick 1998 [tipo 202].

[151] GROTTA DELLE STIFFE overlooks the point where the ATERNO river flows from its upper stretch in the L'Aquila plain (to the west of the Gran Sasso Mountains) into an intermontane stretch (after which it emerges in the Sulmona basin and subsequently meets up with the Pescara river at POPOLI).

southern Lazio [#28-35], thereby completing the distribution of caves in the intermontane region (§6.1.2). Although the number of caves with episodes of EBA use is higher in 'coastal' Lazio [#17-35] than in 'coastal' Abruzzo [#1-3] (§6.1.1) and the intermontane region [#4-16] (§6.1.2), regional differentiation can be discerned. The following overview will show that evidence for EBA cave use is not as straightforward in northern Lazio (Table 6.3) as in southern Lazio (Table 6.4). Here I will follow the punctuated occurrence of EBA cave use in a discussion by micro-region, again with a focus on 'special' features (if present), whereas the assemblages will be discussed 'in full' as part of their polythetic classification (§6.2).

	Neolithic	Copper Age	EBA1	EBA2
middle Fiora valley (VT)				
Grotta del Siciliano (VT)	?			
[#21] Grotta Nuova (VT)	?		?	?
[#18] Grotta dell'Infernetto (VT)			?	?
[#17] Grotta della Paternale (VT)		X		?
[#19] Grotta delle Settecannelle (VT)	X	X	X	
[#20] Grotta di Carli (VT)	X	?		X
[#22] Grotta del Diavolino (VT)			?	?
lower Fiora valley (VT)				
[#23] Grotta di Don Simone (VT)			?	?
[#24] Grotta del Lago di Torre Crognola (VT)	X	?	?	?
[#25] Riparo di Ponte dell'Abbadia (VT)	X	X	?	?
Lago di Vico (VT)				
Monte Venere (VT)	X			
Agro Falisco (VT)				
Grotta del Vannaro (VT)	X			
Cavernette dell'Agro Falisco (VT)	X			
Monte Soratte (RM)				
Grotta dei Meri-Monte Soratte (RM)	X			
Tolfa Mountains (RM)				
[#26] Pian Sultano (RM)				X
Cerveteri micro-region (RM)				
Grotta Patrizi al Sasso di Furbara (RM)	X			
[#27] Macchia della Signora-Grotta delle Fate (RM)				?

Table 6.3: overview (incorporating Fugazzola Delpino et al. 2004) of later prehistoric (Neolithic-EBA) trajectories of cave use in northern Lazio [nos. refer to Appendix 3 & Figure 6.1].

The MIDDLE-LOWER FIORA valley

Later prehistoric trajectories of cave use in northern Lazio show a significant break after the Neolithic, with the exception of the FIORA valley (Table 6.3). This spatially circumscribed distribution of Copper Age cave use recalls the focus on northernmost Lazio in Copper Age burial (§5.1.3). The overlapping, circumscribed distributions of Copper Age cave use and cemeteries in this micro-region could indicate that depositional practices at both these types of place were interconnected. For instance, the shared subsurface connotation of these places is implicit in the Italian terminology for Copper Age rock-cut tombs (Italian: "grotticelle artificiali", i.e. artificial caves), but this has so far not been explicitly explored as a potential link in cosmological terms. The absence of Copper Age cave use from the remainder of northern Lazio underscores the peculiarity of northernmost Lazio where a cluster of Copper Age cemeteries emerged (§5.1.3). This coincidence of a break in trajectories of cave use in the 'southern' northern Lazio with the emergence of man-made subsurface places in northernmost Lazio adds another dimension to the role of this particular micro-region in (supra)regional connectivity between Tuscany and Lazio. However, in comparison with the abundance of rock-cut tombs in northernmost Lazio and evidence for funerary cave use in southern Tuscany (§5.1.4), Copper Age cave use in the FIORA valley was a relatively insignificant phenomenon (Table 6.3).

The generalised abandonment of Copper Age cemeteries (Chapter 5) does not seem to have resulted in an increase in cave use, at least in the micro-region itself. Whereas EBA evidence for cave use in southern Tuscany is abundant (§6.1.4; Figures 6.2 & 6.3), in northernmost Lazio it remains underrepresented or unsubstantiated (Table 6.3). Certain episodes concern one EBA1 cave assemblage (GROTTA DELLE SETTECANNELLE [#19]) and one EBA2 assemblage (GROTTA DI CARLI [#20]), in both cases following Neolithic and/or Copper Age episodes of use (Table 6.3). The EBA2 ceramics at GROTTA DI CARLI show typological affinities (Casi & Mieli 1998, 412) with ceramics from the lake-side cult place at LAGO DI MEZZANO (Chapter 7). This highlights a parallel trajectory of place-making

at a cave and a crater lake and underscores the ritual connotation of cave use. Another EBA cave assemblage (GROTTA DEL DIAVOLINO [#22]), recently reported from the same micro-region, has not been published yet. By contrast, the majority of assemblages from caves in the FIORA valley that had been reported as EBA episodes (Table 6.3), have been redated to MBA1.[152] The generally limited, episodic character of cave use in this micro-region and the respective assemblages should probably be interpreted as an intermittent form of EBA cave use. The prevalence of occasional acts of deposition in northernmost Lazio contrasts with the predominance of funerary and non-funerary cave use in southern Tuscany (§6.1.4; Figures 6.2 & 6.3; cf. Cocchi Genick 1998, 323-324).

'Southern' northern Lazio

The Copper Age gap in trajectories of cave use in northern Lazio outside the FIORA valley (see above) lasted until EBA2 (Table 6.3). Apart from presumably EBA2 ceramics reported from the entrance of GROTTA DELLE FATE [#27], the only instance of cave use concerns the use of two rock fissures at PIAN SULTANO [#26] for secondary burial (Chapter 5), in association with ceramic vessels and faunal remains. In the rock fissure excavated most recently ('crepaccio 2') vessels have been found mainly in groups of larger fragments in a particular stretch of the rock fissure (Di Gennaro et al. 2002, 675). About thirty vessels are reported as relatively complete and these seem to have constituted separate acts of deposition, perhaps including deliberate fragmentation of the vessel at some stage in the ritual. Although the spatial distribution of disarticulated human remains, i.e. skulls and long bones (§5.2.1; Table 5.9), shows a partial overlap with that of ceramics at PIAN SULTANO-CREPACCIO 2, the former tend to be located somewhat deeper, in the more inaccesible parts of the rock fissure (Di Gennaro et al. 2002, 675). This relative position of human remains and ceramics could indicate that in cosmological terms the (deeper) subsurface had a more specific connotation as an ancestral realm and was more appropriate for selected human remains. Unfortunately, the position of the faunal remains has not been reported in more detail than "sometimes" (at least more than once) occurring in association with disarticulated human remains.[153]

The assemblage of PIAN SULTANO is more informative in terms of place-making than other instances of EBA cave use and indicates that repeated acts of deposition and/or secondary burial took place at least in one of the rock fissures. The striking absence of Copper Age-EBA cave use in the larger part of northern Lazio (Table 6.3) strengthens the scenario that PIAN SULTANO was a significant new node in EBA2 networks. This was argued on the basis of the spatial distributions of EBA funerary practices alone (§5.1.4) and in terms of the spatio-temporal coincidence with a concentration of EBA2 axe depositions in the TOLFA MOUNTAINS (§4.2.3). Given their overall similarity, it was suggested that the cult place of PIAN SULTANO could have taken over the role of FOSSO CONICCHIO (§5.1.3). In this respect, it is significant that one of the large (storage) vessels from PIAN SULTANO has been attributed to a 'Southern Italian' type, connecting to Campania or Calabria (Di Gennaro et al. 2002, 678, 685 [fig. 3.2]). Incidentally, as a probable storage vessel, it could have contained items of exchange. The presence of 'Southern Italian' vessel types recalls the presence of 'Southern Italian' vessels at the EBA1 cult place at FOSSO CONICCHIO (Appendix 2 [#11]). This strengthens the scenario that FOSSO CONICCHIO and PIAN SULTANO, both contexts of secondary burial (§5.2), constituted similar nodes in networks and that the abandonment of the former in EBA1 coincided with the establishment of the latter in EBA2.

The ANIENE valley

The only cave in southern Lazio with an 'uninterrupted' trajectory since the Neolithic (GROTTA POLESINI [#29]) is situated in the LOWER ANIENE valley (Table 6.4). This place has been interpreted as a site of (seasonal) dwelling, putatively interrupted by the existence of a year-round internal stream in the Neolithic, prohibiting access to the cave (Radmilli 1974, 21). However, precisely the existence of a (seasonal) subsurface stream in the cave may argue for a scenario that links the limited EBA1-EBA2 assemblage to depositional practices with a ritual character. The significance of peculiar subsurface features can also be discerned at a cave with geothermal characteristics (GROTTA DELLO SVENTATOIO [#28]) in the mountains to the north of the LOWER ANIENE valley. It constitutes a 'new' place that was

[152] The chronological resolution of cave assemblages is to a large extent determined by the predominance of MBA1 ceramics. This makes it often difficult to exclude the existence of initially very limited EBA2 assemblages. Nonetheless (or, for this reason), Cocchi Genick (1998, 2002) has redated the ceramics from GROTTA NUOVA [#21], GROTTA DELL'INFERNETTO [#18], RIPARO DI PONTE DELL'ABBADIA [#25] and GROTTA DI DON SIMONE [#23] to MBA1.

[153] Di Gennaro et al. 2002, 676: "in più casi", i.e. in more than one case.

selected for deposition at the EBA2-MBA1 transition (§9.2.1), including food deposition (§6.2). Unfortunately, apart from the botanical sample presented as generically EBA-MBA in date, the assemblage of GROTTA DELLO SVENTATOIO has not been published in detail yet (Appendix 3 [#28]).[154] At the same time, circumstantial evidence in the UPPER ANIENE valley suggests that cave use resumed at a prior place (GROTTICELLA DI MONTE LICINO [#30]) after a gap since the Neolithic (Table 6.4). Overall, EBA cave use in the larger ANIENE micro-region was occasional, contrary to MBA cave use (Van Rossenberg forthcoming).[155]

	Neolithic	Copper Age	EBA1	EBA2
Cornicolani Mountains (RM)				
[#28] Grotta dello Sventatoio (RM)				?
lower Aniene valley (RM)				
[#29] Grotta Polesini (RM)	?	X	X	X
upper Aniene valley (RM)				
[#30] Grotticella di Monte Licino (RM)	X			?
Riparo di Morra di Collecchia (RM) [Mattioli 2009]	?	?		
Grotta dell'Arco di Bellegra (RM) [Mattioli 2010]		?		
Grotta Mora di Cavorso (RM) [Rolfo et al. 2009, 2010]	X	?		
Alban Hills (RM)				
Pentina Battiferro-Grotta I (RM)	X			
Collepardo micro-region (FR)				
[#31] Grotta Madonna delle Cese (FR)			X	X
[#32] Grotta-riparo del Peschio Tornera (FR)		X	?	X
[#33] Grotta Rossa (FR)		?	?	?
southeastern Frosinone province (FR)				
[#35] Valle Cantara (FR)	X	X		X
[#34] Grotta del Cane (FR)				X
Ausoni Mountains (FR)				
Grotte di Pastena (FR)	X			
Lepini Mountains (LT)				
Andreola (LT)	X	X		
[#36] Grotta Vittorio Vecchi (LT)		?	X	X
Arnalo dei Bufali (LT)	X			
Coastal Latina province (LT)				
Riparo Blanc (LT)	?			
Le Vasche (LT)	X	X		

Table 6.4: overview (incorporating Fugazzola Delpino et al. 2004) of later prehistoric (Neolithic-EBA) trajectories of cave use in southern Lazio [nos. refer to Appendix 3 & Figure 6.1].

The province of Frosinone

In the karstic area of COLLEPARDO cave use seems to have started only after the Neolithic (Table 6.4). It represents one of the few micro-regions where the number of caves increased since the Neolithic, starting with Copper Age episodes at GROTTA-RIPARO DEL PESCHIO TORNERA [#32] and perhaps GROTTA ROSSA [#33], to which another cave (GROTTA MADONNA DELLE CESE [#31]) was added in EBA1 (Table 6.4). The caves in this group were probably selected as contexts of deposition on the basis of the occurrence of subsurface, karstic phenomena such as stalagmites and stalactites, as well as other natural substances circulating in the cave including water, in one case a spring (GROTTA ROSSA). In this respect, the presence of two cups at GROTTA-RIPARO DEL PESCHIO TORNERA seem to refer more to ritual practices than to the site function of (seasonal) dwelling originally proposed.[156] The absence of EBA1 episodes of cave use elsewhere in the 'interior' province of Frosinone highlights the potentially wider significance of cave use in the area of COLLEPARDO, starting as a node in Copper Age networks (Table 6.4). Still, it should be stressed that cave use was limited, episodic and occasional in character.

Nonetheless, a 'peak' can be discerned in cave use in the Frosinone (FR) province as a whole, with the addition of two caves with EBA2 assemblages to the southeast of the MIDDLE LIRI valley (Figure 6.1). One instance concerns a rock-shelter (VALLE CANTARA [#35]), where a single fragment of

[154] Loney (2007, 192) refers to a MBA-LBA date in the context description of her sample of ceramics subjected to technological analysis, but this seems to be a mistake.

[155] A later, strictly MBA1 date for cave use at GROTTA DELLO SVENTATOIO and GROTTICELLA DI MONTE LICINO may find corroboration in the assemblage of GROTTA MORRITANA in the UPPER ANIENE valley, redated from EBA2 to MBA1.

[156] Cf. Angle & Guidi 2007, 150 [note 1], who date this vessel type on the basis of a parallel with a site in northern Tuscany, which in itself may be an indication that it concerns 'non-local' objects.

an EBA2 vessel indicates a single act of deposition that made a connection with a prior, Neolithic-Copper Age place (Table 6.4). The other cave assemblage (GROTTA DEL CANE [#34]) constituted a new, EBA2 place with the deposition of a group of ceramics showing affinities with the 'Palma di Campania' style (§3.2.2). This lends an intercommunal connotation to this act of place-making, perhaps involving people from both southern Lazio and northern Campania. Despite the relative proximity of these regions, the GROTTA DEL CANE assemblage stands out as one of the few instances of this type of ceramics found in southern Lazio. An alternative interpretation that appreciates the rarity of this assemblages, is that it constituted an act of deposition incorporating 'non-local' objects in a particular depositional context.[157]

The province of Latina

Later prehistoric cave use in the coastal province of Latina (LT) shows a decrease in the number of caves after the Neolithic and Copper Age (Table 6.4). Only one cave (GROTTA VITTORIO VECCHI [#36]), situated on the 'coastal' side of the LEPINI MOUNTAINS (Figure 6.1), has yielded limited EBA1 and EBA2 assemblages, perhaps following late Copper Age use (Angle & Guidi 2007, 152-153 [no. 20]; Rosini 2007).[158] This suggests that GROTTA VITTORIO VECCHI constituted a prior, ancestral place, but it remains to be seen whether the abundant funerary evidence should (partly) be considered as EBA in date (§5.1.3), in the absence of radiocarbon dates on human remains. Similarly, the (botanical) remains of food depositions (§6.2) that have been reported as (partly) EBA2 in date, could predominantly refer to later, MBA cave use. In terms of place-making, GROTTA VITTORIO VECCHI was probably initially selected for deposition as a cave consisting of several spaces and including subsurface karstic features such as stalactites and stalagmites.

6.1.4 Access to the past: caves as prior places

One broader diachronic pattern emerges from the regional overviews of the spatial distribution and trajectories of late prehistoric cave use in coastal Abruzzo (§6.1.1), the intermontane region (§6.1.2) and coastal Lazio (§6.1.3). Caves with Neolithic episodes of use outnumber those with Copper Age evidence, whereas EBA cave use is generally not so well-represented as Copper Age cave use (Tables 6.1, 6.2, 6.3 & 6.4). Most of the trajectories of cave use are 'persistent', in the sense that caves with EBA evidence had already been used in the Copper Age (and/or Neolithic). In these particular cases the connotation of caves as prior places is mainly 'cultural', in the sense that earlier episodes of use can be linked to 'specific' ancestors or notions of 'collective' ancestorhood. On the other hand, the later prehistoric trajectory of a smaller number of caves only started with an EBA episode of use. In these cases, the connotation of caves as prior places is mainly cosmological (or 'mythical') in character and can be linked to their pre-existence as so-called 'natural places'. This second form of place-making, concerning caves without a prior, Copper Age trajectory of use, seems to have applied predominantly to EBA2 cultural landscapes (Figure 6.3), to a lesser extent EBA1 cultural landscapes (Figure 6.2).

Excluding caves with 'circumstantial' or unsubstantiated evidence for EBA1 episodes of use, the spatial distribution of EBA1 cave use is circumscribed to two larger areas (Figure 6.2). One group is focused on southern Tuscany, including one instance (GROTTA DELLE SETTECANNELLE) in northernmost Lazio (§6.1.3). The second group is focused on the intermontane FUCINO BASIN and includes GROTTA DEI PICCIONI in coastal Abruzzo (§6.1.1) and adjacent caves in southern Lazio (§6.1.3). The majority of caves with EBA1 assemblages are characterised by a Copper Age episode in their trajectories (Figure 6.2) and can tentatively be regarded as prior or 'persistent' places in a cultural sense (i.e. ancestral places). Only a few caves with EBA1 assemblages lack evidence for prior use and these are circumscribed to southern Lazio (Table 6.4). In particular, GROTTA VITTORIO VECCHI and GROTTA MADONNA DELLE CESE seem to have been selected for deposition as pre-existing, natural places (§6.1.3). In this respect, both are characterised by karstic features such as stalagmites and stalactites, which probably added a dimension to their perception as places with a prior history (i.e. ancestral places) in a cosmological sense.

[157] A similar link has been made with the typology of ceramics at the rock fissure cult place of PIAN SULTANO-CREPACCIO 2 (Belardelli et al. 2007, 375), in all likelihood concerning the 'southern Italian' EBA2 vessel (Appendix 3 [#26]). This is another indication that deposition of 'Palma di Campania' ceramics in coastal Lazio should be interpreted in the light of supra-regional connectivity, perhaps in the aftermath of the EBA2, 'Avellino' eruption of SOMMA-VESUVIUS (§3.4).

[158] Initially, the assemblage from GROTTA VITTORIO VECCHI was dated in its entirety to MBA1-MBA2 and only provisionally to EBA (Guidi 1991/1992, 435 [no. 37]). Unfortunately, the recent publication (Rosini 2007) is still preliminary and limited to the earliest objects. The final publication of the full assemblage (including as yet unpublished and undated metalwork) is awaited.

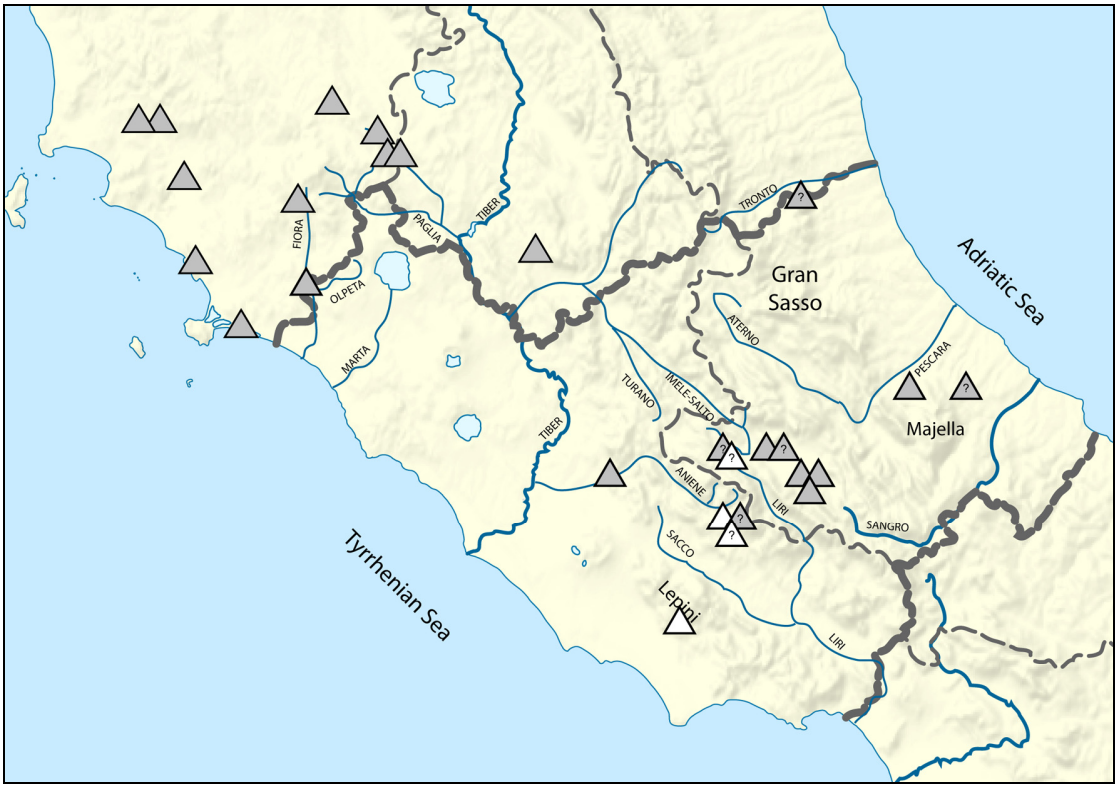

Figure 6.2: map (adapted from http://commons.wikimedia.org/wiki/File:Italy_map-blank.svg) showing the spatial distribution of EBA1 cave use (with Copper Age prior history highlighted in grey) in Abruzzo and Lazio, including EBA1 cave use in southern Tuscany and Umbria.

With respect to the two larger groups of EBA1 cave use (Figure 6.2), the spatial distribution of EBA2 cave use is more widespread (Figure 6.3). This extension of the distribution of cave use suggests that this form of place-making constituted an increasingly significant element, at least in terms of numbers of places, in cultural landscapes. The new, EBA2 places in question are predominantly caves without a prior history, both in the intermontane region (Table 6.2: RIPARO LILIANA; GROTTA DELLE STIFFE) and in 'coastal' Lazio (Table 6.3: PIAN SULTANO; Table 6.4: GROTTA DELLO SVENTATOIO; GROTTA DEL CANE). On the other hand, a few 'new' caves, situated in 'coastal' Lazio (Table 6.3: GROTTA DI CARLI; Table 6.4: VALLE CANTARA), have yielded evidence for Neolithic-Copper Age (but not EBA1) episodes of use. Because of the absence of a prior history (or the presence of a gap in their trajectories), probably none of the new, EBA2 places should be regarded as prior places in a cultural sense (i.e. ancestral places), but rather as pre-existing, natural places that were selected as a context of deposition. Arguably, the (re)discovery of a prior history in the form of earlier, Neolithic and Copper Age remains would have added an ancestral dimension to the cosmological dimension of EBA2 place-making at caves. In general, however, abandoned prior places do not seem to have been preferred in place-making, given the high numbers of Neolithic and Copper Age places without such evidence for EBA reuse (Tables 6.1, 6.2, 6.3 & 6.4). Deliberate engagement with the past can only be substantiated at the 'persistent' places of GROTTA SANT'ANGELO and GROTTA DEI PICCIONI in 'coastal' Abruzzo, where pits were dug into earlier cave deposits and used for deposition, including complete EBA2 vessels (§6.1.1).

To sum up, the broad diachronic pattern of the decrease in the number of caves in use since Neolithic seems to have been reversed in EBA2 (Figures 6.2 & 6.3). In addition to the new, EBA2 places (see above), the majority of caves with EBA1 assemblages also include EBA2 assemblages. In other words, the more widespread character of the distribution of EBA2 cave use is determined by acts of place-making (Figure 6.3) outside the spatially more circumscribed distribution of EBA1 cave use (Figure 6.2). However, the 'gap' in the distribution of EBA1 cave use in the larger part of northern Lazio persisted in EBA2, but not because of a lack of caves in the region (§6.1.3; Table 6.3), and would have constituted a past reality. To reiterate, EBA dates for assemblages from most of the caves in the MIDDLE-LOWER FIORA valley are currently rejected (Figure 6.1; Table 6.3). Most of these have been

redated to MBA1, or to the EBA2-MBA1 transition (§9.2.1). This highlights that rock-cut tombs of Copper Age tradition in northernmost Lazio remained significant as subsurface places in EBA cultural landscapes (instead of caves), as evidenced by EBA acts of burial and deposition engaging with such prior places (§5.1.3). On the other hand, cave use remained a prominent element of cultural landscapes in southern Tuscany between EBA1 and EBA2 (Figures 6.2 & 6.3). The overall absence of EBA cave use in northern Lazio could strenghten the possibility that caves in southern Tuscany served as intercommunal cult and meeting-places and constituted nodes in (supra)regional connectivity (§3.2). At the same time, it underscores the peculiar position of the newly established cult place at the rock fissures of PIAN SULTANO in EBA2 networks (Figure 6.3), similar to the scenario put forward in the context of funerary practices (Chapter 5).

Figure 6.3: map (adapted from http://commons.wikimedia.org/wiki/File:Italy_map-blank.svg) showing the spatial distribution of EBA2 cave use (with Copper Age and/or EBA1 prior history highlighted in grey) in Abruzzo and Lazio, including EBA2 cave use in southern Tuscany and Umbria.

The increasingly widespread occurrence of cave use, including new, EBA2 places, highlights a corresponding extension of knowledge about natural places in physical (or cultural) landscapes. In addition, the focus in EBA2 cave use was not so much on caves with a prior, Copper Age history of use, as on those without such a trajectory (see above). This indicates a shift in cave use as a form of place-making in EBA2 cultural landscapes. Some (but not all) of the prior, Copper Age-EBA1 places, i.e. ancestral places in a cultural and historical sense, were abandoned in favour of natural places, i.e. prior, pre-existing places in a cosmological, mythological sense (§6.2). Connected to different natural places, metalwork deposition shows a similar diachronic pattern in terms of its increasingly widespread distribution in EBA2 (§4.2.4; §4.4.3). On par with occasional acts of metalwork deposition, the overall limited character of cave assemblages (see above) suggests that cave use constituted isolated acts of deposition (§6.2). This raises the question whether these contextually dissociated elements (i.e. metalwork deposition and cave use) were somehow connected in terms of cultural landscapes and should be interpreted in similar terms, as isolated acts of place-making in connection with (different) natural places within the same cosmological framework (Chapter 8). Another 'multi-sited' question is how the increasingly widespread occurrence of both cave use and metalwork deposition between EBA1 and EBA2 related to contemporary, changing settlement patterns (Chapter 7).

6.2 Caves as collectors and connectors: ceramics deposition as ritual practice

In the overview and analysis of the spatial distribution and historical trajectories of cave use in Abruzzo and Lazio (§6.1) depositional practices have only been discussed in terms of the presence or absence of EBA remains, with special reference to features with an overtly ritual connotation. The rarity of such features highlights that these cannot be regarded as a common denominator of EBA cave assemblages. At the same time, the absence of 'special' features does not necessarily mean that depositional practices lacked a ritual connotation. In this respect, the polythetic dimension of Cocchi Genick's classification of EBA ceramics (1998) should be recalled, which revealed that particular vessel types were exclusive to caves and therefore implicated in ritualised practices (§3.2). Ceramic connections tend to occur between cave assemblages throughout Central Italy (rather than open-air sites) and set caves apart in the occurrence of so-called 'unica' (vessel types without parallels), presumably connected to ritual practices (Cocchi Genick 1998, passim). Moreover, on the basis of the overrepresentation of vessel types shared with other cultural groups in Central Italy, in comparison with the relative lack of vessel types in common with open-air assemblages in the region itself, Cocchi Genick has argued that a select group of caves in Abruzzo (GROTTA SANT'ANGELO; GROTTA DEI PICCIONI; GROTTA MARITZA) should be regarded as cult places that participated in a supra-regional network through which models of ritual practice were shared and exchanged (Cocchi Genick 1998, 327-330, 344, 372). For instance, a particular vessel type found at GROTTA DEI PICCIONI has a sole parallel in the assemblage of one of the caves (GROTTA DI LATTAIA) in the MONTE CETONA cluster in southeastern Tuscany (Cocchi Genick 1998, 99 [tipo 11], 344), the latter also interpreted as a supra-regional cult place (Cocchi Genick 1998, 372). I elaborated on this pattern by adopting Ialongo's classification (2007) of EBA ceramics and extending it to other caves in the FUCINO BASIN (§6.1.2).

In this section I will argue that ceramics deposition should be regarded as the common denominator of EBA cave use, not only in Abruzzo but also in Lazio. Although it should be kept in mind that 'ritual' and 'non-ritual' forms of cave use are not necessarily mutually exclusive, ceramics deposition can be interpreted as a ritualised practice (or a particular form of place-making) because of its peculiarities, already highlighted in some cases (§6.1.1; §6.1.2; §6.1.3). Focusing on these shared characteristics of EBA cave use, I will postpone a discussion of the issue of pastoralist practices as a potentially 'non-ritual' form of cave use to a comparison between faunal samples from cave and open-air assemblages (§7.4). Here the starting-point is a polythetic classification of EBA cave assemblages (§6.2.1), comparing these in terms of the presence or absence of classes of objects and substances (Table 6.5). The resulting polythetic groups of cave assemblages will shed light on the character of depositional practices. These cannot only be used to substantiate notions of place in terms of cultural landscapes (§6.1.4), but also to specify the sort of nodes that caves constituted in social networks (§6.2.2).

6.2.1 Polythetic classification

Cave assemblages can be compared and differentiated in terms of the classes of objects and substances selected for deposition. On the basis of such a polythetic classification, two (or three) groups of EBA cave assemblages can be distinguished (Table 6.5). At one extreme a group of assemblages with a full range of objects and substances ("full assemblages") and at the other extreme a group of assemblages that are limited to ceramics ("limited assemblages"). The latter group includes the 'special' features of complete vessels that were already singled out as ritual features (§6.1). Perhaps a third polythetic group is characterised by a slightly fuller range than so-called "limited assemblages", but still considerably more limited than so-called "full assemblages". It should be stressed that the polythetic distinction between full and limited cave assemblages is not due to a research bias. Limited EBA assemblages can also be found in comprehensively excavated sites, providing a sharp contrast with fuller Copper Age and Middle Bronze Age assemblages from the same caves. The absence of a research bias sets the two caves that make up the polythetic group of full assemblages (GROTTA SANT'ANGELO; GROTTA DEI PICCIONI), apart from the majority of EBA cave assemblages in Abruzzo and Lazio (Table 6.5).

Full cave assemblages

There is a strong sense of regional differentiation in the spatial distribution of "full" and "limited" cave assemblages, with the two fullest spatially circumscribed to 'coastal' Abruzzo (Table 6.5). GROTTA SANT'ANGELO (Di Fraia & Grifoni Cremonesi 1996) and GROTTA DEI PICCIONI (Cremonesi 1976) are not only characterised by long, seemingly uninterrupted trajectories of cave use (§6.1.1; Table 6.1), but

they also stand out for the volume of their prior, Neolithic and Copper Age assemblages, with respect to other caves with EBA remains. They had already been significant nodes in Neolithic networks and more exclusive nodes for depositional practices in Copper Age networks (§6.1.1). As such, GROTTA SANT'ANGELO and GROTTA DEI PICCIONI constituted depositional contexts with a strong connotation of ancestral place, arguably also for people beyond the micro-region. Their status as ancestral places is underscored by the practice of digging pits (into earlier cave deposits) for acts of deposition, a specific form of engaging with the past that is exclusive to both these caves (§6.1.1). On the one hand, digging pits inside caves depends on the presence of deeper layers; on the other hand,, it would not have occurred if these places had been left aside, like so many other caves in 'coastal' Abruzzo (Table 6.1).

	date	ceramics	complete vessel(s)	spindle-whorls	lithics (general)	arrowheads	querns & mullers	pebbles	bone & antler artefacts	shell artefacts	metalwork	botanical remains	faunal remains	human remains
Coastal Abruzzo														
[#1] Grotta Sant'Angelo (TE) [layer 5]	EBA1?-EBA2	X	X	X	X			X	X	X		?	X	X
[#2] Grotta dei Piccioni (PE) [layers 8-7]	EBA1-EBA2	X	X	X	X		X	X	X	X		?	X	
[#3] Grotta del Colle (CH)	EBA	X	X											
Intermontane region														
[#14] Riparo Liliana (RI)	EBA2	X												
[#4] Grotta delle Stiffe (AQ)	EBA2	X												
[#5] Grotta Beatrice Cenci (AQ)	EBA	X												
[#6] Grotta Cola I (AQ)	EBA		X											
[#7] Grotta di Monte Salviano (AQ)	EBA1	X												X
[#8] Grotta Di Ciccio Felice (AQ)	EBA1?-EBA2	X												
[#9] Grotta La Cava (AQ)	EBA1-EBA2	X												?
[#10] Grotta Maritza (AQ)	EBA1-EBA2	X												
[#11] Grotta di Ortucchio (AQ)	EBA1			?										
Coastal Lazio														
[#19] Grotta delle Settecannelle (VT)	EBA1	X		?										
[#20] Grotta di Carli (VT)	EBA2	X												?
[#26] Pian Sultano-crepaccio 2 (RM)	EBA2	X	X									?	X	X
[#28] Grotta dello Sventatoio (RM)	EBA2?	X										?		
[#29] Grotta Polesini (RM)	EBA1-EBA2	X			?									
[#31] Grotta Madonna delle Cese (FR)	EBA1-EBA2	X												
[#32] Grotta-Riparo del Peschio Tornera (FR)	EBA1?-EBA2	X	?											
[#33] Grotta Rossa (FR)	EBA	X												
[#35] Valle Cantara (FR)	EBA2	X												
[#34] Grotta del Cane (FR)	EBA2	X												
[#36] Grotta Vittorio Vecchi (LT)	EBA1-EBA2	X									?	?		?
Other funerary contexts														
(Appendix 2 [#8]) Campore (RI)	EBA1	X												X
(Appendix 2 [#11]) Fosso Conicchio (VT)	EBA1	X	X		X	X					X			X

Table 6.5: polythetic classification of EBA cave assemblages in Abruzzo and Lazio [nos. refer to and further details in Appendix 3].

The full range of objects and substances selected for deposition and 'collected' at these places include 'domestic' and/or 'local' elements, as well as 'natural' substances and/or 'non-local' elements. The former include objects and substances such as ceramics, spindle-whorls, domestic animals and probably agricultural produce. Cereal remains have been reported from pits and layers at GROTTA SANT'ANGELO and GROTTA DEI PICCIONI, but no botanical samples have been published in detail (and these features were probably not systematically sampled). At the same time, wild animal species, shells, pebbles and 'non-local' ceramics refer to a wider range of activities in physical, cultural and social landscapes (Table 6.5). In other words, distinctive spheres seem to have met at these deep-rooted nodes in local, regional and arguably supra-regional networks. The dissociation of metalwork from full cave assemblages is striking and should be interpreted in terms of the inappropriateness of caves for EBA metalwork deposition. The absence of metalwork from GROTTA DEI PICCIONI has been interpreted as a sign of "cultural retardation" (Cremonesi 1976, 311), but I argued that this dissociative pattern was a shared characteristic in EBA metalwork deposition (§4.2.4).

To be more precise, two acts of early metalwork deposition in the upper reaches of the ORTA river (§4.2.1) that flows from the MAJELLA MOUNTAINS past GROTTA DEI PICCIONI, were spatially connected to, but contextually dissociated from the cave itself. This underscores that metalwork deposition and cave use constituted distinctive places in cultural landscapes. The spatial relationships of cave use and metalwork deposition in EBA cultural landscapes and social networks will be explored in a 'multi-sited' analysis in the synthesis (Chapter 8). In the case of 'coastal' Abruzzo, however, a generic connection can already be discerned in the relative vicinity of clusters of EBA metalwork in the VIBRATA valley to GROTTA SANT'ANGELO and the upper PESCARA micro-region to GROTTA DEI PICCIONI (§4.2.1). Such a spatial coincidence in 'coastal' Abruzzo can be used to substantiate Cocchi Genick's reconstruction that GROTTA SANT'ANGELO and GROTTA DEI PICCIONI participated in supra-regional networks, through which models of ritual practices were shared and exchanged (1998, 327-330, 344, 372).

Intermediate assemblages

The EBA2 rock fissure assemblage (PIAN SULTANO-CREPACCIO 2) in northern Lazio should perhaps be included in an 'intermediate' polythetic group of cave assemblages, tending towards full assemblages in the sense that they are not limited to ceramics (Table 6.5). In addition, this cult place shows evidence for repetitive use, similar to GROTTA SANT'ANGELO and GROTTA DEI PICCIONI (see above). The slightly fuller assemblage from PIAN SULTANO, including complete vessels and food remains (Table 6.5), was invoked to interpret this rock fissure as a cult place (§6.1.3), rather than primarily a funerary context (§5.1.3). Selected human remains were 'collected' at this new EBA2 node as one of several substances, with an overall focus on deposition of ceramics (and food contents), probably followed by deliberate fragmentation (§6.1.3). The presence of a high number of 'complete' vessels was used to argue for a parallel between PIAN SULTANO and the earlier, Copper Age-EBA1 context of secondary burial in northern Lazio (FOSSO CONICCHIO). In a polythetic sense, the latter subsurface cult place can be regarded as closer to a full cave assemblage than the former, but the FOSSO CONICCHIO assemblage remains more limited than those from GROTTA SANT'ANGELO and GROTTA DEI PICCIONI (Table 6.5). On the whole, the prominence of complete vessels in the FOSSO CONICCHIO and PIAN SULTANO assemblages highlights the significance of ceramics deposition in place-making. Again the absence of metalwork should be stressed in the case of PIAN SULTANO, especially in the light of the prominence of EBA2 axe depositions in the immediate vicinity, in the TOLFA MOUNTAINS micro-region (§4.2.3). I will argue, however, that the spatio-temporal coincidence of a core area in metalwork deposition (i.e. repeated acts) and the emergence of the cult place at PIAN SULTANO (i.e. repetitive use) should probably be interpreted in association, situated at similar (or the same) nodes in networks (Chapter 8).

Limited cave assemblages

Assemblages limited to ceramics make up by far the largest polythetic group of EBA cave use in Abruzzo and Lazio (Table 6.5). It can be expected that in some cases additional classes of objects and substances would have been present, for instance the organic contents of vessels. However, it is unlikely that limited assemblages derive from originally full assemblages. In general, the predominance of limited assemblages highlights that deposition of EBA ceramics at caves was a significant form of place-making in itself. This is corroborated by 'special' features, which often involve complete vessels (§6.1). These instances include the vessels from pits dug into the earlier deposits in the two caves with the fullest assemblages (GROTTA SANT'ANGELO; GROTTA DEI PICCIONI), as well as the large number of vessels from PIAN SULTANO-CREPACCIO 2 (see above). Another instance of a larger EBA vessel has been reported as an isolated act of deposition from a crevice in one of the caves (GROTTA COLA I) in the UPPER LIRI valley (§6.1.2) and perhaps the cups from GROTTA DEL COLLE and GROTTA-RIPARO DEL PESCHIO TORNERA (Table 6.5) should be added to the list. It is the prominence of these instances in an otherwise relatively poor body of evidence for EBA cave use that indicates that ceramics deposition in connection with caves was a distinctive form of place-making. I will argue that similar acts of ceramics deposition can be found elsewhere in cultural and physical landscapes, placed 'in isolation' or repeatedly at the same place, such as at LAGO DI MEZZANO (Chapter 7). The significance of ceramics deposition is also highlighted by the exclusive presence of ceramics in association with human remains (Table 6.5: GROTTA DI MONTE SALVIANO; CAMPORE) in some of the few EBA funerary contexts (Chapter 5). The question is whether the ritual character of 'special' features in EBA cave use can be extended to other cave assemblages that are limited to ceramics.

Polythetically limited cave assemblages also tend to be limited in terms of their size (or volume), with 'isolated' ceramic fragments as an extreme (e.g. VALLE CANTARA). It shows that interpretations of EBA cave assemblages should be quantified in terms of the volume of objects and substances selected for deposition and the (minimum) number of events. It can be argued that depositional practices were repetitive at caves with "full assemblages" (GROTTA SANT'ANGELO; GROTTA DEI PICCIONI; PIAN SULTANO), constitutive of cult places with an ancestral dimension (see above). On the other hand, it is more likely that polythetically limited cave assemblages resulted from occasional, isolated acts of deposition, especially in case of those assemblages that are also limited in size. This characteristic of cave use should be taken into account in the consideration of 'persistent' trajectories of cave use since the Neolithic or Copper Age (Tables 6.1, 6.2, 6.3 & 6.4). Different from caves with full and larger assemblages (see above), those with evidence for 'episodic' use, consituted by occasional, isolated acts of deposition, can only to some extent be interpreted as 'persistent' nodes in networks, despite evidence for earlier episodes of cave use (§6.1). Only in the case of a few caves with limited assemblages can continuous relevance be substantiated on the basis of their overall context, for instance in the FUCINO BASIN with a long and consistent tradition of cave use (§6.1.2). However, even in this micro-region one cave in particular (GROTTA MARITZA) stands out as the main cult place for including a relatively sizeable assemblage. On the basis of such differentiation between caves in terms of the frequency of deposition, the ancestral connotation attributed to caves with a 'continuous' trajectory can be refined (§6.1.4).

In most cases, seemingly continuous trajectories (Figures 6.2 & 6.3) should actually be characterised as intermittent cave use and/or occasional acts of deposition, on a par with limited EBA assemblages (see above). A sense of continuity in trajectories of cave use that only resulted in limited assemblages should not be exaggerated. As such, EBA episodes of cave use do not necessarily refer to making a connection with ancestral places known from oral history, but to the creation of 'new' places in EBA cultural landscapes, irrespective of prior use of the same places. This puts emphasis on ceramics deposition as a more generalised form of EBA place-making, even in those caves where Copper Age remains could be encountered. Apart from the complete vessels from 'special' features (see above), the limited size and polythetic scope of cave assemblages is not inconsistent with a ritual connotation of the respective acts of deposition. Because of the wider pattern of 'isolated' acts of ceramics deposition, limited cave assemblages cannot easily be used to substantiate the seasonal use of caves in pastoralism (§7.4). The common practice is to interpret limited cave and open-air assemblages in terms of the putatively ephemeral character of pastoralism in an archaeological sense. However, if pastoralist cave use had been a significant EBA phenomenon, the presumably highly structured character of mobility patterns would have resulted in cave assemblages of more considerable size. Similarly, one would have expected a more consistent presence of faunal remains, in association with ceramics, in EBA cave assemblages, but these are limited to full assemblages (Table 6.5). Instead, I would argue that ceramics (& contents) deposition is the common denominator of EBA cave use, as highlighted by the prevalence of cave assemblages limited to ceramics.

6.2.2 Nodes in networks and flows of substances

The polythetic classification of EBA cave assemblages does not only shed light on the character of depositional practices (§6.2.1), thereby substantiating notions of place (§6.1.4), but it can also be used to reconstruct the sort of nodes that caves would have constituted in social networks. For a start, the physically and spatially circumscribed occurrence of caves (§6.1.1; §6.1.2; §6.1.3) means that these places, almost by definition, constituted nodes in (supra)regional connectivity. The notion of centrality deriving from the spatially circumscribed occurrence of caves in physical landscapes is enhanced by the lower number of caves that were actually in use at a given time, also in the light of their clustering in particular micro-regions (Figures 6.2 & 6.3). Moreover, the occurrence of caves is linked to geographical features that consitute 'natural' nodes of connectivity in physical landscapes, in particular source areas and river valleys in mountainous areas. This could indicate that EBA cave use should be interpreted accordingly, in terms of connectivity with the implication of travel over longer distances. If so, it provides the opportunity to interpret the spatial distribution of later prehistoric cave use (§6.1) in terms of changing routes and directionality in (supra)regional connectivity. In this respect, it can be argued that the coincidence of the location of cave use at intermontane nodes of connectivity in the physical landscape, following rivers, and actual routes of connectivity (including exchange) over long distances is more than tautological in nature, since both cultural phenomena require knowledge of physical landscapes.

Cave use and connectivity

The presumption of knowledge of physical landscapes on the part of later prehistoric people should neither be exaggerated nor underestimated. Intimate and precise knowledge of subsurface and surface courses of rivers in a map-like manner on a supra-regional scale is less unlikely, in appreciating that many of the major rivers in Abruzzo and Lazio run off the mountains that define the FUCINO BASIN, thereby more or less predetermining their source areas as nodes of connectivity. As such, the location of caves in these source areas, such as in the UPPER LIRI valley (§6.1.2), could have provided for a metaphorical means to conceptualise social connectivity over long distances. One such indication for cross-APENNINE and intermontane connectivity in later prehistory is a shared tradition of cave-related rock art, presumably also related to travel-based oral history. The MAJELLA MOUNTAINS stand out as a core area in the distribution of later prehistoric cave related rock art. Although notoriously difficult to date, schematic paintings in red ochre of people in religious roles (praying, priests) have been ascribed to the Neolithic-Copper Age, whereas warriors and battle scenes in charcoal have been ascribed to the Bronze and Iron Ages (Grifoni Cremonesi 1968/1969; Burri 1977; De Pompeis & De Pompeis 1984; De Pompeis & De Pompeis 1997).

This concentration of rock-art underscores the potentially wider cosmological significance of GROTTA DEI PICCIONI as a cult place since the Neolithic (§6.1.1). The spatial distribution of caves with Neolithic rock art around the MAJELLA MOUNTAINS (Table 6.1: GROTTA BUCO MALEDETTO; GROTTA DEL MORTAIO; GROTTA DELL'ANGELO; GROTTA DELLA PINETA; Table 6.2: RIPARO DI PACENTRO) incorporates the cult places of GROTTA DEI PICCIONI and GROTTA DEL COLLE. It also provides further context for Copper Age and EBA metalwork deposition in connection with the MAJELLA MOUNTAINS and the larger UPPER PESCARA micro-region (§4.2; Table 4.12). Mattioli's recent work (2006, 2007, 2009, 2010, 2011) has demonstrated that the Neolithic-Copper Age tradition of rock art can be extended to include rock-shelters in the UPPER ATERNO valley (RIPARO DI RAVA TAGLIATA) and the SALTO valley (RIPARO DI GROTTI) in the intermontane region (§6.1.2; Table 6.2) and in the UPPER ANIENE valley (RIPARO DI MORRA DI COLLECCHIA; GROTTA DELL'ARCO DI BELLEGRA) in the adjacent part of southern Lazio (§6.1.3; Table 6.4). It remains to be seen to what extent this wider tradition of cave-related rock art extended into the Bronze Age, but as a prior tradition it does underscore that travel-related knowledge of physical landscapes was cave-related in later prehistory and would in all likelihood have carried cosmological dimensions.

In the end, EBA patterns of connectivity in Abruzzo and Lazio can only emerge from a 'multi-sited' analysis in the synthesis (Chapter 8). Still, the diachronic trend of a decrease in the number of caves in use (§6.1) shows that Neolithic and Copper Age mobility patterns had reached a larger number of relatively 'inaccessible' places and covered a wider extent of physical landscapes. By contrast, the spatially more circumscribed distribution of EBA1 cave use (Figure 6.2) gives the impression of a single major cross-APENNINE route, connecting southern Lazio and southern Abruzzo, by way of the FUCINO BASIN. This spatial pattern emerges from the persistence of cave use in the FUCINO BASIN that contrasts with the gap in the trajectory of GROTTA A MALE after the Copper Age, as well as the absence of evidence for EBA cave use in the VELINO and SALTO valleys to the north (§6.1.2; Table 6.2). It was argued that the spatial distribution of 'horizon II' metalwork (Figure 4.8) highlights a similar (or the same) route in EBA1, linking southern Abruzzo to the FUCINO BASIN (§4.4.2). By contrast, the more widespread character of the spatial distribution of cave use in EBA2 (§6.1.4; Figure 6.3) could indicate the (re)emergence of intermontane patterns of mobility and connectivity.

In particular, cave use in connection with the TURANO river (RIPARO LILIANA) and the upper ATERNO river (GROTTA DELLE STIFFE) highlights an EBA2 change in intermontane connectivity, with persistent cave use in the FUCINO BASIN (Table 6.2). If the two larger vessels from GROTTA COLA I and GROTTA BEATRICE CENCI are EBA2 in date (§6.1.2), by analogy with the ones from pits at GROTTA SANT'ANGELO and GROTTA DEI PICCIONI (§6.1.1), the two EBA episodes of cave use in the upper LIRI valley would actually have followed an EBA1 'gap' in their respective trajectories. In turn, this would make the increasingly more widespread, 'intermontane' EBA2 pattern in the spatial distribution of cave use even more pronounced (§6.1.4; Figures 6.2 & 6.3). Again, a diachronic similarity with the spatial distributions of metalwork can be discerned in the more widespread occurrence of EBA2 axes in the intermontane region (§4.2.4; Figure 4.6). This could to some extent corroborate the impression on the basis of cave use (Figure 6.3) that intermontane patterns of mobility connecting the largest basins (i.e. RIETI BASIN & FUCINO BASIN) (re)emerged. Such a network change would have coincided with a shift in location of the main cross-APENNINE route in EBA2, away from the FUCINO BASIN towards the north (§4.4.3; Figure 4.9).

The similarity of the diachronic patterns of increasingly widespread distributions of both metalwork deposition and cave use in the intermontane region between EBA1 and EBA2 deserves further exploration in a 'multi-sited' analysis (Chapter 8). The increase in the distribution of cave use strengthens the idea that it intersected with travel (see above), the latter moreover implied by the extent of exchange networks as a form of supra-regional connectivity (§4.4). In order to substantiate mobility patterns and connectivity, it should be stressed that travel over long distances would by no means have been normal practice in later prehistory. As argued, it would have required (and, at the same time, engendered) intimate knowledge and skills in engaging with physical landscapes (and seascapes), as well as cultural landscapes and social formations.[159] It is likely that the rhythm (or temporality) of travel over longer distances (§2.1.2; §2.1.3) was seasonal at most, structured in the context of annual (or longer) cycles of the respective communities (§2.2.3). Seasonality was probably an even stronger determinant of cross-APENNINE and intermontane connectivity, in the expectation that mountainous areas were to a large extent off-limits for travel during winter, perhaps leaving the FUCINO BASIN community (§7.1.2) seasonally isolated from other communities.[160]

In general, it can be argued that patterns of mobility over longer distances followed an annual, if not longer periodicity, in particular in the case of intermontane environments. This has implications for understanding cross-APENNINE exchange networks involving EBA metalwork (§4.4.2; §4.4.3). At the same time, the postulated periodicity of travel over longer distances can be used to substantiate reconstructions of the character of cave use. It was argued that EBA cave use was largely intermittent or occasional in character, based on the polythetic classification (§6.2.1). The median frequency of cave use recalls the periodicity of travel in intermontane and cross-APENNINE, or more generally supra-regional connectivity (see above). The presumably occasional character of both cave use and travel suggests that acts of ceramics deposition in caves constituted nodes of new, EBA2 social networks in physical (at the same time, cultural) landscapes. In this respect, the frequently 'non-local' character of the ceramics selected for deposition (§6.1) highlights a similar sense of supra-regional connectivity. From this perspective, the increasing evidence for cave use between EBA1 and EBA2 (§6.1.4; Figures 6.2 & 6.3) can be interpreted as a form of place-making related to exploration, including the extension of intimate knowledge about physical landscapes, whether explicitly cosmological or not (see below and Chapter 8). Starting from the intimate interconnections between intercommunal interaction, travel, exchange, cosmology, landscape and sociality in ethnographic records (cf. Goldman & Ballard 1998; Helms 1998; Hoëm & Roalkvam 2003; Stewart & Strathern 2003), one could for instance argue that EBA cave use constituted acts of place-making that would have cosmologically grounded social interaction at relevant features of the physical landscape (cf. Helms 1998).

Underground place-making

The consideration of caves as nodes in social networks (see above) helps to understand EBA cave use as a historically specific phenomenon. At the same time, it should not be overlooked that cave use was a particular form of place-making, directed at the subsurface, and that as a consequence caves constituted a particular type of place in EBA cultural landscapes. General interpretations of later prehistoric cave use appreciate the cosmological connotations of subsurface environments as pre-existing, 'natural' places, arguing that deposition at caves was a chthonic form of religious practice, intersecting with so-called fertility cults and ancestor veneration.[161] However, 'chthonic' interpretations of cave use refer to the intimate, interdependent connection of local communities with the land (and its produce) and their ancestors (i.e. rootedness) only in a generic sense. I would argue that more specific interpretations are possible in the case of EBA cave use, starting from the polythetic distinction between full and limited assemblages, as well as the place of caves in social networks. Moreover, the distinction made between 'cultural' and 'natural' prior places in terms of notions of ancestorhood (§6.1.4) should be recalled. It was argued that notions of place attached to persistent cult places with full assemblages (GROTTA SANT'ANGELO; GROTTA DEI PICCIONI) differed significantly from the majority of caves, which only have yielded evidence for occasional episodes of EBA use (Table 6.6).

[159] Cf. Farr 2006 who makes a comparison between Neolithic travel on land and by sea.

[160] For instance, it seems unlikely that repeated visits of RIPARO DI GROTTI, as evidenced by superimposed Copper Age rock art (Mattioli 2006), at the heart of the intermontane SALTO valley (Table 6.2) occurred in winter. Because of the difficulty in dating rock art, Mattioli (2006) allows for a wide date range between middle-late Neolithic and EBA. Given the absence of evidence for EBA cave use in the SALTO valley, a Copper Age date is preferred here.

[161] Such generic approaches often refer to cyclical notions of life and death following agricultural metaphors (cf. Miari 1995; Williams 2003), irrespective of the presence (or absence) of farming produce and human remains.

	Full cave assemblages	Limited cave assemblage
Regional differentiation	'coastal' Abruzzo	intermontane region and 'coastal' Lazio
Polythetic classification	wide range of objects and substances	predominantly, if not exclusively ceramics
Frequency of deposition	persistent use or periodic, repetitive acts of deposition	occasional (or isolated) acts of deposition
Social context	probably intercommunal (i.e. nodes in intermediate- and higher-level connectivity)	intercommunal (i.e nodes in higher- and intermediate-connectivity) or local (i.e. nodes in lower-level connectivity)
Trajectories of cave use	prior and persistent places, frequently visited	new and prior (i.e. rediscovered) places
Notions of place and ancestorhood	generally 'genealogical' notion of prior, ancestral place	generally 'mythical', (re)discovered notion of prior, ancestral place
Cosmological connotation of deposition	sustaining flows of substances at a node of cosmological exchange	(re)creating a node of cosmological exchange

Table 6.6: connotations and character of EBA cave use in Abruzzo and Lazio.

Another further distinction can be made between caves with 'genealogical' and those with 'mythical' connotations, the former related to persistent places (continuously or last used in living memory) and the latter to new (or rediscovered) places (§6.1.4). A similar distinction was made in the case of reusing prior places for subsequent EBA burial (§5.2.3; Table 5.11).[162] Again largely defined in terms of the distinctive frequency of use of caves, the same categories can be linked to a distinction between repetitive acts versus occasional acts of deposition in terms of cosmological connotations (Table 6.6). On the one hand, depositional practices at persistent cult places *maintained* flows of substances at an established node of cosmological exchange (i.e. a 'nexus'). On the other hand, an occasional act of deposition *created* such a flow of substances in the act of place-making, or 'activited' the ancestral connotation of a pre-existing place ('cultural' or 'natural'). Irrespective of the premise that a cosmological notion of the 'subsurface' was immanent and that deposition was an established means to make a connection between the surface ('the living') and the subsurface ('the ancestors' or 'the land') (cf. Davies & Robb 2004), it is important to make such a distinction. It should be appreciated that it is the act of deposition itself (not its potential) that (re)creates a node of cosmological exchange. In the same manner, the apparent abandonment of a 'nexus' such as the Copper Age cult place at GROTTA A MALE in or before EBA (§6.1.2; Table 6.2) can be regarded as an indication of interrupted exchange (and perhaps cosmological irrelevance). Even in the case of pre-existing, underground places such as caves, a cosmological notion of the subsurface should be conceptualised as emergent in depositional practices directed at the subsurface.

In this context, the characteristics of these subsurface spaces themselves would have been significant and deserve a closer look. The selection for ritual practices of those caves in the Italian peninsula with particular physical properties, such as speleothem formations (i.e. stalagmites and stalactites) and water circulating in other forms, has been recognised as a cultural bias from the Neolithic onwards (e.g. Bernabei & Grifoni Cremonesi 1995/1996; Cocchi Genick 1999; Grifoni Cremonesi 1999, 2007). Although it seems to have been a relatively widespread phenomenon, it cannot be regarded as a common denominator of EBA cave use in Abruzzo and Lazio. EBA remains in caves with such karstic features can be found in 'coastal' Abruzzo (§6.1.1; Table 6.1: GROTTA SANT'ANGELO; GROTTA DEL COLLE), the intermontane region (§6.1.2; Table 6.2: GROTTA DELLE STIFFE; GROTTA COLA I; GROTTA BEATRICE CENCI), northern Lazio (§6.1.3; Table 6.3: GROTTA DI CARLI) and southern Lazio (§6.1.3; Table 6.4: GROTTA POLESINI; GROTTA MADONNA DELLE CESE; GROTTA ROSSA; GROTTA VITTORIO VECCHI). The presence of these peculiar subsurface features contributes to the cosmological connotation of underground deposition. It adds another dimension to the notion that caves constituted nodes of cosmological exchange (see above), in the sense that some of these places could easily have been conceptualised as dynamic (or 'living') entities in themselves. Some EBA acts of deposition almost literally 'tapped into' subsurface flows of (super)natural substances, mainly karstic (but sometimes geothermal[163]) in nature.

In general, the significance of the presence of a range of 'natural' subsurface features highlights that knowledge about caves would not only have entailed their location in physical landscapes, but also their interior, physical characteristics. The significance of 'natural' characteristics

[162] Cf. Fontijn 1996 (on trajectories of late prehistoric cemeteries and funerary monuments in the Netherlands) for terminology.
[163] The trajectory of GROTTA DELLO SVENTATOIO with geothermal characteristics probably started only at the EBA2-MBA1 transition (§6.1.3; §9.2.1).

of caves, in turn, strengthens the scenario that 'cultural' connotations of prior place, in the form of Neolithic and Copper Age remains (§6.1.4), did play a role in the selection of caves for subsequent, occasional EBA acts of deposition, either starting from living memory (or oral tradition) or upon (re)discovery in explorative practices. Exploration did not stop at cave entrances, but sought to create (or recreate) appropriate nodes of cosmological exchange in EBA networks, arguably following an established cosmological notion of cave use, a form of place-making directed at the subsurface.

6.3 A summary and multi-sited questions

A larger body of evidence for EBA cave use in Abruzzo and Lazio has been taken into account than discussed in Cocchi Genick's synthesis (1998). Here I will provide a summary of the basic patterns that emerged from the preceding analyses and the main interpretations that were based on these patterns. Along the line, further questions were highlighted that are 'multi-sited' in character and can therefore only be addressed in comparison with other constituent elements of cultural landscapes and social networks. These 'multi-sited' questions will be listed here as a conclusion to this chapter, to be addressed in the data-rich synthesis (Chapter 8).

- The analysis of later prehistoric trajectories of cave use (§6.1) shows that the majority of caves with EBA remains are characterised by an earlier history and can therefore be regarded as prior (or persistent) places in a cultural sense. The 'persistent' pattern particulary concerns EBA1 cave use (Figure 6.2), whereas a relatively larger number of caves with EBA2 remains constituted new (or rediscovered) places (Figure 6.3). In general, the spatial dimension of this diachronic pattern concerns a decrease in the number of caves in use between the Neolithic and EBA1 (§6.1), followed by a reversal of this trend with a slight increase in the number of caves with EBA2 remains (Figure 6.3). Moreover, the latter show an overall wider spatial distribution than those with EBA1 remains (Figure 6.2).
- Secondly, the polythetic classification of EBA cave assemblages (§6.2.1) resulted in a general distinction between full cave assemblages and limited cave assemblages (Table 6.5). The former are regionally specific, circumscribed to two persistent cult places (GROTTA SANT'ANGELO; GROTTA DEI PICCIONI) in 'coastal' Abruzzo, perhaps also including the new, EBA2 cult place (PIAN SULTANO) in northern Lazio. Although cave assemblages limited to ceramics also tend to be limited in size (or volume), there is ample evidence that the respective depositional practices should be regarded as ritual in character (§6.1; §6.2). In this respect, evidence for funerary cave use is scarce, by comparison (Chapter 5), and the use of caves for (seasonal) dwelling cannot be substantiated. Overall, the common denominator of ritual EBA cave use was ceramics deposition (with or without contents), exemplified by the 'special' cases of complete vessels as/in features (§6.2.1).
- It was argued that caves, almost by definition, constituted nodes in regional and supra-regional connectivity (§6.2.2) because of their uneven distribution over cultural and physical landscapes (§6.1). In general, EBA cave use was connected to travel over longer distances, both following similar periodicities and occasional in character (with the exception of persistent cult places), as well as requiring intimate knowledge of physical landscapes (§6.2.2). The diachronic pattern of the increasingly widespread occurrence of cave use between EBA1 and EBA2 (§6.1.4; Figures 6.2 & 6.3) was interpreted in terms of changing patterns of mobility and routes of connectivity (§6.2.2), arguably in parallel with changing exchange networks and distributions of metalwork (§4.2.4; §4.4.2; §4.4.3).
- Finally, the polythetic groups of full and limited cave assemblages more or less coincide with other distinctions (Table 6.6) related to the frequency of cave use (persistent versus occasional) and notions of place (ancestral versus new, 'natural' or rediscovered). This distinction was linked to distinctive connotations of the acts of deposition that constituted flows of substances, sustaining and (re)creating nodes of cosmological exchange, respectively (§6.2.2). The series of coincidences suggests that EBA cave use, either at persistent places or as occasional acts of deposition, was implicated in the cosmological underpinning (or 'rooting') of social interaction and connectivity (including exchange), as a particular form of place-making directed at the subsurface.

This summary of patterns and reconstructions shows that EBA cave use in Abruzzo and Lazio can be linked to historically specific characteristics of EBA cultural landscapes and social networks. This

differs from the generalisation that caves in Abruzzo can be regarded as Bronze Age 'territorial markers' (D'Ercole 2000), a statement that should be substantiated (or rejected) for each phase of the Bronze Age. Still, the reconstructions of EBA cave use outlined in this chapter can and should be put to the test, in comparison with other elements in cultural landscapes and in the 'multi-sited' context of social networks (Chapter 8).

- Despite the absence (or dissociation) of EBA metalwork from caves in Abruzzo and Lazio (§4.2), metalwork deposition and cave use seem to have been connected in other respects. Both these elements follow a diachronic pattern of an increasingly widespread distribution between EBA1 and EBA2 (§6.1.4). This raises the question of their spatial relationships, to be addressed in a 'multi-sited' analysis (Chapter 8). Another broad similarity is that the main distinction in terms of the frequency of deposition at caves (i.e. repetitive or occasional acts of deposition) does also seem to apply to metalwork deposition in terms of depositional zones (or areas of deposition) versus 'isolated' finds (§4.2). Moreover, cave use and metalwork deposition shared a connection with (distinctive) subsurface features in the physical landscape (or types of natural places). The question is whether ceramics deposition (at caves) and metalwork deposition (elsewhere in physical landscapes) can be regarded as parallel depositional practices, as forms of place-making constitutive of cultural landscapes and nodes in social networks that could have been interlinked in a cosmological sense (Chapter 8).
- The main issue to be addressed, however, is a comparison of the spatial distribution of cave use and settlement patterns (Chapter 7). Such a diachronic comparison should specify the spatially differentiated distributions of caves and settlements, but still regard them as interrelated places in cultural landscapes and as nodes in the same networks (Chapter 8). The question is whether caves can be interpreted as cult places that were intimately linked to a particular 'local', settled community, or rather occupied 'intermediate' positions with respect to settlements (between settled communities), consistent with the postulated role of cave use in connectivity (§6.2.2). At the same time, the general impression based on distributions of cave use (§6.1.4) that patterns of mobility and connectivity changed between EBA1 and EBA2 (§6.2.2) should be corroborated (or falsified) in the light of diachronic changes in settlement patterns. This will include a closer look at 'ceramic connectivity' between caves and open-air sites (§3.2.1), focused on Abruzzo and Lazio (§7.2). In the same context, the thorny issue of patterns of mobility (putatively or potentially) including pastoralist cave use will be discussed. This analysis was postponed because it can only be corroborated (or rejected) in the 'multi-sited' context of a comparison of faunal samples from cave and open-air assemblages (§7.4).