HUMAN SETTLEMENT AND ENVIRONMENTAL EXPLOITATION OF VALCAMONICA-VALTROMPIA WATERSHED FROM THE BEGINNING OF THE HOLOCENE TO THE MIDDLE AGES

Paolo $BIAGI^1\,$ and $\,ELisabetta\,\,STARNINI^2\,$

Parole chiave - Alpi centrali, insediamento umano, territorio montano.

Riassunto - Il lavoro presenta una sintesi dei dati a disposizione riguardanti la frequentazione umana più antica delle alte quote alpine, con particolare riferimento allo spartiacque Valcamonica-Valtrompia. Le ricerche condotte negli ultimi 30 anni hanno messo in luce numerose testimonianze del passaggio dell'uomo a partire dalla fine del Paleolitico Superiore. Un maggior numero di frequentazioni è documentato a partire dall'inizio dell'Olocene, e testimonia l'attività venatoria stagionale da parte di gruppi di cacciatori-raccoglitori mesolitici, non appena le praterie alpine si erano liberate dalla coltre glaciale. Le alte quote vennero frequentate nuovamente a partire dall'età del Bronzo, come indicato principalmente da rinvenimenti di punte di freccia anche su sentieri attualmente ancora in uso, oltre che da una serie di datazioni radiocarboniche. Frequentazioni più recenti sono attestate per l'età del Ferro e il periodo Alto Medievale

PREFACE

In the last decades, the interest in mountain archaeology has greatly improved especially in the Alps, but also in the Pyrenees, the Pindos range of Western Macedonia, the Rhodopes, the Carpathians and the Caucasus, thanks to a series of projects whose scope is the study of the archaeology of human impact and high-altitude anthropogenic pressure (STIRN, 2014). Given the importance of the mountain ecosystem considered as a "marginal" environment exploited by man since the Palaeolithic, and the relevance that high altitude archaeology assumed in the archaeological dialogue, a research programme aimed at the study of the peopling of the Valcamonica-Valtrompia-Valsabbia watershed was promoted in the 1990s by Museo Civico di Scienze Naturali di Brescia. It resulted in the organization of an international congress held in 1993, and the publication of the proceedings as a monograph of the museum's journal, Natura Bresciana (BIAGI & NANDRIS, 1994).

The scope of this paper is to present and discuss some

Key words - Central Alps, human settlement, highland zone.

Abstract - This paper discusses some aspects of the highaltitude peopling of Valcamonica-Valtrompia watershed within the general pattern of the prehistoric and historic exploitation of the Central Alpine arc of northern Italy. Research carried out during the last 30 years has shown extensive evidence of human occupation starting from the end of the Late Palaeolithic. More information is available for the beginning of the Holocene, witnessing the ascent of the watershed by groups of Mesolithic hunter-gatherers as soon as the alpine pastures had been freed from the ice sheet. The highland zone was exploited again during the Bronze Age, as shown by the recovery of flint arrowheads from present-day footpaths, and a good set of radiocarbon dates. More recent, though sporadic occupations are documented during the Iron Age and the early Medieval period.

aspects of the earliest peopling of Valcamonica and Valtrompia within the general pattern of the prehistoric and historic exploitation of a segment of the Central Alpine arc of northern Italy. More precisely this paper considers some aspects of the highland zone exploitation and human settling along the Valcamonica-Valtrompia watershed. During the last 30 years our knowledge of the archaeology of this region has greatly improved thanks to many discoveries made mainly by local amateurs, and excavations carried out by institutional programmes of research (FRANCO, 2011). The results favoured the interpretation of the processes that led prehistoric and historic communities to settle and exploit this part of the alpine arc (BIAGI, 1992; 1998; BIAGI et al., 1994a; 1994b). Our view of the problem drastically changed during the 1970s, following the discoveries of new localities in the Trentino and the eastern Alps (BAGOLINI & DALMERI, 1992; BROGLIO, 1992; GRIMALDI, 2006; BERTOLA et al., 2007). The excavations carried out in the aforementioned region showed for the first time that groups of Mesolithic

hunter-gatherers seasonally settled around small lakes

¹Ca' Foscari University Venice. Department of Asian and North African Studies, Ca' Cappello, San Polo 2035, I-30125 Venezia - 🖂 pavelius@unive.it

² Turin University. School of Humanistic Sciences, Department of Historical Studies, Via Sant'Ottavio 20, I-10124 Torino

Fig. 1 - Distribution map of the most important Mesolithic sites mentioned in the text: Provaglio d'Iseo (1), Cividate Camuno (2), Foppe di Nadro (3), Cascina Valmaione (4), Pozza sotto lo Splaza (5), Stanga di Bassinale (6), Malga Rondeneto (7), St. Glisente (8), Laghetti del Crestoso (9), Laghi di Ravenola (10), Lago di Vaia (11) (drawing by P. Biagi).

of glacial origin located at ca. 2000 m. altitude. The new evidence contrasted with the general view of that time, according to which man had never inhabited the northeastern Alpine chain before the Iron and Roman periods (RAVAGNI, 1930).

The problems related with the mountain peopling have been recently reconsidered, especially as regards the northwestern Alpine arc (FEDELE, 1978; 1999; WICK, 1994), the Adige Valley and northeastern Italy in general (BROGLIO & LANZINGER, 1990; GRIMALDI, 2005), namely those regions where high altitude archaeology has greatly developed after the 1970s. A seminal volume on the Neolithic and Chalcolithic periods in central Valcamonica was published some 15 years ago, describing the results of the excavations carried out at Castello di Breno (FEDELE, 2008). More recent research has been centred on the Chalcolithic settlement and stele-statues that abound in the valley bottom (FEDELE, 2012).

THE LAST HUNTER-GATHERERS

The excavations carried out at Cividate Camuno, Via Palazzo, along the left (eastern) bank of the Oglio River, have brought to light the most important long sequence so far discovered in Valcamonica (POGGIANI-KELLER, 1988-1989; BAGLIONI & MARTINI, 2009). The lowermost layer has been attributed to the Late Epigravettian, radiocarbon-dated to 13,805±440 BP (GX-17273). This result suggests that the retreat of the glacier from the valley bottom took place a few thousand years before than previously suggested (HOROWITZ, 1975; BERTOLDI & CONSOLINI, 1989). It also shows that the valley bottom was already inhabitable a few millennia before the beginning of the Holocene.

The above data are supported by the results retrieved from a few pollen cores extracted from middle and high altitude peat basins. Their radiocarbon dating provides us with further information on the deglaciation of the valley bottom, confirming once again that it took place during the Tardiglacial (BARONI *et al.*, 1996).

At present only two Epigravettian valley bottom sites are known from Valcamonica: Cividate Camuno (Fig. 1, n. 2), and Castello di Breno. Just a few flint microbladelets and flakelets have been recovered from the latter site (FEDELE, 1988: 55). A third case is represented by a probable Late Palaeolithic horse engraved on a rock discovered at Luine (MARTINI et al., 2009). Apart from the above valley bottom, we do not have any evidence for Late Palaeolithic high altitude settlement. However, we know that the alpine high altitude grasslands were already open around 12,275 \pm 115 BP at Passo del Tonale (BARONI *et al.*, 1996: 11) and, roughly in the same period, Col di Val Bighera (2087 m) (GEHRIG, 1986: 118).

The exploitation of the high altitude alpine open landscapes that surround Valcamonica started at the beginning of the Holocene. The earliest Mesolithic sites excavated near Cascina Valmaione (1778 m) (Fig. 1, n. 4; Fig. 2) have been attributed to the Preboreal Sauveterrian culture, according to the typology of the chipped stone assemblages, characterised by hypermicrolithic tools among which are isosceles triangles obtained by microburin technique. Valmaione 2 has been dated to 9630 \pm 100 BP (GrN-20890) and 9410 \pm 80 BP (GrN-20093) (BIAGI, 1997).

In contrast the valley bottom did not yield any evidence of Preboreal occupation. An Early Mesolithic Sauveterrian, Boreal site is known from the aforementioned Cividate Camuno sequence. The layer overlying the Late Epigravettian horizon has been dated to 8820±112 BP (GX-18843) (POGGIANI-KELLER, 1988-1989). A small, though very important Mesolithic camp of this period has been excavated at Malga Rondeneto (1780 m) (Fig. 1, n. 7). It yielded just a few characteristic lithic implements produced on the spot, among which are microlithic scalene triangles obtained by microburin technique. The site was settled during a brief period of the summer as shown by the recovery of a few charred *Butrychium lunaria* seeds (BIAGI et al., 1994b: 137). Spruce and

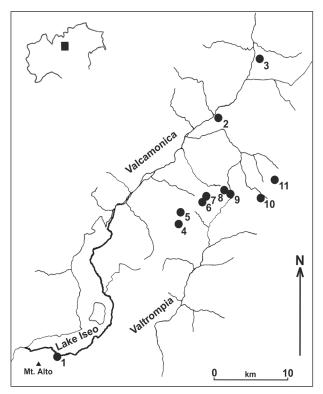




Fig. 2 - Location of the saddle above Cascina Valmaione where the Mesolithic sites are located. Valmaione 1 (black dot) and Valmaione 2 (white dot) (photograph by P. Biagi).

larch charcoals from the small fireplace recovered during the excavation yielded the date of 8880±150 BP (GrN-19590). The ephemeral, seasonal Boreal camp was located at the ecotonal belt between the upper tree line and the alpine open landscape (Fig. 3). Just south of the camp, an important sequence was found in 1990, from which a well-dated peat pollen sequence was recovered. Just below it, sediments showing the presence of a small basin were radiocarbon dated to the end of the glacial period (10,560±120 BP: GrN-19589). Peat started to accumulate above it around the end of the ninth millennium BP (8170±80 BP: GrN-19813) (Fig. 4). The Mesolithic camp was settled a few centuries before, most probably during a period of climatic dryness that took place at the beginning of the Boreal (SCAIFE & BIAGI, 1994).

Three more sites of this period have been discovered at Cascina Valmaione, on the terrace facing the upper Lake Ravenola (1957 m)(GrN-26800: 8160 ± 100 and GrA-59653: 8725 ± 40 BP from the same hearth) (Fig. 1, n. 10), and along the northern shore of Lake Vaia at the upper edge of Valsabbia, at 1915 m. of altitude (GrA-48363: 8285 ± 45 BP) (Fig. 1, n. 11).

Late Mesolithic sites attributed to the Atlantic are known from both valley bottom and high altitudes. The most important valley bottom site is located along the northern slope of the innermost morainic cordon of Lake Iseo (Fig. 1, n. 1), facing the present-day peat bog called Lametta (BIAGI, 1976). The site was closely related to the exploitation of the rich, good quality flint sources of Mt. Alto, ca. 5 km to the west. A small chipped stone assemblage of this period comes from Foppe di Nadro rock-shelter 2, in middle Valcamonica (BIAGI, 1997) (Fig. 1, n. 3; Fig. 5).

The surveys carried out in the 1990s have shown that Late Mesolithic Castelnovian sites occur also at some 2000 m of altitude (Fig. 6). So far the only excavated one is Laghetti del Crestoso (BARONI & BIAGI, 1997) (Fig. 1, n. 9). Three research seasons have yielded evidence of a complex Late Mesolithic, Castelnovian seasonal camp that was settled in two different periods of the Atlantic period. The site, located close to the northern shore of the lower lake, consists of many habitation structures among which are pits, postholes and fireplaces (Fig. 7). Two sets of dates from Picea/Larix charcoals were obtained from different features. They show that the site was settled first at the beginning of the Atlantic (GrN-21889: 7870±50 and GrN-21889: 7850±80 BP), and then some 1000 years later (GrN-18091: 6870±70 and HAR-8871: 6790±120 BP). The chipped stone assemblage consists of two main types of trapezoidal arrowheads produced by microburin technique. Most of the implements were manufactured on the spot utilizing Mt. Alto flint, whose outcrops are located some 1 day's walk from the site. The occurrence of cores, fabricators, primary, debitage and waste flakes and microburins confirms this impression. According to the results of the microwear analysis some kind of meat



Fig. 3 - Location of the Mesolithic Boreal site of Malga Rondeneto (white dot) from Bassinale (photograph by P. Biagi).



Fig. 4 - Malga Rondeneto: the peat sequence that started to accumulate during the Boreal period above whitish, laminated deposits indicating a Late Glacial lake basin (photograph by P. Biagi).



Fig. 5 - Foppe di Nadro rock-shelter 2, located along the left (eastern) side of Middle Valcamonica (photograph by P. Biagi).

processing and woodwork took place within the site. The general pattern of Mesolithic peopling of the watershed Valcamonica-Valtrompia is somewhat different from that of other Alpine regions of northern Italy, among which are the Adige Valley and its surroundings (LANZINGER & BROGLIO, 1966). For example the Valcamonica Valley bottom has never yielded any long Mesolithic sequence comparable to those excavated in the Trento Basin (CLARK, 2000), some of which have been interpreted as evidence for repeated occupations, perhaps related to winter "base camps". Moreover, we know that the highland zone of Valcamonica watershed was settled during the Late Mesolithic period up to ca. 2000 m. At present there is little information available for seasonal movements of Mesolithic hunter-gatherers between low and high altitudes. Nevertheless we know that at least since the beginning of the Atlantic the Mesolithic hunter-gatherers of Laghetti del Crestoso were in close relationships with groups settled along the southern shore of Lake Iseo, for lithic raw material procurement. In contrast, the Preboreal and Boreal huntergatherers obtained part of their flint from the Scaglia Rossa outcrops of the Venetian Pre-Alps or the Dolomites. The same is known for other sites excavated north of Gavia Pass (ANGELUCCI et al., 1992: 28). According to the evidence available from the circulation of the raw

materials utilised for making tools, we can assume that, in the study region, the Late Atlantic Mesolithic movements were quite different from those of the Early Mesolithic Preboreal and Boreal periods. Another important point regards the manufacture of hunting and processing tools. They were made locally, utilising raw material nodules brought appositely to the site.

THE EARLY FOOD PRODUCING AND LATER COMMUNITIES

Quite a different situation is known for later prehistoric food-producing periods. At present the earliest Neolithic site is that of Lovere, along the northwestern coast of Lake Iseo, carbon-dated to 6650 ± 170 BP (PoggIANI-KELLER, 1999-2000a: 302). Only three settlements of the Middle Neolithic Square-Mouthed Pottery Culture so far have been excavated at Coren Pagà (FERRARI and PESSINA, 1997), Breno (FEDELE, 2008; FEDELE et al., 2010), and Cividate Camuno (PoggIANI-KELLER, 1988-1989). All the three above sites belong to the late phase of development of the culture, characterised by incised and impressed ceramics (BAGOLINI *et al.*, 1979). This attribution is supported also by the geographic characteristics of Coren Pagà and Breno, two "fortified" sites similar to those located along



Fig. 6 - Location of the Late Mesolithic, Castelnovian camp of Laghetti del Crestoso (white dot) between Mt. Crestoso in the left (south) and Mt. Colombino, in the right (north) (aerial photograph by P. Biagi).

the Adige Valley and its affluents (DONDIO, 1995: 175). Breno yielded also settlement traces and material culture remains of the Lagozza Culture (FEDELE, 2008).

At present, indubitable evidence of high altitude Neolithic sites is absent. Two flint arrowheads perhaps attributable to this period have been recovered at Mt. Mignolino (2040 m.) and Malga Mignolino (1930 m.). The specimen from Mt. Mignolino is important because it was recovered from a footpath that transversally moves across the watershed. It shows that some of the presentday routes were already utilised during the Neolithic.

A radiocarbon date obtained from a charcoal sample collected from the small basin of Pozza sotto lo Splaza (GrN-20889: 5550 ± 50 BP) (Fig. 1, n. 5) is considered to be too recent. In effect the site yielded only a few atypical chipped stone artefacts collected from the surface.

More evidence of human activity is available for the Bronze Age. The finds of this period are represented mainly by flat-retouched flint arrowheads (Fig. 8). They show that during this period the high altitudes of the watershed were exploited mainly for hunting purposes, while so far we do not have any trace of pastoral activities. Many arrowheads have been collected from the surface of footpaths crossing its crests between 1535 and 2180 m. of altitude. Another specimen comes also from Lake Lova.

A few flint implements show that some kind of Bronze Age agriculture was practised at some places. This is the case for Malga Agolo, along the western slopes of Mt. Guglielmo. Other evidence of Bronze Age exploitation of the same mountain comes from the locality called Stalletti Alti at 1490 m., from which a charcoal sample from the site yielded a date of 3070±30 BP (GrN-24817) (BIAGI, 2003a: 247). Copper and Bronze Age fireplaces attesting ephemeral occupations during different periods of this age have been recovered at Valmaione. They have been dated to 3950±110 (GrN-20360), 3120±50 (GrN-20092), 3000±60 (GrN-20892) and 2930±60 BP (GrN-20095) respectively. An Iron Age date comes from the same area (2230±30 BP: GrN-20891). Another Bronze Age fireplace has been sampled at Malga Mai (3090±55 BP: GrN-26798), and close to St. Glisente saddle (2895±35 BP: GrN-18980 and 2815±35 BP: GrA-48362).

These dates show that the area was exploited also during later prehistoric periods. Along the Valcamonica Valley bottom a noticeable population improvement is known since the Chalcolithic. This is demonstrated not only by the great quantity of stele-statues and cult sites (FEDELE,

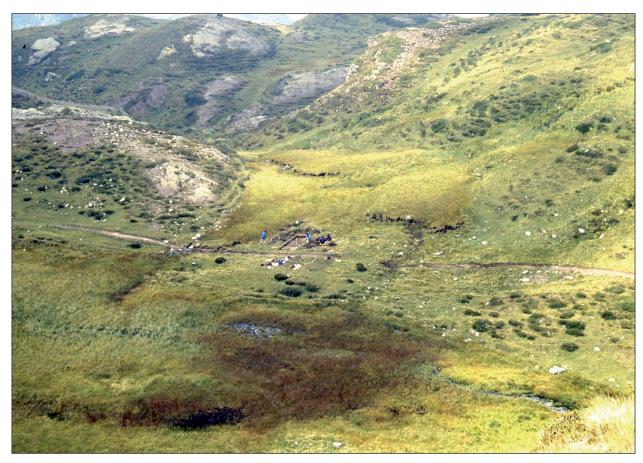


Fig. 7 - Laghetti del Crestoso. Excavations in progress at the Late Mesolithic, Castelnovian site located at the northern edge of the ancient lake shore (photograph by P. Biagi).

1995; 2012), but also by the impressive number of rock engravings discovered in well-defined spots of the valley (ANATI, 1995).

Moving farther south, the sequences excavated at Lovere show evidence of Chalcolithic and Bronze Age occupations dated to 3930±110 BP (GX-24942) and 3410±50 BP (GX-26852) respectively (POGGIANI-KELLER, 1999-2000a: 362; POGGIANI-KELLER et al., 2003-2006).

The St. Glisente saddle from which just a few late Mesolithic tools have been recovered (Fig. 1, n. 7), was resettled during the Middle Age, possibly during the hermitage of the saint who is supposed to have spent the last years of his life in this place (PIOTTI, 1912). Two similar dates 1050 ± 30 BP (GrN-24816), 1040 ± 30 BP (GrN-1020), and a third one 740 ± 35 BP (GrA-48361) are indicative in this respect.

DISCUSSION

A plot of the calibrated dates obtained from the watershed sites is presented in Fig. 9. It shows that the area was visited or briefly settled mainly during Mesolithic, Bronze, Iron, and Early Medieval periods. The area seems to have

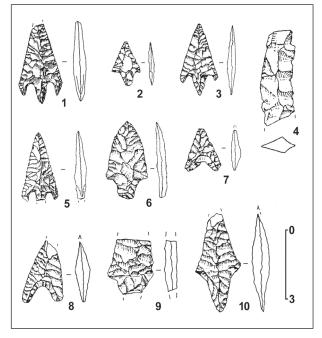


Fig. 8 - Flint arrowheads and sickle (n. 4) from Mt. Guglielmo (nn. 1 and 2), Punta Caravina (n. 3), Malga Agolo (n. 4), Valmaione (n. 5), Mt. Arano (n. 6), St. Glisente (n. 7), Mt. Crestoso (n. 8), Mt. Mignolino (n. 9), and Malga Mignolino (n. 10). See BIAGI, 2003b, fig. 9 and 10 (drawings by G. Almerigogna and E. Starnini).

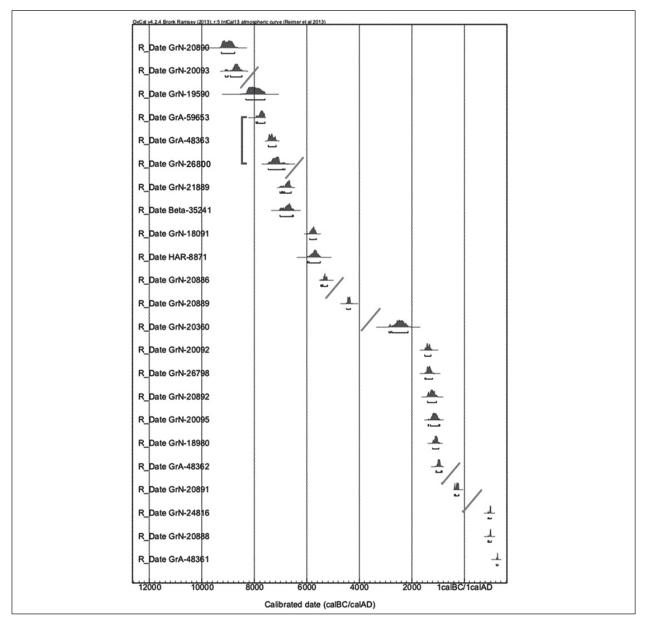


Fig. 9 - Plot of the calibrated dates from the high-altitude sites so far discovered along the Valcamonica-Valtrompia watershed. The red lines indicate boundaries between different occupation periods. The blue line conjoins Lake Ravenola dates GrA-59653 and GrN-26800 from charcoals from the same fireplace (calibrations by T. Fantuzzi according to BRONK RAMSEY & LEE, 2013, and REIMER et al., 2013).

been abandoned for many centuries just after the Late Mesolithic, and sporadically only during the Bronze Age. This evidence is similar to that available from other alpine regions where peopling started again during the Subboreal (CREMASCHI et al., 1994; BASSETTI et al., 2008).

The watershed was easy to access from the northern edge of the Po Plain. All the sites are located one-day's walk from the plain itself, and from good-quality flint sources. Mesolithic occupation traces are relatively numerous, though represented mainly by small flint scatters and isolated finds, while sites are rare. The latter consist of Preboreal (Valmaione), Boreal (Rondeneto, Ravenola and Vaia), and Late Mesolithic Atlantic camps (Laghetti del Crestoso, Bassinale and Valmaione). The curve of the radiocarbon dates is discontinuous, with gaps separating the three main periods of human activity (Fig. 8). Also the distribution of sites looks inhomogeneous. Find spots are located close to small lakes or waterholes of glacial origin, scattered along important, easily accessible communication routes. Many of them face Valcamonica, or lie close to the uppermost edge of alpine valleys incised by torrents flowing down to Valcamonica.

All the sites are most probably summer camps briefly settled by small groups of deer hunters (BINFORD, 1982). Their chipped stone tools are manufactured from flint nodules carried to the site from pre-alpine sources. With the exception of Laghetti del Crestoso, the site, once left, was never resettled again.

| Site name | Initials | Altitude (m) | Coordinates | Lab. Number | Material | Δ ¹³ C | Uncal BP | Cal BC/AD (1o) | Reference |
|-----------------------|----------|--------------|-----------------------|-------------|---------------|-------------------|----------|----------------|----------------------|
| Cascina Valmaione 2 | VM-6 | 1778 | 45°49'59"N-10°13'00"E | GrN-20890 | Picea/Larix | -24.80 | 9630±100 | 9022±163 BC | Biagi, 1997 |
| Cascina Valmaione 2 | VM-2 | 1778 | 45°49'59"N-10°13'00"E | GrN-20093 | Picea/Larix | -24.19 | 9410± 80 | 8710±109 BC | Biagi, 1997 |
| Lago di Rondeneto | LRN-8 | 1780 | 45°50'42"N-10°15'23"E | GrN-19590 | Picea/Larix | -25.50 | 8880±150 | 7992±212 BC | Biagi, 1997 |
| Lago di Ravenola | RVN-1bis | 1957 | 45°51'12"N-10°21'36"E | GrA-59653 | Picea/Larix | -24.99 | 8725±45 | 7751±88 BC | Unpublished |
| Lago di Vaia | Vaia-1 | 1915 | 45°52'05"N-10°23'55"E | GrA-48363 | Picea/Larix | -24.19 | 8285±45 | 7339±96 BC | Unpublished |
| Lago di Ravenola | RVN-1 | 1957 | 45°51'12"N-10°21'36"E | GrN-26800 | Picea/Larix | -25.31 | 8160±100 | 7189±131 BC | Unpublished |
| Laghetti del Crestoso | LC-14 | 2006 | 45°51'18"N-10°18'53"E | GrN-21889 | Picea excelsa | -23.80 | 7870±50 | 6755±87 BC | Baroni & Biagi, 1997 |
| Laghetti del Crestoso | LC-3 | 2006 | 45°51'18"N-10°18'53"E | Beta-35241 | Picea/Larix | Unknown | 7850±80 | 6767±142 BC | Baroni & Biagi, 1997 |
| Laghetti del Crestoso | LC-10 | 2006 | 45°51'18"N-10°18'53"E | GrN-18091 | Picea/Larix | -23.82 | 6870±70 | 5770±70 BC | Baroni & Biagi, 1997 |
| Laghetti del Crestoso | LC-1 | 2006 | 45°51'18"N-10°18'53"E | HAR-8871 | Picea/Larix | Unknown | 6790±120 | 5712±109 BC | Baroni & Biagi, 1997 |
| Stanga di Bassinale | BSS-1 | 1861 | 45°50'22"N-10°15'12"E | GrN-20886 | Picea excelsa | -23.85 | 6330±45 | 5307±54 BC | Biagi, 1997 |
| Pozza sotto lo Splaza | SPL-1 | 1778 | 45°49'31"N-10°13'27"E | GrN-20899 | Larix | -24.06 | 5550±50 | 4403±41 BC | Biagi, 1997 |
| Cascina Valmaione 2 | VM-5 | 1778 | 45°49'59"N-10°13'00"E | GrN-20360 | Picea/Larix | -24.33 | 3950±110 | 2457±164 BC | Biagi, 1997 |
| Cascina Valmaione 1 | VM-1 | 1780 | 45°50'02"N-10°12'56"E | GrN-20092 | Picea/Larix | -24.70 | 3120±50 | 1386±57 BC | Biagi, 1997 |
| Malga Mai | MAI-1 | 1810 | 45°51'51"N-10°21'59"E | GrN-26798 | Picea/Larix | -23.46 | 3090±55 | 1354±62 BC | Biagi, 1997 |
| Cascina Valmaione 5 | VM-8 | 1775 | 45°49'47"N-10°13'08"E | GrN-20892 | Pinus | -26.24 | 3000±60 | 1245±99 BC | Biagi, 1997 |
| Cascina Valmaione 2 | VM-4 | 1778 | 45°49'59"N-10°13'00"E | GrN-20095 | Picea/Larix | -25.55 | 2930±60 | 1146±96 BC | Biagi, 1997 |
| St. Glisente | SGL-1 | 1990 | 45°51'28"N-10°18'12"E | GrN-18980 | Picea/Larix | -23.63 | 2895±35 | 1091±60 BC | Baroni & Biagi, 1997 |
| St. Glisente | SGL-009 | 2000 | 45°51'45"N-10°18'10"E | GrA-48362 | Picea/Larix | -24.53 | 2815±35 | 972±40 BC | Unpublished |
| Cascina Valmaione 3 | VM-7 | 1790 | 45°49'57"N-10°13'10"E | GrN-20891 | Picea/Larix | -25.35 | 2230±30 | 299±62 BC | Biagi, 1997 |
| St.Glisente | GLS-97 | 2025 | 45°51'38"N-10°18'10"E | GrN-24816 | Picea/Larix | -23.88 | 1050±30 | 984±23 AD | Baroni & Biagi, 1997 |
| St. Glisente | SGL-2 | 1990 | 45°51'38"N-10°18'11"E | GrN-20888 | Pinus | -23.29 | 1040±30 | 994±18 AD | Baroni & Biagi, 1997 |
| Mt. Crestoso | CRT-1 | 2117 | 45°51'15"N-10°18'13"E | GrA-48361 | Picea/Larix | -24.48 | 740±35 | 1258±19 AD | Unpublished |

Table 1 - List of the radiocarbon dates obtained from the watershed sites calibrated at 1σ according to www.calpal-online.de (see DANZEGLOCKE et al., 2014).

Given the evidence of hunter-gatherers activity in the area, we can assume that the watershed played a certain role in the life of the Mesolithic communities and their complex year round movements (LEE & DE VORE, 1982). During the good season a few people moved from their residential camp up to the high, alpine open landscapes for hunting. As mentioned above, after a long period, Bronze Age groups began to move along the watershed. Their passage is marked by flint arrowheads recovered from the surface of footpaths still in use today. Fireplaces of this period, as well as of the Iron Age have also been recorded. The high altitudes do not seem to have attracted human groups during the early historical period. In contrast early medieval fireplaces have been dated, although massive anthropogenic pressure seems to have started a few centuries later for deforestation and herding practises (BERRUTI, 2003).

Acknowledgements - Research and excavations along the Valcamonica-Valtrompia watershed were carried out in the 1990s thanks to the financial support of the Museo Civico di Scienze Naturali, Brescia. The programme of radiocarbon dating of the Holocene high-altitude sites was made possible thanks to grants from Ca' Foscari University, Venice. The authors are very grateful to Professor J. van der Plicht (Groningen University, NL) for the Δ^{13} C values of the radiocarbon results, Dr. R. Nisbet (Ca' Foscari University, Venice) for the charcoal analyses, and Dr. B.A. Voytek (Berkeley University, USA) for the correction of the original English text.

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