An Update On The Data About The Late Neolithic And Eneolithic In Friuli

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V zadnjih letih so nam ponovno preučevanje starih najdb, nekaj slučajnih odkritij in nedavna izkopavanja omogočili prenovljen vpogled v najmlajše faze neolitika in eneolitika v Furlaniji. Obsežni podatki, ki so nam na voljo, nam za enkrat še ne omogočajo, da bi predstavili celovito sliko, vendar prikazujejo obsežno območje poselitve, ki ga v poznem neolitiku zaznamujejo padanski kulturni vplivi, medtem ko se v času eneolitika pojavijo značilni znaki povezav s čez alpskim in še posebej z balkanskim svetom.

Ključne besede: pozni neolitik, eneolitik, naselbinska tipologija, keramika, industrija kamnitih odbitkovnih orodij, industrija glajenih orodij, kovinske najdbe, poselitev, kulturni vplivi

In the last years, the re-examination of old finds, some casual discoveries and recent excavation works allowed us to update our knowledge on the latest phases of the Neolithic and Eneolithic in Friuli. The increasing data at our disposal do not allow to present an organic picture yet, but it depicts a vast occupation area characterised during the Late Neolithic by a Padan cultural influence, whilst during the Eneolithic significant signs of connections with the transalpine and especially the Balkan worlds have emerged.

Keywords: Late Neolithic, Eneolithic, settlement typologies, pottery, chipped lithic industry, polished lithic industry, metal artefacts, occupation, cultural influences

In the last years, the re-examination of old finds, some casual discoveries and recent excavation works allowed us to update our knowledge on the latest phases of the Neolithic and Eneolithic in Friuli (Tasca and Visentini 2010; Borgna et al. 2011; Visentini et al. 2015; Visentini 2018). The distribution of the finds demonstrate that funerary evidences are almost completely absent while settlements were limited, for now, to the high plain and piedmont areas, even though the numerous finds discovered out of context had a much wider diffusion on the territory.

At present, the data on the Late Neolithic environmental and palaeoeconomical aspects (Micheli in press) are being studied, whilst there

are data available for the last phases of the Eneolithic from the fortified site at Meduno-Sach di Sotto, located in the north-western part of the region (Visentini et al. 2015).

The Last Phases Of The Neolithic

Overall, the region has presented many evidences attributable to the last phases of the Neolithic, but they mainly are finds with scarce lithic and/or ceramic materials attributable to that period and usually not coming from stratigraphic excavations, as is the case of Molin Nuovo (Fragiacomo and Pessina 1995) and Gramogliano (Bastiani et al. 1997) in the province of Udine, and San Tomé di Dardago in the province of Pordenone (Pettarin et al. 1997). As for Trieste's

Figure 1. Aerial view of Palù di Livenza (PN).

karst, there are many caves and abris with Danilo-Vlaška elements which seem to also characterise a Neolithic advanced phase in that area, and sherds with Besenstrich-finished surface usually attributed to a period from the Late Neolithic to the Eneolithic. These are some of the sites: Grotta dei Ciclami (Legnani and Stradi 1963; Gilli and Montagnari Kokelj 1993), Riparo di Monrupino (Bertoldi 1996), Grotta Tartaruga, Grotta Cotariova, Grotta del Muschio, Grotta Azzurra, Grotta Gigante, Grotta di Trebiciano, Grotta del Mitreo, Grotta dell'Orso and Grotta del Pettiroso (Barfield 1999).

Unfortunately, because of the absence of certain stratigraphies, a precise picture of the Late Neolithic phenomenon in this part of Northern Italy cannot be drawn (Visentini 2018) and now it seems complicated to even define a precise chrono-cultural context and the eventual participation to the phenomenon of the site at Palù di Livenza (PN) (Figure 1), now

attributed to the Late Neolithic. In effect, preliminarily, the remarkable complex of materials found during the research and the excavations carried out during the 1990s seems to be ascribable to the Late Neolithic; this inhabited area is characterised by cultural aspects with a predominant coarse ware with ribs, whilst the Western and Square-Mouthed Pottery elements are rare (Figure 2). Only recent stratigraphic research activities carried out by the Superintendence have started to clear up the picture: they brought to light some SU characterised by the considerable prevalence of coarse ware with plastic decorations (impressed ribs and hollow bosses) associated with rare SMP and Western elements dating back to around the first centuries of the 4th millennium BC (Micheli in press). The planned in-depth analysis of the excavation works could reveal the presence of an earlier occupation phase.

As for the easternmost territories, the rare elements of Western tradition only sporadically

Figure 2. Palù di Livenza (PN). Pottery from SU 6 (after Visentini 2018).

Figure 3. Location map of main copper age sites in Friuli Venezia Giulia (modified after Tasca & Visentini 2010): 1. Aquileia e Monastero (UD), 2. Marano Lagunare (UD), 3. Piancada (UD), 4. Muzzana del Turgnano (UD), 5. Carlino (UD), 6. Teor (UD), 7. Torsa (UD), 8. Pocenia (UD), 9. Porpetto (UD), 10. Castions di Strada (UD), 11. Medea (GO), 12. Monte Brestovez (GO), 13. San Lorenzo Isontino (GO), 14. Capriva (GO), 15. Monte Quarin (UD), 16. Gramogliano (UD), 17. Pavia di Udine, 18. Pozzuolo del Friuli (UD), 19. Carpeneto (UD), 20. Baldasseria, Pradamano (UD), 21. Molin Nuovo (UD), 22. Martignacco (UD), 23. Roveredo di Varmo (UD), 24. San Vito al Tagliamento (PN), 25. Venchiaredo (UD), 26. Sedulis e Cjastelar di San Giovanni di Casarsa (PN), 27. Zoppola (PN), 28. Pordenone, 29. Palu di Livenza (PN), 30. San Tome di Dardago (PN), 31. Gradisca di Spilimbergo, 32. San Daniele del Friuli (UD), 33. Sant'Odorico (UD), 34. Mereto di Tomba (UD), 35. Fagagna (UD), 36. Colloredo di Montealbano (UD), 37. S. Eliseo di Caporiacco (UD), 38. Palude di Sequals (PN), 39. Meduno (PN), 40. Tarcento (UD), 41. Ciondar des Paganis (UD), 42. Foran di Landri (UD), 43. Grotta di Cladrecis (UD), 44. San Pietro al Natisone e Ponte San Quirino (UD), 45. Velika Jama (UD), 46. Gabrovizza (UD), 47. Colle Mazeit, Verzegnis (UD), 48. Rividischia (UD), 49. Sammardenchia (UD), 50. Muina, Ovaro (UD), 51. Castellazzo di Dorbedo (GO), 52. Nogaredo al Torre (UD), 53. Buttrio (UD), 54. Anaret e Borgo Ampiano (PN), 55. Grotta dell'Edera, Caterina e Azzurra (TS), 56. Grotta del Pettiroso e del Mitreo (TS), 57. Grotta dell'Ansa (TS), 58. Grotta Teresiana (TS), 59. Grotta della Tartaruga (TS), 60. Grotta degli Zingari e Gigante (TS), 61. Grotta Ciclami, Lonza e Riparo di Monrupino (TS), 62. Grotta Cotariva e dell'orso (TS), 63. Grotta delle Gallerie (TS), 64. Grotte di San Canziano (Slovenia), 65. Abisso di Trebiciano (TS), 66. Grotta del Muschio (TS), 67. Rive d'Arcano (UD), 68. Sterpo di Bertio (UD).

Figure 4. The remains of two Eneolithic huts (after Simeoni 2011).

reached Trieste's karst, but they were not grafted onto the SMP matrix, as is the case of Grotta delle Gallerie (TS), where there are pottery materials attributable to the final phase of the SMP. On the contrary, Western traits have been documented in the Ljubljana marshes, at the site of Maharski Prekop, Slovenia (Greif and Montagnari Kokelj 2002, Fig. 3) and in nearby Carinthia, where, following alternative itineraries,

SMP elements such as four-spouted vessels, pin-taderas, and Western traits such as double-perforated handles and flat spindle whorls, reach the site of Kanzianiberg (Pedrotti 1990).

In summary, especially thanks to pottery complex found at Palù di Livenza (PN), the pottery production during the Late Neolithic in Friuli is characterised by vessels with coarse - and only rarely medium-ware, and almost exclusive-

ly plastic decorations. There are bowls with impressed rims, impressed mouth, conical bosses and hollow bosses right under the rim, and jars, non-articulated and extremely deep forms decorated with parallel series of impressed ribs, impressed ribs right under the rim and impressed ribs combined with hollow bosses. There are few four-spouted vessels and the elements of Western tradition are rare. Incised decorations are scarce if not completely absent.

As for the lithic industry, the provision systems, especially at Palù di Livenza, show the prevalence of raw materials coming from the province of Belluno and the Tagliamento's valleys, whilst only 40% of flint comes from the *Piattaforma Veneta* (Dal Santo 2003). The technological aspects remained almost unvaried as compared to those highlighted in the third SMP style, with a variant constituted by the rise in the laminar production probably due to the connections with the Western world, which have been observed also in the pottery production (Bianchin Citton et al. in press). Probably because of the interest in new raw materials, the retouched artefacts are numerically scarce: some contexts documented the presence of elements ascribable to the SMP world, such as the tanged arrowheads and shoulders, or to the Western world, such as the transversal tranchets.

Settlement Aspects, Funerary Evidences And Out-Of-Context Finds Attributable To The Eneolithic

Evidences referring to the Eneolithic are much more considerable (Figure 3). Two pits containing pottery artefacts found in the high plain of the province of Udine could be attributed to the settlement aspects of its ancient phase. According to the typological comparison between materials, the most ancient pit seems to be the one found in the area surrounding the burial mound at S. Odorico di Flaibano (UD). Deep bowls with distinct rims have been compared with those found in the Ljubljana Marshes, at Maharski prekop, a site dating back to the first half of the IV millennium BC. The pit at Carpeneto, near Pozzu-

olo del Friuli, not far from Udine, probably dates back to a slightly later period, between the mid-4th and mid-3rd millennia BC. It was surveyed by the Superintendence in 2005. The sherd of a vessel with sinuous profile and vertical tunnel handle, and two rim's sherds, one probably belonging to a shallow bowl while the other to a bowl with narrow neck, can be compared to the finds from Hočevarica and Maharski prekop, in the Ljubljana Marshes, and an artefact found at Podmol, in the Slovenian karst (Borgna et al. 2011).

At S. Odorico di Flaibano, the remains of two Eneolithic huts have been found (Figure 4). The most ancient hut has an elliptical plan and it is approximately N-S oriented. It is delimited by a row of postholes, which is double on the North side, and it presents a line of six posts, probably used to bear the weight of the ca. 13 x 5 m roof. From a stratigraphic point of view, the other structure, delimited by a ditch, seems to be partially overlapping the first one. It has a S-W oriented and 9 x 6 m trapezoidal plan. The materials collected during the excavation works mostly come from the most recent structure: sherds of walls decorated with bosses, polished and fingertipped ribs, or transversal-notched impressions, tongue-like handles, sherds of bowls' rims, among which there is a bowl with inward-curved walls and a tube-shaped handle that reaches the rim. The common elements have been identified in Eneolithic sites in Austria and Slovenia, namely the Late Beaker Culture site of Oggau-Wipfing (Neugebauer and Neugebauer-Maresch 2001), and the inhabited areas of the Ljubljana Marshes ascribable to the Parte and Založnica's Somogyvár-Vinkovci *facies* (Vitri et al. 2012).

The biggest number of data has been collected in the settlement of Meduno-Sach di Sotto, located on the high plain in the province of Pordenone, between 292 and 297 m a.s.l., on a river terrace at the confluence of the Meduna and Rugo torrents. The settlement area is delimited east, west and south by a steep slope that reaches the watercourses. Northwards the rolling plain ends with a rectilinear embankment preserved for 115 in length and delimit-

Figure 5. Aerial view of Meduno Sach di Sotto (PN) (after Visentini et al. 2015).

Figure 6. Meduno Sach di Sotto. A rectilinear embankment preserved (after Visentini et al. 2015).

Figure 7. Survey map of Rive d'Arcano (UD) (after Quarina 1943).

ed by a ditch on its outer side (Visentini et al. 2015) (Figures 5 and 6). This type of settlement was already known in Friuli since the first years of the 20th century, with some typological variants in two towns in the province of Udine: Rive d'Arcano (Figure 7), near San Daniele del Friuli, where northwards of the morainal promontory there is a rectilinear embankment, and Ponte San Quirino, near Cividale (Figure 8), that is also the originating site of the Eneolithic lithic industry (Gerdol and Stacul 1978, 70-80). Conversely to those two sites, the village of Meduno was not surveyed by Lodovico Quarina who, in the 1930s, was inspired by the research works of Giovanni Battista De Gasperi (Marinelli 1922) and, most of all, Achille Tellini (Tellini 1900), and described many of those emerging protohistoric structures. At that time the embankment was probably clearly visible, as it was only interrupted by one rural road, just like now. But given the similarity between the two above-mentioned settlements, Meduno-Sach di Sotto could be included in the category Quarina named "Castellieri (hillforts) near watercourses" (category C) (Quarina 1943). In truth, now we know that it is

Figure 8. Survey map of Ponte San Quirino (UD) (after Quarina 1943).

a type of settlement known throughout Western and Central Europe under the name of "éperon barré" or "barred spur", although the term indicates a vast and various complex of settlements protected by embankments which seem to have appeared during the early metal ages in that area (Càssola Guida 2011).

As previously said, at Meduno the defensive embankment runs for 115 m in length and 6-7 m in width. It is composed by a modest silt core and characterised, especially in the northern part, by the presence of big boulders probably gathered from the western borders of the site or the Meduna riverbed (Figure 9). The earthwork is characterised on the outside by the presence of an open conical ditch more than 2 metres deep, as recorded in the western edge (Figure 10). According to the present research, in addition to the various pottery and metal sherds of

Figure 9. Meduno, Sach di Sotto. Section N-S of the embankment and the ditch (after Visentini et al. 2015).

recent age and attributable to a series of interventions to farm the embankment and plant trees, the only element surely belonging to the most recent prehistoric times can be ascribed to an advanced phase of the Ancient Bronze Age. It is a sherd of a vessel with a tongue-like handle and a central impression, found in the southern part of the defensive structure in a fragmentary stratigraphic unit.

The defensive embankment was probably built and used in a prehistoric period corresponding to the one documented in the structures found in the southern part of the river terrace. The typological comparison of the materials demonstrates it, while the two radiocarbon dates available do not completely confirm the hypothesis: while the date of the embankment layers, although ancient, can be located between 3498 and 3096 BC (cal 2 σ)¹, and it is pretty close to that of the structures dug in the southern part of the terrace, the date obtained from a coal ore found in a layer of the ditch outside the embankment is located between 4038 and 3793 BC (cal 2 σ)², that is to say a period corresponding in Friuli to a Late Neolithic phase, which has not been observed in the gathered archaeological materials.

Little can be said about the structures inside the settlement. The coring activity systematically carried out throughout the river terrace and some test pits signalled a series of structures con-

centrated only at the south-eastern border of the area, where, as previously said, pits and trenches have been found. Only few dozens of centimetres of those structures were preserved because of the farming activity and the strong washing away of the terrain surface.

From a chrono-cultural point of view, because of the scarce number of archaeological materials found in the structures and the heavy fragmentation, the interpretative analysis is quite limited. The lithic industry on chipped flint is characterised by scarcely laminated materials and the use of lithotypes mostly of local origin, being those two aspects already observed in other sites ascribable to the first metal ages in Friuli (Castiglioni et al. 2003) and generally in Northern Italy (Barfield 2001). Despite the restricted number of retouched artefacts, in the technological structure there is a prevalence of flat retouched tools and *substratum*. Generally, some typologies reproduce the Eneolithic ones known in Northern Italy and those of the Beaker *facies*, such as segments, triangular and tanged arrowheads and dagger blades, unfortunately preserved only in their mesial portion. As for the data concerning the polished-stone industry, the artefact belonging to the axe-hammer typology has been made with raw materials of local origin, while the other axe sherd, after a petrographic analysis, shows that the Eneolithic groups were interested in the raw material sources generally located in Central Europe.

The pottery production allows us make some observation on the site from a cultural point of view: such evaluations generally sup-

1 Unless otherwise noted, all the dates are indicated in radiometric calibrated chronology, calculated with OxCal version 4.3 following the INTCAL13 curve and selecting the intervals with 2 sigma. Embankment SU6 GrN-22818 4560±50 BP.

2 Embankment SUF GrN-22755 5120±50 BP.

Figure 10. Meduno, Sach di Sotto (PN). The ditch.

ports the hypothesis by which the Eneolithic pottery repertoires of the Friuli Venezia Giulia region probably had less connections with the contexts of the other regions of Northern Italy and on the other hand shared more similarities with the eastern ones. By cross-checking the information of the pottery production with the albeit limited absolute chronology elements available, two life phases of the settlement can be identified. The initial one is represented by Structures 1, 2 and 9, and according to the radiocarbon date of Structure 9, it is dated between 3090 and 2906 BC (cal 2 σ)³ (Figures 11-13). The most recent one can be traced in Structure 5, dating between 2835 and 2476 BC (cal 2 σ)⁴ (Figure 14). The vessel production coming from the most

³ Pit 9: GrN-27804.4370 $\pm$ 35 BP.

⁴ Pit 5: GrN-27803.4050 $\pm$ 30 BP.

ancient structures and represented by the various sherds with flaring rim and externally thickened edge decorated with instrumental impressions, refers to the complexes found in Slovenia or the easternmost ones in Friuli.

As for the palaeoeconomical data, they attest the existence of farmed fields, together with the knowledge and exploitation of the territories around the site, characterised by a mixed oak grove. The few faunal finds discovered especially in the trenches dug in the embankment, shows that the main domestic species were farmed and wildlife species were hunted, as documented by some traces of impact found on the lithic artefacts. The textile production is documented by a clay spindle whorl, and the leather tanning activity has been prudently proposed after the discovery of many acorns which produce tannin as

Figure 11. Meduno, Sach di Sotto (PN). A reconstructed pot from Pit 9 (after Visentini et al. 2015, scale 1:2).

Figure 12. Meduno, Sach di Sotto (PN). Pottery from Pit 9 (after Visentini et al. 2015, scale 2:3).

Figure 13. Meduno, Sach di Sotto (PN). Pottery from Pit 9 (after Visentini et al. 2015, scale 2:3).

a by-product if they are correctly processed, and the presence of signs of wear on some lithic artefacts due to said activity.

Little can be said about the funerary evidence of that period. They exclusively come from a cave in eastern Friuli, Ciodar des Paganis, where a human metacarpal was found and then lost (Feruglio 1916), two pendants, one made of sandstone and the other serpentine, a pierced canid tooth, a small pearl of calcarenite and a polished stone axe. Those materials suggests that the cave was used as a sepulchre between the Eneolithic and the Bronze Age (Bressan 1982), as doc-

umented in similar contexts in the Italian Pre-alps.

In conclusion, the overview of the materials found out of context, despite their uncertain chrono-cultural ascription and functional context, significantly expands the Eneolithic occupation area in Friuli. An example is represented by the chipped flint elements, such as the various lunates and dagger blades sporadically found especially in the Friulian lowlands (Montagnari Kokelj 1990).

Furthermore, the limited lithic complexes found at Norgaredo al Torre, San Tomé di Dardago, Anaret, Molin Nuovo, Ponte San

Figure 14. Meduno, Sach di Sotto (PN). Pottery from Pit 5 (after Visentini et al. 2015, scale 2:3).

Quirino and Gramogliano, such as those found during the excavation works at Meduno, and Carpeneto, provide the framework to the structure of the lithic industry in that period. A vast use of local raw materials has been observed; sometimes the silicate limestone was used to

produce summarily retouched instruments, as is the case of Anaret in the province of Pordenone, Gramogliano and Molin Nuovo in the province of Udine. The production of flakes and large flakes seems to have been the main goal of the lithic industry at those sites. The cores are main-

Figure 15. Polished stone shaft-hole axes: 1. San Tomè, Dardago (PN), 2. Meduno, Sach di Sotto (PN), 3. Gradisca, Provesano (PN), 4. Fagagna, Torrente Lavia (UD), 5. Rive d'Arcano (UD), 6. S. Eliseo, Caporiacco (UD), 7. Colloredo di Montalbano (UD), 8. Sammardenchia, Pozzuolo del Friuli (UD).

Figure 16. Polished stone shaft-hole axes: 1 and 2. Cjastelar, San Giovanni di Casarsa (PN), 3 and 4. San Giovanni di Casarsa (PN), 5 and 6. Roveredo, Varmo (UD).

Figure 17. Polished stone shaft-hole axes: 1. Torsa (UD), 2. Pavia di Udine, 3. Aquileia (UD), 4. Castions (UD), Baldasseria (UD).

ly polyhedral with flakes and they were usually intensively exploited. The blade production is mainly documented at Meduno, where there are the secondary products for the use of blade cores and most of the instruments were created on laminar supports.

As for the polished stone, in the region more than 30 axe-hammers have been found, 21 of which in the provinces of Udine and Porde-

none⁵. Some of those artefacts call attention to the presence of this typology of artefacts in settlements on high grounds which later became *castellieri* sites. That is the case of the castelliere of Casarsa (PN) where in addition to a lithic industry ascribable to the Eneolithic, four sherds

⁵ The morphological features and recent archaeometric studies concerning the polished stone axe found near Castions di Strada testify long-distance connection systems covering all Central Europe and dating back to the 5th millennium BC (Bernardini et al. 2012).

Figure 18. Copper axes: 1. Sterpo of Bertioło 2. Škocjan / S. Canziano, Tominčeva jama / Grotta Tominz, 3, 8, 9. "Aquila"; 7. Aquileia, loc. Monastero; 4. Gabrovizza di Savogna; 5. Muina di Ovaro; 6. S. Giovanni di Casarsa, loc. Sedulis; 10. S. Daniele, loc. Fornace (n. 1 drawing D. De Tina, nn. 2, 3, 6, 8, 9, 10 drawings G. Tasca; nn. 4-5: Giumlia Mair 2006: figg. 1-2; n. 7: Vitri 2004: fig. 6/2).

Figure 19. Copper axe from Sterpo of Bertolo (UD) (Archaeological Museum of Udine).

of pierced axes have been found (Corazza et al. 2006), the *castelliere* of Gradisca sul Cosa, and most of all the already described *castelliere* of Meduno-Sach di Sotto (Visentini et al. 2015).

On many of those finds a preliminary lithological analysis has been conducted by observation with stereomicroscope and in diffractometry, which showed especially the use of serpentinites, highly diffused rocks, even on a regional level, as the interest for HP metabasites, diffused in the Neolithic context was probably decreased (D'Amico et al. 1996). The collected data on polished stone Copper Age shaft-hole axes suggest a change in the raw material procurement strategies to the exploitation also of local or medium-distant raw material sources, often testifying to new directions of contacts (Figures 15-17).

In conclusion, there are around ten copper axes⁶, often the results of old finds which were not documented, coming from a vast area between the lowlands, with a particular concentration in the area of Aquileia, and central Carnia (Tasca and Visentini 2010). It is a series of flat

axes and some Kozarac-type axes, vastly diffused in Austria and generally in Eastern Europe. The analyses (XRF and SEM/EDS) conducted by A. Giumlia-Mair (2006) on three artefacts from Carnia (Muina di Ovaro), the right bank of the Tagliamento river (Sedulis di S. Giovanni di Casarsa) and the area of Cividale (Gabrovizza di Savogna), determined the intentional presence of elements in traces similar to those known in deposits in the Austrian area or in the Slovenian Styria, implicating some relations with the northern and eastern side of the Alps, and especially the area of Salzburg, one of the main districts for the extraction of copper (Figures 18-19).

Conclusions

As previously said, in the recent years an increase in the data on the late Neolithic and Eneolithic phases in Friuli allowed us to update our knowledge about that period, even though we cannot draw an organic picture yet.

In Friuli and throughout Italy, the Late Neolithic brought a loss in the cultural identity, specifically in terms of territory, consistency and solidity, which characterised the Middle and Recent Neolithic. That is particularly evident in the pottery repertoire, where the differences on a ter-

⁶ An addition to the set could be represented by the flat trapezoidal axe of ca. 10x3,2x1 cm recently donated to the Archaeological Museum of Udine by Aldo Macor, to whom we hereby express our gratitude, and sporadically found at Sterpo of Bertolo.

ritorial base seems to be less clear than how they were described in the past (Visentini 2006). On the other hand, now a common matrix crucially emerges; it can be recognised by the presence of especially coarse ware pottery characterised by plastic decorations such as fingertipped ribs, conical and hollow bosses, on which Western and Padan elements have been added (Visentini 2018).

As for the Eneolithic, relevant traces of relations with the transalpine world, and especially the Balkans, can be found by looking at the raw materials which were used and the typological similarities of the pottery and metallic artefacts. In that phase, the formation of settlements defended by embankments which later found their peak in terms of diffusion during the Middle Bronze Age, suggests that they were used as a shelter because of a general situation characterised by uncertainty, or to control the surrounding territory or a route.

Translated by Elena Modotto

Povzetek

V zadnjih nekaj letih nam je ponovno preučevanje starih najdb, med njimi nekaj priložnostnih odkritij in iz nedavnih izkopavanj omogočilo, da smo posodobili svoje znanje o najbolj poznih fazah neolitika in eneolitika v Furlaniji. Distribucija najdb kaže na skoraj popolno odsotnost dokazov funerarnega značaja in območje poselitve, omejeno na višje ležečo ravnino in območje Piemonta, čeprav veliko najdb, odkritih sicer izven konteksta, izkazuje veliko širšo prostorsko razprostranjenost. Trenutno se podatki o paleoeconomijskih in okoljskih vidikih poznega neolitika v Furlaniji analizirajo na osnovi preučevanja najdišča Palù di Livenze (LN), arheološko najdišče, ki ponuja zanimive podatke tudi v smislu kulturne pripadnosti najdb. Med izdelki iz gline so značilne posode grobe zrnivosti - redko so srednje zrnivosti - in okrašene skoraj izključno s plastičnimi okrasi. Odkritih je bilo zelo malo posod s štirimi izlivi; elementi t.i. zahodne tradicije so redki. Vrezani okrasi so redki, če že ne skoraj popolnoma odsotni. Kar zadeva kamnito industrijo lahko rečemo, da preskrbovalni sistemi, zlasti v Palù di Livenza, kažejo razširjenost uporabe surovin, ki prihajajo iz pokrajine Belluno in iz doline Tilenza, medtem ko samo 40 % kremena prihaja iz pod-

ročja Piattaforma Veneta. Tehnološki vidiki so ostali skoraj nespremenjeni v primerjavi s tistimi, ki so bili poudarjeni v tretjem SMP slogu, pri čemer je bila varianta, ki je nastala zaradi vzpona laminarne proizvodnje, verjetno posledica povezav z zahodnim svetom, kar se opazi tudi v proizvodnji keramike.

Kar zadeva eneolitik, pa razpoložljivi podatki večinoma prihajajo iz najdišča Meduno - Sach di Sotto (PN), ki se nahaja na rečni terasi ob sotočju dveh rek. Lokacija odlikujejo strma pobočja proti severovzhodu in jugozahodu, na severu pa je obdan z nasipom in z zunanjim obodnim jarkom. Ta vrsta naselbine je v zahodni in srednji Evropi poznana pod imenom »éperon barré« ali »barred spur«. Za kamnito industrijo odbitkovnih orodij so značilni redko laminirani primerki in uporaba litotipov, večinoma lokalnega izvora. Ti značilnosti sta bili opaženi tudi na drugih najdiščih in se lahko pripišejo začetkom kovinskih obdobij v Furlaniji in na splošno v severni Italiji. Na splošno nekatere tipologije reproducirajo eneolitske trende, znane v severni Italiji in v fazah zvončastih čaš, kot so krožni segmenti, trikotne in ostale puščične konice ter različna rezila. Lončarska proizvodnja podpira hipotezo, da so eneolitski keramični repertoarji iz dežele Furlanije-Juljske krajine najverjetneje imeli manj povezani z drugimi območji severne Italije; več podobnosti se kaže z lončarsko produkcijo območij na vzhodu. Z navzkrižnim preverjanjem informacij o proizvodnji keramike z razpoložljivimi absolutno kronološkimi podatki, ki so na voljo, je mogoče identificirati dve fazi poselitve. Prva, zastopana s strukturami 1, 2 in 9, sodi glede na radiokarbonski datum iz strukture 9 med 3090 in 2906 pr.n.št. (Cal 2σ). Novejšo pa je mogoče zaslediti v strukturi 5, ki sega od 2835 do 2476 pr.n.št. (Cal 2σ).

Za zaključek lahko ugotovimo, da gradivo, ki je bilo odkrito izven konteksta, kljub negotovi kronološko-kulturni umestitvi in funkcionalnemu kontekstu, bistveno razširi eneolitsko poselitveno območje v Furlaniji. To so razni kremenasti odbitki, kot so npr. noži, bakrene in polirane kamnite sekire.

Summary

In the last years, the re-examination of old finds, some casual discoveries and recent excavation works allowed us to update our knowledge on the latest phases of the Neolithic and Eneolithic in Friuli. The distribution

of the finds shows an almost total absence of funerary evidences and the occupation zone limited to the upper plain and the piedmont area, although many finds found out of context had a much wider diffusion over the territory.

At the moment, the data of the palaeoeconomical and environmental aspects concerning the Late Neolithic in Friuli, are being analysed through the study of the site of Palù di Livenza (PN), a site which provides interesting data also in terms of cultural materials. The clay production is characterised by vessels with coarse ware - rarely medium ware - and almost exclusively plastic decorations. There are few four-spouted vessels and the elements of Western tradition are rare. Incised decorations are scarce if not completely absent. As for the lithic industry, the provision systems, especially at Palù di Livenza, show the prevalence of raw materials coming from the province of Belluno and the Tagliamento's valleys, whilst only 40% of flint comes from the Piattaforma Veneta. The technological aspects remained almost unvaried as compared to those highlighted in the third SMP style, with a variant constituted by the rise in the laminar production probably due to the connections with the Western world, which have been observed also in the ceramic production.

As for the Eneolithic, the available data mostly come from Meduno - Sach di Sotto (PN), a site located on a fluvial terrace at the confluence of two rivers. It is characterised by steep slopes to the North-East and South-West, and it is defended to the North by an embankment with an external ditch. This type of settlement is well-known in Western and Central Europe under the name of "éperon barré" or "barred spur". The lithic industry on chipped flint is characterised by scarcely laminated materials and the use of lithotypes mostly of local origin, being those two aspects already observed in other sites ascribable to the first metal ages in Friuli, and generally in Northern Italy. Generally, some typologies reproduce the Eneolithic ones known in Northern Italy and those of the Beaker *facies*, such as segments, triangular and tanged arrowheads and dagger blades. The pottery production supports the hypothesis by which the Eneolithic ceramic repertoires of the Friuli Venezia Giulia region probably had less connections with the contexts of the other regions of Northern Italy and on the other hand shared more similarities with the eastern

ones. By cross-checking the information of the ceramic production with the albeit limited absolute chronology elements available, two life phases of the settlement can be identified. The initial one is represented by Structures 1, 2 and 9, and according to the radiocarbon date of Structure 9, it dates between 3090 and 2906 BC (cal 2 σ). A more recent one can be traced in Structure 5, dating between 2835 and 2476 BC (cal 2 σ).

In conclusion, materials found out of context, despite their uncertain chrono-cultural ascription and functional context, significantly expands the Eneolithic occupation area in Friuli. Those are chipped flint elements, such as the various reports of lunates and dagger blades, the copper and polished stone axes.

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