Research Article

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The First Italian Farmers: The Role of Stone Ornaments in Tradition, Innovation, and Cultural Change

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Abstract: When the first farmers landed on the eastern coast of the Italian peninsula (end of seventh millennium cal BC), they brought with them a system of knowledge and technologies that quickly spread along both the Tyrrhenian and Adriatic coasts. The study of the material culture, therefore, assumes an important role in understanding the social and cultural identity of these incoming groups. Analyses of ornament production – involving manufacture technology, raw materials, and stylistic choices – may supply information about the cultural choices and the technical skills of human groups and shed light on the social and symbolic system of these ancient populations. Data obtained from this work show that the ornaments became symbols of a growing cultural identity, which began to be developed within Italian territory. In the ornamental assemblages of the newcomers, the relevance of shaped lithic items is clearly visible, and there was the development of types that will become more and more standardized during the Neolithic period. However, elements in the symbolic culture of these first settlers, such as the use of *Columbella rustica* and the exclusive production of hard animal matter ornaments in some sites, recall previous traditions. This study intends to extend our knowledge on the ornamental customs of the first Italian Neolithic communities. It will attempt to establish if the chronological and the geographical differences that emerge from our analyses reflect diversities in the cultural and symbolic systems of the incoming farmers and different possible interactions with the native population.

Keywords: Early Neolithic, identity, Italy, stone beads, bracelet

1 Introduction

In Europe, the transition to farming was not a linear process (Manen et al., 2019; Shennan, Downey, & Timpson, 2013), and in many regions, the question remains as to the relationship between the newcomers and the indigenous inhabitants.

The spread of the Neolithic culture throughout the Mediterranean area was facilitated by human groups that brought with them innovative technologies and new artifacts as part of the “Neolithic package.”
The passage from foraging to a production economy had an impact not only on different aspects of the daily life of the human groups but also on their symbolic codes.

When the first farmers reached the south-eastern coasts of the Italian peninsula (end of seven millennium cal BC), new systems of knowledge and technologies quickly spread along both coasts and then carried on through to the north.

As many authors claim, a holistic approach to the personal ornament production – involving manufacture technology, raw materials, and stylistic choices – supplies information about the cultural choices and the technical skills of human groups, but it can also shed light on the role these objects played in the social and symbolic system of the ancient populations (Vanhaeren & D’Errico, 2006).

Data provided from the study of early Neolithic ornamental assemblage show the presence of new highly elaborated items and the progressive development of local customs and behavior patterns due to the progressive formation and stabilization of new communities (Pessina & Tiné, 2008).

However, some elements reveal that these incoming farmers also adopted some features of the previous local traditions, such as the use of Columbella rustica and perforated teeth. The kind of interaction they had with the local hunter-gatherer communities, especially in the central-southern part of the Italian peninsula, remains a widely debated issue due to the scarcity of Late Mesolithic sites (Franco, 2011; Radi & Petrinelli Pannocchia, 2018). Data do not allow for the exclusion that some elements were already part of the traditional heritage of the newcomers (Tozzi, 1996).

In Italy, detailed studies on the prehistoric personal body adornments to date has been focused on northern regions and on specific cultural groups (Bernabò Brea, Maffi, Mazzieri, & Salvadei, 2010; Micheli, 2012) or raw materials (Borrello & Micheli, 2005; Borrello & Rossi, 2005), so that the picture we have remains very limited.

This article intends to review the evidence relating to the production of Neolithic personal ornaments relating to the whole Italian peninsula through the analyses of the main stone elements: pendants, shaped beads, and bracelets.

The evidence provided is collected from published sources, so it may not fully represent the actual composition of the Neolithic repertoire. Publications, especially the older ones, often omit the presence of ornaments in the sites or provide only a hint to their presence. Moreover, during the past excavations, their number could have been, at times, underestimated due to inadequate recovery techniques employed.

A brief overview of the pre-Neolithic ornamental assemblages is followed by an analysis about how and where new Neolithic stone ornaments spread in the Italian peninsula, underlining the eventual differences in their production and geographical distribution. To complete the picture of early Neolithic adornments customs, a synthesis of nonlithic items will also be presented.

The chronological and the geographical differences are examined to understand more fully if they reflect diversities in the cultural and symbolic systems of the incoming groups, as well as suggest potential interrelations among the newcomers and the native population.

2 The Neolithization of Italy: A Brief Overview

Guilaine (2018) remarked that “the early Neolithic of the Central Mediterranean is a real kaleidoscope and, beyond distinct common basic denominators, it exhibits strong ceramic and lithic variability”. The framework at our disposal for the early Italian Neolithic period is continuously refined by new data (Biagi & Starnini, 2021; Binder et al., 2017; Delpino, 2020). The first farmers arrived in south-eastern Italy (Apulia) around the end of seventh millennium cal BC (i.e., Pulo di Molfetta: LTL-142A 7130 ± 60 BP, Binder et al., 2017; Ripa Tetta: Beta-47808 6988 ± 45 BP, Binder et al., 2017; Favella: LTL-778A 7003 ± 55 BP, Tiné, 2009; Table 1). They rapidly penetrated to the hinterland, into the Ionic area and along the Tyrrenian coast, as shown by the impressed-ceramic levels discovered at the Arene Candide Cave (Beta-66553 6880 ± 60 BP, Bernabò Brea, 1946, 1956; Binder & Maggi, 2001; Maggi, 1997). The early Neolithic of southern Italy, in relation to the Impressed Ware groups, shows a regional variability in the morphological and decorative
Table 1: δ14C Dates of the Italian early Neolithic settlements mentioned in the text (calibration with OxCal v4.4.2 using IntCal20, Reimer et al., 2020; “?” = data not available)

| Site                                | Lab code | Uncal BP     | Cal BC      | Culture                          | Context               | Sample                  | References                          |
|--------------------------------------|----------|--------------|-------------|----------------------------------|-----------------------|-------------------------|-------------------------------------|
| Favella della Corte (CS)             | LTL-778A | 7003 ± 55    | 5981–5806   | Impresa (Archaic)                | Structure D           | Bone collagen            | Tiné, 2009                          |
| Favella della Corte (CS)             | LTL-202A | 6956 ± 75    | 5963–5745   | Impresa (Archaic)                | Structure E           | Cerealia charred seeds   | Tiné, 2009                          |
| Favella della Corte (CS)             | Beta-165482 | 6940 ± 40    | 5878–5752   | Impresa (Archaic)                | Structure A           | Cerealia charred seeds   | Tiné, 2009                          |
| Favella della Corte (CS)             | Beta-71633 | 6910 ± 60    | 5876–5728   | Impresa (Archaic)                | Structure E           | Cerealia charred seeds   | Tiné, 2009                          |
| Favella della Corte (CS)             | LTL-203A | 6890 ± 50    | 5831–5724   | Impresa (Archaic)                | Structure D           | Cerealia charred seeds   | Tiné, 2009                          |
| Favella della Corte (CS)             | LTL-204A | 6793 ± 40    | 5722–5658   | Impresa (Archaic)                | Structure G           | Bone collagen            | Tiné, 2009                          |
| Torre Sabea (LE)                      | OxA-1468 | 6860 ± 45    | 5794–5672   | Impresa (Archaic)                | Layer 2, Pit T-U/11-12| Cerealia charred seeds   | Guilaine, Gasco, Evin, & Valladas, 2003 |
| Ripatetta (F6)                       | Beta-47808 | 6988 ± 45    | 5973–5805   | Impresa (Guadone)                | Cobble paved area     | Cerealia charred seeds   | Binder et al., 2017                  |
| Ripatetta (F6)                       | LTL-16676A | 6910 ± 40    | 5832–5736   | Impresa (Guadone)                | Cobble paved area     | Cerealia charred seeds   | Binder et al., 2017                  |
| Ripatetta (F6)                       | LTL-16677A | 6890 ± 60    | 5841–5719   | Impresa (Guadone)                | Cobble paved area     | Cerealia charred seeds   | Costantini & Stancanelli, 1994       |
| Coppa Nevigata (F6)                  | OxA-1475 | 6880 ± 90    | 5878–5669   | Impresa (Archaic)                | Phase II–III          | Cerealia charred seeds   | Skeates, 1994                       |
| Coppa Nevigata (F6)                  | OxA-1474 | 6850 ± 80    | 5829–5659   | Impresa (Archaic)                | Phase II–III          | Cerealia charred seeds   | Skeates, 1994                       |
| Le Secche-Giglio Island (GR)         | LTL-16672A | 6769 ± 45    | 5712–5635   | Impresa/cardial                  | Brown sediment        | Charcoal                 | Binder et al., 2017                  |
| Le Secche-Giglio Island (GR)         | LTL-16671A | 6637 ± 45    | 5622–5531   | Impresa/cardial                  | Grey sediment         | Charcoal                 | Binder et al., 2017                  |
| Le Secche-Giglio Island (GR)         | LTL-16673A | 6492 ± 65    | 5518–5374   | Impresa/cardial                  | Brown sediment        | Charcoal                 | Binder et al., 2017                  |
| Cala Giovanna Piano-Pianosa Island (LI) | LTL-1468 | 6222 ± 60    | 5296–5066   | Late cardial/linear pottery      | Cut 14A, Sq. M20      | Charcoal                 | Costolino & Tozzi, 2007              |
| Cala Giovanna Piano-Pianosa Island (LI) | LTL-1153A | 6200 ± 70    | 5292–5047   | Late cardial/linear Pottery      | Fire pit in O/P 20/21 | Soil organic matter      | Boschian, Caponi, Costolino, & Gabriele, 2005 |
| Cala Giovanna Piano-Pianosa Island (LI) | Beta-181546 | 6090 ± 40    | 5200–4941   | Late cardial/linear pottery      | Fire pit north        | Charcoal                 | Costolino & Tozzi, 2007              |
| Cala Giovanna Piano-Pianosa Island (LI) | LTL-1778A | 5877 ± 55    | 4832–4688   | Linear pottery                   | Fire pit in MN 22/23  | Bone collagen            | Costolino & Tozzi, 2007              |
| Cala Giovanna Piano-Pianosa Island (LI) | GrA-13474 | 5680 ± 40    | 4546–4454   | Linear pottery                   | ?                     | Bone collagen            | Costolino & Tozzi, 2007              |

(Continued)
| Site                        | Lab code | Uncal BP  | Cal BC                        | Culture          | Context | Sample | References                        |
|-----------------------------|----------|-----------|-------------------------------|------------------|---------|--------|-----------------------------------|
| Casa Querciola (U)          | GrN-13891| 6040 ± 50 | 5000–4847 5201–4796           | Fiorano          | AA2-T1  | Charcoal | Iacopin, 2000                    |
| Arene Candide Cave (SV)     | Beta-66553| 6880 ± 60 | 5838–5715 5893–5641           | Impressa/cardial | Phase AC1? | Charcoal | Maggi, 1997                      |
| Arene Candide Cave (SV)     | Beta-170557| 6870 ± 40 | 5801–5714 5842–5665           | Impressa          | Phase AC1 | Cerealia charred seeds | Binder et al., 2017 |
| Arene Candide Cave (SV)     | LTL-15944A| 6864 ± 45 | 5797–5673 5877–5657           | Impressa          | Phase AC1 | Bone collagen | Binder et al., 2017 |
| Arene Candide Cave (SV)     | LTL-259407A| 6861 ± 45 | 5795–5672 5874–5655           | Impressa          | Phase AC2 | Bone Collagen | Binder et al., 2017 |
| Arene Candide Cave (SV)     | Beta-170558| 6860 ± 40 | 5791–5674 5839–5661           | Impressa          | Phase AC1 | Comus charred seeds  | Binder et al., 2017 |
| Arene Candide Cave (SV)     | LTL-15943| 6834 ± 45 | 5748–5662 5829–5631           | Impressa          | Phase AC1 | Bone collagen | Binder et al., 2017 |
| Arene Candide Cave (SV)     | Beta-110542| 6830 ± 40 | 5738–5666 5793–5633           | Impressa          | Phase AC1 | Cerealia charred seeds | Binder et al., 2017 |
| Arene Candide Cave (SV)     | OxA-230722| 6778 ± 39 | 5714–5643 5730–5625           | Impressa          | Phase AC1 | Cerealia charred seeds | Biagi & Starnini, 2021 |
| Arene Candide Cave (SV)     | LTL-16678A| 6751 ± 45 | 5711–5626 5729–5566           | Cardial           | Phase AC3 | Bone collagen | Binder et al., 2017 |
| Arene Candide Cave (SV)     | LTL-159446A| 6750 ± 45 | 5711–5626 5728–5566           | Cardial           | Phase AC1 | Vitis charred seeds | Binder et al., 2017 |
| Arene Candide Cave (SV)     | Beta-170555| 6700 ± 40 | 5656–5565 5713–5536           | Impressa          | Phase AC1 | Charcoal | Binder et al., 2017 |
| Arene Candide Cave (SV)     | LTL-16678A| 6623 ± 45 | 5618–5485 5623–5481           | Cardial           | Phase AC3 | Bone collagen | Binder et al., 2017 |
| Arene Candide Cave (SV)     | LTL-6004A| 6446 ± 45 | 5473–5376 5479–5325           | Cardial           | ?       | Cerealia charred seeds | Arobbà, Panelli, Caramiello, Gabriele, & Maggi, 2017 |
| Arene Candide Cave (SV)     | Beta-19619| 6370 ± 50 | 5467–5229 5474–5218           | Cardial           | Phase AC1 | Charcoal | Binder et al., 2017 |
| Arene Candide Cave (SV)     | LTL-16680A| 6271 ± 40 | 5307–5213 5324–5071           | Cardial           | Phase AC3 | Bone collagen | Binder et al., 2017 |
| Arene Candide Cave (SV)     | Beta-66552| 6150 ± 70 | 5208–5008 5300–4856           | Impressa/cardial | Phase AC4? | Charcoal | Maggi, 1997 |
| Pollera Cave (SV)           | MC-756| 6950 ± 100 | 5969–5736 6015–5662           | Impressa (sillon d’impressions) | Cut XXIV | Charcoal | Tinè, 1974 |
| Pollera Cave (SV)           | MC-1148| 6880 ± 100 | 5881–5667 5984–5622           | Impressa (sillon d’impressions) | Cut XXI | Charcoal | Odetti, 1990 |
| Pollera Cave (SV)           | MC-257| 6580 ± 100 | 5625–5418 5707–5331           | Cardial           | Cut XXIII | Charcoal | Tinè, 1974 |
| La Marmotta (RM)            | R-2360| 6855 ± 65 | 5798–5666 5887–5629           | Impressa          | Pole     | Wood | Fugazzola Delpino, 2002 |
| La Marmotta (RM)            | ?      | 6622 ± 64 | 5620–5483 5658–5475           | Cardial           | Pole     | Wood | Fugazzola Delpino, 2002 |
| La Marmotta (RM)            | ?      | 6564 ± 66 | 5612–5476 5626–5379           | Cardial           | Pole     | Wood | Fugazzola Delpino, 2002 |
| Site                          | Lab code | Uncal BP | Cal BC  | Culture          | Context | Sample | References                  |
|------------------------------|----------|----------|---------|------------------|---------|--------|----------------------------|
| La Marmotta (RM)             | HD-20466 | 6474 ± 20| 5346–5388| Cardial          | Pole    | Wood   | Fugazzola Delpino, 2002    |
| La Marmotta (RM)             | R-3193   | 6389 ± 52| 5471–5311| Linear pottery   | Pole    | Wood   | Fugazzola Delpino, 2002    |
| La Marmotta (RM)             | ?        | 6189 ± 43| 5212–5061| Linear pottery   | Pole    | Wood   | Fugazzola Delpino, 2002    |
| Mora Cavorso Cave (RM)       | LTL-612A | 6505 ± 50| 5522–5380| Early Neolithic  | B1/8SU300Charcoal | Silvestri, Achino, Gatta, Rolfo, & Salari, 2020 |
| Mora Cavorso Cave (RM)       | Ly-3504  | 6405 ± 35| 5470–5324| Early Neolithic  | URSU1   | Human bone | Silvestri et al., 2020 |
| Mora Cavorso Cave (RM)       | Ly-5202  | 6275 ± 45| 5307–5214| Early Neolithic  | LW      | Charcoal | Silvestri et al., 2020 |
| Colle Santo Stefano (AQ)     | LTL-60A  | 6843 ± 40| 5753–5667| Impressa (Guadone)| Cut 13, Sq. I17Charcoal | Charcoal | Fabbri & Angeli, 2010 |
| Colle Santo Stefano (AQ)     | LTL-526A | 6823 ± 55| 5743–5643| Impressa (Guadone)| Cobbled paved area | Cereal charred seeds | Binder et al., 2017 |
| Colle Santo Stefano (AQ)     | LTL-15952A| 6809 ± 45| 5730–5658| Impressa (Guadone)| Cobbled paved area | Cereal charred seeds | Binder et al., 2017 |
| Colle Santo Stefano (AQ)     | LTL-15953A| 6770 ± 45| 5712–5635| Impressa (Guadone)| Cobbled paved area | Cereal charred seeds | Binder et al., 2017 |
| Colle Santo Stefano (AQ)     | LTL-58A  | 6727 ± 75| 5715–5566| Impressa (Guadone)| Cut 6, Sq. I19Charcoal | Charcoal | Fabbri & Angeli, 2010 |
| Colle Santo Stefano (AQ)     | LTL-59A  | 6718 ± 40| 5668–5566| Impressa (Guadone/Middle Adriatic)| Cut 9, Sq. M21Charcoal | Charcoal | Fabbri & Angeli, 2010 |
| Colle Santo Stefano (AQ)     | LTL-61A  | 6688 ± 110| 5711–5485| Impressa (Guadone)| Cut 15, Sq. I19Charcoal | Charcoal | Fabbri & Angeli, 2010 |
| Colle Santo Stefano (AQ)     | LTL-525A | 6651 ± 60| 5627–5530| Impressa (Guadone/Middle Adriatic)| Cut 1, Sq. O26Charcoal | Charcoal | Fabbri & Angeli, 2010 |
| Colle Santo Stefano (AQ)     | LTL-57A  | 6570 ± 60| 5610–5478| Impressa (middle Adriatic)| Cut 3, Sq. X21Charcoal | Charcoal | Fabbri & Angeli, 2010 |
| Colle Santo Stefano (AQ)     | Rome-468 | 6575 ± 80| 5617–5476| Impressa (middle Adriatic)| Cut 7–8, Sq. M22Charcoal | Charcoal | Radi, Boschian, Calani, Pistoia, & Zamagni, 2001 |
| Continenza Cave (AQ)         | R-1411   | 6590 ± 75| 5616–5479| Impressa (Guadone)| Cut 20 | ? | Grifoni Cremonesi et al., 2011 |
| Continenza Cave (AQ)         | R-2938   | 6570 ± 63| 5611–5478| Impressa (Guadone)| Cut 17 | ? | Grifoni Cremonesi et al., 2011 |
| Continenza Cave (AQ)         | R-1410   | 6170 ± 75| 5213–5011| Impressa | Cut 7 | ? | Grifoni Cremonesi et al., 2011 |
| Marcianese-Villaggio Rossi (CH) | BM-2250R | 6590 ± 130| 5634–5385| Impressa (Guadone)| Str.3, Layer5Charcoal | Skeates, 1994 |
| Marcianese-Villaggio Rossi (CH) | BM-2251R | 6570 ± 160| 5629–5377| Impressa (Guadone)| Str.1, Layer 2Charcoal | Skeates, 1994 |
| Marcianese-Villaggio Rossi (CH) | BM-2252R | 6300 ± 170| 5472–5055| Impressa (Guadone)| Str.?Bone collagen | Skeates, 1994 |
| Site                        | Lab code | Uncal BP | Cal BC     | Culture                  | Context         | Sample       | References                  |
|----------------------------|----------|----------|-----------|--------------------------|-----------------|--------------|-----------------------------|
| Ripabianca di Monterado (AN) | R-599    | 6260 ± 85 | 5472–5055 | Impressa (middle Adriatic) | Structure-base  | Charcoal     | Alessio et al., 1970        |
| Ripabianca di Monterado (AN) | R-598    | 6210 ± 75 | 5296–5052 | Impressa (middle Adriatic) | Structure-higher levels | Charcoal     | Alessio et al., 1970        |
| Ripabianca di Monterado (AN) | R-598a   | 6140 ± 70 | 5208–4999 | Impressa (middle Adriatic) | Structure-higher levels | Charcoal     | Alessio et al., 1970        |
| Edera Cave (TS)             | GX-19569 | 6700 ± 130 | 5721–5484 | Mesolithic + early Neolithic | Layer 3a       | Charcoal     | Biagi, Starnini, & Voytek, 1993 |
| Edera Cave (TS)             | GX-19568 | 6615 ± 390 | 5981–5126 | Vlaska group              | Layer 2a       | Charcoal     | Biagi et al., 1993          |
| Edera Cave (TS)             | ?        | 6600 ± 100 | 5626–5476 | Vlaska group              | Layer 5B/l     | Shell        | Boschian, 1989              |
| Edera Cave (TS)             | GrN-23129| 6590 ± 100 | 5721–5484 | Vlaska group              | Layer 2a       | Charcoal     | Skeates, 1994               |
| Edera Cave (TS)             | GX-19568 | 6445 ± 210 | 5622–5211 | Vlaska group              | Layer 2a       | Charcoal     | Biagi et al., 1993          |
| Edera Cave (TS)             | GrN26795 | 6410 ± 50  | 5472–5325 | Vlaska group              | Layer 2a       | Charcoal     | Skeates, 2004               |
| Edera Cave (TS)             | GX-19022 | 6305 ± 285 | 5531–4935 | Vlaska group              | Layer 2a       | Charcoal     | Biagi et al., 1993          |
| Sammardenchia (UD)          | R-2547   | 6570 ± 74  | 5616–5475 | Friulan groups            | Trench 84      | Charcoal     | Alessio, Allegri, Ferrari, Importa, & Pessina, 1996 |
| Sammardenchia (UD)          | R-2545   | 6535 ± 75  | 5610–5388 | Friulan groups            | Str.101        | Charcoal     | Skeates & Whitehouse, 1999  |
| Sammardenchia (UD)          | R-2736   | 6170 ± 57  | 5210–5046 | Friulan groups            | Str.126        | Charcoal     | Pessina & Rottoli, 1996     |
| Sammardenchia (UD)          | Bln-3373 | 6120 ± 60  | 5207–4951 | Friulan groups            | Str.1          | Charcoal     | Skeates & Whitehouse, 1999  |
| Sammardenchia (UD)          | R-2733   | 6028 ± 46  | 4991–4848 | Friulan groups            | Str.117        | Charcoal     | Skeates & Whitehouse, 1999  |
| Sammardenchia (UD)          | R-3136   | 5993 ± 59  | 4947–4796 | Friulan groups            | Str.101        | Charcoal     | Skeates & Whitehouse, 1999  |
| Sammardenchia (UD)          | R-3142   | 5963 ± 76  | 4941–4728 | Friulan groups            | Str.3          | Charcoal     | Skeates & Whitehouse, 1999  |
| Sammardenchia (UD)          | R-2937   | 5867 ± 54  | 4828–4681 | Friulan groups            | Str.142        | Charcoal     | Skeates, 2004               |
| Sammardenchia (UD)          | R-2920   | 5797 ± 64  | 4717–4551 | Friulan groups            | Trench         | Charcoal     | Skeates, 2004               |
| Sammardenchia (UD)          | R-3141   | 5713 ± 54  | 4649–4459 | Friulan groups            | Str.126        | Charcoal     | Skeates & Whitehouse, 1999  |
| Sammardenchia (UD)          | R-2735   | 5684 ± 58  | 4602–4450 | Friulan groups            | Str.114        | Charcoal     | Pessina & Rottoli, 1996     |
| Savignano (MO)              | Teled. Isot. | 6310 ± 210 | 5477–5032 | Florano                  | ?              | Charcoal     | Improta & Pessina, 1998     |
| Savignano (MO)              | Bln-2976 | 5880 ± 80  | 4845–4616 | Florano                  | ?              | Charcoal     | Biagi & Nisbet, 1987        |
| Florano-Fornaci Carani (MO) | GrN-19838| 6690 ± 180 | 5783–5420 | Florano                  | Pit 2          | Bone collagen | Improta & Pessina, 1998     |
| Florano-Fornaci Carani (MO) | GrN-19839| 6540 ± 60  | 5611–5413 | Florano                  | Pit 5          | Bone collagen | Improta & Pessina, 1998     |
| Florano-Fornaci Carani (MO) | Bln-3137 | 5570 ± 50  | 4446–4357 | Florano                  | Layer 4        | Charcoal     | Improta & Pessina, 1998     |

(*Continued*)
| Site                        | Lab code | Uncal BP   | Cal BC     | Culture       | Context | Sample            | References                                      |
|-----------------------------|----------|------------|------------|---------------|---------|-------------------|------------------------------------------------|
| Isorella - Cascina Bocche   | Oxa-35333 | 6290 ± 34  | 5308–5218  | 5359–5208     | Pit 1   | Bone collagen     | Biagi, Starnini, Boric, & Mazzucco, 2020       |
| Isorella - Cascina Bocche   | OxA-19737 | 6183 ± 33  | 5176–5069  | 5280–5012     | Pit 1   | Cereal charred    | Starnini, Biagi, & Mazzucco, 2018             |
| Isorella - Cascina Bocche   | OxA-23133 | 5850 ± 34  | 4784–4685  | 4797–4609     | Pit 1   | Cereal charred    | Starnini et al., 2018                         |
| Isorella - Cascina Bocche   | GrN-23645 | 5850 ± 80  | 4830–4606  | 4932–4501     | Pit 1   | Charcoal          | Starnini, 1999                                |
| Isorella - Cascina Bocche   | GrM-15259 | 6190 ± 25  | 5173–5072  | 5216–5045     | Pit 1   | Charcoal          | Biagi et al., 2020                            |
| Vhò di Piadena-Campo        | I-11445  | 6170 ± 110 | 5297–4988  | 5364–4838     | Pit XVII| Animal tooth      | Biagi, 1979                                   |
| Vhò di Piadena-Campo        | OxA-27418 | 6127 ± 35  | 5206–4995  | 5209–4953     | Pit XXIIB| Bone collagen     | Biagi et al., 2020                            |
| Vhò di Piadena-Campo        | OxA-21358 | 6122 ± 38  | 5206–4991  | 5209–4947     | Pit XVII| Cereal charred    | Biagi et al., 2020                            |
| Vhò di Piadena-Campo        | GrM-12418 | 6090 ± 55  | 5204–4906  | 5209–4847     | Pit XXIIB| Animal tooth      | Biagi et al., 2020                            |
| Vhò di Piadena-Campo        | GrN-2304  | 6090 ± 18  | 5039–4954  | 5201–4940     | Pit XL   | Animal tooth      | Biagi et al., 2020                            |
| Vhò di Piadena-Campo        | Bln-3135  | 5930 ± 50  | 4846–4725  | 4942–4702     | Pit XXXII| Charcoal          | Biagi & Nisbet, 1987                          |
| Vhò di Piadena-Campo        | GrM-12690 | 5895 ± 35  | 4796–4719  | 4846–4688     | Pit XXIX | Animal tooth      | Biagi et al., 2020                            |
| Ostiano - Dugali Alti       | GrM-12416 | 6184 ± 18  | 5173–5073  | 5213–5052     | Pit I    | Bone collagen     | Biagi et al., 2020                            |
| Ostiano - Dugali Alti       | GrM-15257 | 6130 ± 25  | 5205–5000  | 5210–4991     | Pit III  | Bone collagen     | Biagi et al., 2020                            |
| Ostiano - Dugali Alti       | Bln-2795  | 6090 ± 100 | 5207–4850  | 5300–4732     | Pit I    | Charcoal          | Biagi & Nisbet, 1987                          |
| Alba - Coop. Lav. (CN)       | GX-20845  | 6030 ± 80  | 5030–4801  | 5208–4724     | SU72    | Charcoal          | Venturino Gambari & Motella De Carlo, 1995    |
| Alba - Coop. Lav. (CN)       | GX-20652  | 5880 ± 100 | 4892–4612  | 4996–4501     | SU72    | Charcoal          | Venturino Gambari & Motella De Carlo, 1995    |
pattern of the vessels, most likely influenced by the different origin of the first settlers and local evolution of their material culture.

The first pioneers on the Tyrrenian coast, as mentioned earlier, were related to the archaic style of the impressed pottery but were rapidly replaced by the Cardial Ware groups, who spread as far as the Franco-Cantabrian area (Binder & Maggi, 2001; Binder et al., 2017; Guilaine & Manen, 2007).

The neolithization of the Adriatic coast occurred due to settlers coming from south Italy, linked to an evolved phase of the Impressed Ware Culture. At the beginning of sixth millennium cal BC, they reached the Abruzzi region and then spread to the northernmost area around the middle of the same millennium (Bagolini & Von Eles, 1978; Pessina, 2002; Radi, 2010, Table 1; Radmilli, 1974).

In northern Italy, apart from the western zones where the impressed ware mentioned earlier is documented, several early Neolithic groups have been recognized, different in geographical distribution and in some aspects of materials culture: Fiorano, Vhò, Isolino, Gaban, Friulani Groups, and Vlaška Group (Bagolini, 1980b; Pessina, 1998; Pessina & Tiné, 2008). To date, based on available new data, research strictly underlines affinities between some of these groups, the boundaries of which appear increasingly blurred (Biagi et al., 2020; Perini, Starnini, D’Amico, & Ottomano, 2001; Perrin, 2006). Despite the evidence of regionalism, the whole peninsula was crossed by a wide exchange network permitting the circulations of artifacts, raw materials, as well as ideas.

This richness and variety of the cultural framework of the early Italian Neolithic are reflected in the personal adornment habits of the diverse human groups.

### 3 Pre-Neolithic Ornamental Tradition

At the end of the Pleistocene as well as during the early Holocene (Figure 1), despite significant cultural differences between these two periods, the largest part of ornament assemblages was composed of perforated shells, consisting mainly of marine gastropods and bivalves. These shells, often found in sites several kilometers distant from the coastline (Fumane Cave: Aurignacian levels OS-5872 37100 ± 240 BP, Utc-2045 32300 ± 400, Broglio, 1995; Gurioli, Cilli, Giacobini, & Broglio, 2005; Peresani et al., 2019; Figure 2a; Riparo Gaban: Castelnovian levels KIA-10365 8323 ± 63 BP, KIA-10363 6968 ± 41 BP, Bagolini, 1980a; Kozlowski & Dalmeri, 2002; Figure 2b; Riparo Tagliente: Epigravettian level LTL-4441A 13986 ± 60 BP, Broglio, 1984; Fontana et al., 2015; Continenza Cave: late Epigravettian levels from LTL-1250a 11983 ± 80 BP to Rome-557 10280 ± 110 BP, Astuti, Bisconti, Chiarenza, & Grifoni Cremonesi, 2006; Grifoni Cremonesi, Serradimigni, & Usa, 2011; Figure 2d(1–5)), prove the existence of long-distance mobility and exchange networks that promoted the penetration of these items into the Alpine and inland areas. The fact that only specific types of shells were selected is probably related to their peculiar ornamental use or symbolic significance (Baysal, 2013).

From the end of the late Epigravettian, the use of *Columbella rustica* and * Cyclope* sp. items increases, in particular *C. neritea* (i.e. Riparo Tagliente: Benini Accorsi, 1974; Settecannelle Cave: GrN-15977 10570 ± 260 BP, GZC-163 12700 ± 130 BP, Ucelli Gnesutta et al., 2006; Pozzo Cave: AA-78136 12820 ± 130 BP, GX-27906 12320 ± 50 BP, Mussi et al., 2000; Delle Mura Cave: Beta-142778 11420 ± 100 BP, Calattini, 2005). Nevertheless, other species of shells such as *Glycimeris, Mitra* sp., or even the rarer *Nassarius reticulata* and *Dentalium* sp. (*Antalis dentalis*) were collected with the same purpose.

Late Palaeolithic adornment assemblages revealed not only the presence of exchange networks but also the existence of a symbolic language shared or at least understood by the different human groups (Noble & Davidson, 1996; Roach-Higgins & Eicher, 1992; Stiner, Kuhn, & Güleç, 2013; Vanhaeren & D’Errico, 2006). With the emergence of the Holocene, this “language” undergoes changes. The environmental changes affected the relationship between humans and nature. The human communities had to adapt their daily life to these changes that also inevitably involved their spiritual and symbolic sphere.

During the Mesolithic, the use of *Columbella rustica* became more predominant (i.e., Romagnano Loc III: Sauveterrian phase from R-1147 9830 ± 90 BP to R-1139 8220 ± 70 BP, Castelnovian phase from R-1137 7850 ± 60 BP to R-1137B 7800 ± 80 BP, Alessio et al., 1984; Broglio, 1997; Riparo Gaban: Dalmeri &
Lanzinger, 1997; Figure 2b; Riparo Biarzo: Sauveterrian and Castelnovian levels, Bertolini, Cristiani, Modolo, Visentin, & Romandini, 2016; Cristiani, 2012), while among the other collected shells, the presence of C. neritrea seems to decrease, while the use of Dentalium sp. gains importance.

Other relevant items related to the adornment habit of pre-neolithic groups were modified mammals’ bones and teeth. In particular, perforated red deer atrophic canines were widely spread (Riparo Tagliente: late Epigravettian; Riparo Villabruna: late Epigravettian levels from R-2023 12040 ± 150 BP to UtC-1771 11910 ± 160 BP, Bertola et al., 2007; Polesini Cave: late Epigravettian level R1265 10090 ± 80 BP, Belluomini, 1981; Cremonesi, 1987; Paglicci Cave: Gravettian level UTC-1412 26800 ± 300 BP, Mussi & Zampetti, 1993; Ronchitelli et al., 2015; Continenza Cave: Epigravettian levels, Sauveterrian levels from Rome-556 9680 ± 100 to Rome-552 9490 ± 100 and Castelnovian level, Grifoni Cremonesi et al., 2011; Figure 2d(6–8)).

Both in the late Palaeolithic and Mesolithic, the occurrence of ornamental artefacts made of stone is rare. The archeological records only document the following categories:
Figure 2: Selection of Italian pre-Neolithic ornaments. (a) Fumane Cave (Peresani et al., 2019); (b) Riparo Gaban (Borrello & Dalmeri, 2005; Cristiani, 2012); (c) Riparo Bombrini-Balzi Rossi (Bertola et al., 2013); (d) Continenza Cave (Colombo & Ser-radimigni, 2016); (e) Settecannelle Cave (photograph by P. Ucelli Gnesutta); (f) Polesini Cave (Mussi, 1991); (g) Fossellone Cave (Mussi, 1991); (h) Gavorrano (photograph by Museo Archeologico di Massa Marittima (Grosseto, Tuscany), CC BY-SA 4.0); and (i) Monterotondo (photograph by A. Vassanelli). Elaboration by A. Vassanelli.
Simply perforated items. Small natural pebbles selected to be perforated, with the purpose of being worn or hung on to something (i.e., Monterotondo: late Epigravettian, Vassanelli, 2018; Figure 2i(1); Continenza Cave: late Epigravettian levels; Figure 2d(10); Polesini Cave: late Epigravettian level; Figure 2f).

– Slightly morphologically modified items. They were produced on pebbles, which were selected because their shape was similar to the final desired morphology. The human modification was focused mainly on the surface’s treatment, richly decorated with linear carvings (i.e., Monterotondo: late Epigravettian; Figure 2i(2); Settecannelle Cave: late Epigravettian; Figure 2e; Gavorrano: Epigravettian, Lo Vetro, Balducci, & Volante, 2007; Figure 2h).

– Modified items. Some stones had undergone a more elaborate manufacturing process, where their natural shape was exploited to recreate some specific templates (Riparo Bombrini: proto–Aurignacian level Beta-204028 34.200 ± 500, Bertola et al., 2013; Figure 2c). These items often intentionally imitate the shape of a deer’s atrophic canines (i.e., Continenza Cave: late Epigravettian level; Figure 2d(9); Fossel-lone Cave: Aurignacian level; Figure 2g).

### 4 Neolithic Personal Ornaments

With the neolithization, several changes related to raw material, shape, manufacture quality, and technology as well as the suspension mode occur in the ornamental repertoire of the Italian peninsula.

The exploitation of hard animal matter, recalling the previous tradition, continues alongside a significant increment in the use of stone materials, connected to an increase in manufacture complexity.

Data indicate the emergence of high-modified items’ productions, with differences in geographical distribution and raw material selection (Figure 3).

These new stone ornament productions can be considered as a marker of the demic migrations who settled the peninsula and are therefore a representation of the new cultural aspects developing in the different areas (Pessina & Tiné, 2008).

The presence in the early Neolithic ornamental assemblage of new types along with pre-Neolithic ones reflects the ornamental trend observed in Southern and Central Europe (Rigaud, D’Errico, & Vanhaeren, 2015).

Among the stone ornaments, pendants are few and scattered throughout the peninsula. The use of the engraved decoration disappears completely, and their shape became more regular and well defined.

Ring bracelets and shaped beads, mainly the discoid one, appear for the first time in the ornamental repertoire. The former shows a particular geographical concentration, while shaped beads have a wider diffusion. The sources of lithic raw materials used were mainly local and were collected in outcrops or riverbanks. However, steatite, greenstone, and marble artifacts have been found in sites far from the outcrops, revealing the existence of a long-distance exchange system and the choice of hard materials for specific items. Shell and bone were also employed, in some cases preferred, to obtain these new shaped ornaments.

#### 4.1 Stone Pendants

There is a scarce occurrence of lithic pendants dated to the beginning of the early Neolithic, mostly consisting of minimally processed items, obtained by local raw materials.

One of the earliest was found at Torre Sabea (OxA-3950 6860 ± 45 BP; Cremonesi et al., 1987; Guilaine & Cremonesi, 2003; Table 1). This pendant, in amber calcite, has a rough morphology and is broken at one end, where the trace of a little biconical perforation (Radi, 2003; Figure 4b) is clearly visible.
Related to the same period are two sub-rectangular pendants, fractured at the level of the hole, coming from the Arene Candide Cave (Traversone, 1999; Figure 4a). Moving on to the north-eastern side of the peninsula, some greenstone pendants have been found at the site of Sammardenchia (D’Amico, 1998; Figure 4c). The only piece that indicates a more elaborate manufacturing process is the pendant of Colle Santo Stefano in Abruzzi (Petrinelli Pannocchia & Vassanelli, 2016; Figure 4d; Table 1). This elongated item, made in actinolite, has a plano-convex cross-section with extremely polished surfaces. To date, it is impossible to
determine the specific supply area of the raw material. However, suitable sources have been identified in Calabria and in the northern Apennine (Mottana, Crespi, & Liborio, 2004). It is impossible to ascertain if the raw material or the finished object was imported.
At Piccioni Cave (Cremonesi, 1976), in a level dated to the end of the early Neolithic, an ovoid stone pendant was recovered, which had an engraved line encircling the middle of its surface.

From the end of the early and the beginning of the middle Neolithic, the shape of the pendants became more defined, tending toward a geometrical morphology, often trapezoidal or sub-rectangular, but not properly standardized. In the literature, the trapezoidal and thin elongated shaped ones are often defined as miniature axe-heads or chisels, probably with a ritual value (i.e., Passo di Corvo: Tiné, 1983; Capo Alfiere: Morter & Robb, 2010; Murgia Timone, Tirlechcia: Aurino & Mancusi, 2016).

It is interesting to observe that some geometric pendants found in Apulia were exclusively made of jadeite, very similar in color and translucency with the raw material used for the early Neolithic pendant of Colle Santo Stefano. Conversely, in central-northern Italy, the middle Neolithic stone ornaments show a preferential use of dark-colored soapstone. During the last phase of the Neolithic, pendants become more common (i.e., Mulino da Basso: Gravina, 2014; Casali di Porta Medaglia: Carboni & Anzidei, 2020; All’Onda Cave: Amadei & Grifoni Cremonesi, 1986–1987; Sant’Andrea di Travo, Vollein: Micheli, 2016), both in burials and settlements, mostly in north Italy.

4.2 Stone-Shaped Beads

With the advent of the Neolithic, the use of shaped beads spread throughout the Italian peninsula. Morphologically and technically different from the ornaments of the Palaeolithic and Mesolithic, these beads probably represent a new way in which the people adorned themselves.

The discoid type represents the most abundant category, and their simple shapes may recall the late Paleolithic and Mesolithic tradition of using fish vertebrae as necklace elements (i.e., Balzi Rossi: Gravettian burials BG2,3,5, Formicola, 1988; Polesini Cave, Epigravettian levels; Riparo Gaban, Castelnovian levels). The next most important is the cylindrical shape, usually the short type, while other forms are rarer: i.e., bottle, ovoid, and ring shape. Since, in general, they are recovered in smaller numbers, it can be suggested that they were worn as part of heterogenic compositions, as some finds in the Near East indicate (Baysal, 2019).

The distribution of this type of ornament highlights clearly the time and trajectories of the Neolithic penetration into central-south Italy. Unfortunately, the archeological evidence and the absolute dates at our disposal are extremely limited.

At Favella della Corte (Tiné, 2009), dated to the first centuries of sixth millennium cal BC, Micheli (2009) pointed out the presence of a beads workshop, which used radiolarite, ophiolite, and serpentine indifferently. The five unfinished beads recovered (Figure 4k) testify to a manufacture sequence starting from flakes, which were shaped by rough grinding, then perforated, and finally calibrated and polished. It is also important to underline the production of terracotta beads carried out on this site.

Another attestation in the south is the limestone bottle-shaped bead, found at Coppa Nevigata (Puglisi, 1955).

Along the Tyrrhenian coast, four preform beads, four shale beads, and one quartz bead have been discovered at Serotino-Le Secche (Giglio Island: Brandaglia, 1987; Figure 4l). These beads were shaped through a flaking retouch of the edges and only in a few cases show traces of grinding.

For this site, there are no radiocarbon dates, but the associated pottery allowed us to attribute Le Secche to the beginning of the early Neolithic.

Moving further north, three discoidal siltstone beads and a nonperforated steatite cylinder have been discovered in the Impressed Ware levels of the Arene Candide Cave, in Liguria (Traversone, 1999; Starnini & Voytek, 1997; Figure 4e and i).

The presence of preforms at Favella della Corte, Arene Candide Cave, and Le Secche points to a local production of beads, employing raw materials available in the immediate surroundings of the sites.

Along the same coastline, stone-shaped beads have been found in slightly later early Neolithic contexts.
At La Marmotta (Fugazzola Delpino, D’Eugenio, & Pessina, 1999; Table 1), numerous discoid and short cylindrical beads occur with different dimensions (Figure 4i). Despite the absence of a comprehensive study, it is possible to observe a certain standardization of these beads, showing calibrated perforations to the diameter and well-defined surfaces.

In the same region, one of the rare attestations of beads found within a burial context occurs, which dates to the second half of the sixth millennium cal BC. In the inner room sector of Mora Cavorso Cave (Silvestri et al., 2020; Table 1), about 28 burials associated with a few grave goods, composed of pottery, flint artifacts, as well as beads in shell and stone, have been found (Figure 4g).

Slightly more recent are the eight serpentinite and four steatite discoid beads found at Cala Giovanna Piano (Tuscan archipelago) (Bisconti & Zamagni, 2007; Figure 4f). Four of them, due to the width of the hole, can be better classified more specifically as ring beads. The raw materials used, not available on the island, as well as the absence of bead blanks, suggest their importation.

During several surveys in the Livorno’s territory of Tuscany (Vassanelli, 2018), 119 pieces, including blanks and finished stone beads, were collected. Despite the absence of chronological information, the morphology and the manufacturing process suggest a Neolithic attribution of some of these items.

The evidence in the Northern area and along the Adriatic coast are even poorer.

At Monte Alfeo-Godiasco (Simone Zopf, 2004), a site attributed to the Viò culture one blank bead has been found, associated with one ring and one discoid steatite bead. Based on literature reports, similar findings are also testified at the sites of Riparo Gaban (Borrello & Dalmeri, 2005) and Sammardenchia (Micheli, 2009; Table 1). In the former, some short limestone cylindrical beads have been identified, and in the second, a few paragonite schist beads.

Belonging to the early Neolithic of the Istria region are four very small, perforated beads made of sandstone, discovered at the Edera Cave (Biagi, Starnini, & Voytek, 2008). These beads were found in a stratigraphic unit (3a) containing few potsherds and domesticated animal bones, dated to the first centuries of sixth millennium cal BC (Biagi, 2003).

At the Pollera Cave, one green steatite discoidal bead, referable to the end of the early Neolithic/beginning of the middle Neolithic, has been recovered (Odetti, 1990; Figure 4i).

The evidence of stone beads production in northern Italy increases from the fifth millennium cal BC with the spread of the Square Mouth Pottery culture (Mazzieri & Micheli, 2007, 2014). The use of the black steatite beads became almost exclusive.

On the Adriatic coast, a discoid steatite bead at Ripabianca di Monterado (Lollini, 1991; Figure 4h) and two beads, one globular and one long cylindrical, in the Villaggio Rossi of Marcianese (Geniola, 1982) have been discovered.

### 4.3 Stone Ring Bracelets

Contemporary to the neolithization of northern Italy, the use of ring stone bracelets spread (Pessina, 1998; Ribero, 2017; Tanda, 1977).

According to Micheli (2012), the distribution of these ornamental objects was “trans-cultural and had a long-lasting tradition as an important component of Neolithic costume.” From the middle of sixth millennium cal BC, occurrences of these objects are numerous ranging from the Alpine region to the Emilia (i.e., Località Plunacker: Dal Ri, 1996; Isorella-Cascina Bocche: Starnini, 1998; Figure 5d; Viò di Piadena-San Lorenzo, Viò di Piadena-Campo Ceresole: Baioni & Starnini, 2008; Figure 5e; Sammardenchia, Cesena di Azzano Decimo, Buttrio: Pessina, 1993; Figure 5a; Savignano, Fiorano-Fornaci Carani: Laviosa Zambotti, 1943; Figure 5c). In Tuscany, of a slightly later date, evidence has been found at Castagneto Carducci (Sammartino, 2007) and Casa Quercoiaia (Iacopini, 2000) in layers referred to the Fiorano Culture.

At Alba-Cooperativa Lavoratori (D’Amico & Ghedini, 1996) and Brignano Frascata (Zamagni, 1996; Figure 5b), numerous blanks at different stages of production were found, permitting the reconstruction of the whole manufacturing chain (D’Amico, 1998). In general, metamorphic rocks of the greenstone group
were those most largely employed in the manufacture of arm rings. However, differences have been recognized in the exploitation of raw materials within the different northern cultural groups, probably relating to the availability of the supplying area as well as the preference for peculiar raw materials.

During the middle and final Neolithic, this kind of ornament also spread to the remainder of the Peninsula, as shown by the numerous examples at Pollera and Arene Candide.

In the Adriatic area, two steatite bracelet fragments, probably arrived from the Tyrrhenian coast, have been found at Catignano (Zamagni, 2003) and Villa Badessa di Cepagatti (Radi, 1980). In the former, a fragment made in quartz was also collected. In the south, evidence of these objects is extremely rare (Picciano-Malvezzi in Basilicata: Cremonesi, 1976), suggesting occasional imports from external cultural spheres.

Evidence of repair on the broken items has been found, testifying the importance and the symbolic value of this type of ornaments.

### 4.4 Ornaments Made from Hard Animal Materials

Most of the data available relating to the Neolithic ornament repertories show the persistence of a widespread use of pierced animal tusks and teeth, fish-vertebrae, and processed bones (Figure 6).
Figure 6: Selection of Italian early Neolithic hard animal matter ornaments. (a) Arene Candide Cave (Borrello, 2005; Micheli, Panelli, Rossi, & Maggi, 2018); (b) Cala Giovanna Piano-Pianosa Island (Bisconti & Zamagni, 2007); (c) Colle Santo Stefano (Graniti, 2008); (d) Torre Sabea (Micheli, 2003; Radi, 2003); (e) Mora Cavorso Cave (Silvestri et al., 2020); and (f) Ripatetta (Zamagni, 2006). Elaboration by A. Vassanelli.
In northern Italy, the presence of *Columbella rustica*, *Cyclope neritea*, *Cardium* (*Cerastoderma*), and *Dentalium* associated with limestone-shaped beads in the early Neolithic levels of Riparo Gaban (Borrello & Dalmeri, 2005) underline a clear continuity with the Castelnovian period. The same situation is shown by numerous sites of the central and south of the peninsula (i.e., Arene Candide Cave: Figure 6a(1); La Scola: Ducci, Guerrini, & Perazzi, 2000; Cala Giovanna Piano: Figure 6b(1); Mora Cavorso Cave; Ripatetta: Figure 6f(1 and 2); Torre Sabea: Radi, 2003).

At Colle Santo Stefano the majority of the 67 ornaments collected (Graniti, 2008) is represented by *Dentalium*, fragments of *Cardium*, and *Columbella rustica* (Figure 6c(4–6)). Some pendants were obtained from bone: three are on long bones and one *Ovis aries* phalanx. In addition, some *Sus scrofa* tusks and four perforated carnivores’ teeth (*Felis silvestris* and *Martes*) were found (Figure 6c(1–3)).

Since the beginning of the Neolithic, the manufacturing of ornaments also involved the use of shells and bone to produce the shaped beads (i.e., Ostiano-Dugali Alti: Biagi, 1995; Pollera Cave).

At the Arene Candide Cave, among the early Neolithic ornament assemblage mentioned earlier, three discoid shell beads must be added (Figure 6a(2 and 3)). This production persists into subsequent Neolithic phases at the same site and in other northern contexts, such as the *Spondylus* cylindrical beads in the grave goods of la Vela di Trento prove (Bagolini, 1990; Micheli, 2012).

Along the Turrhenian coast examples of shaped organic beads have been found at Cala Giovanna Piano (Figure 6b(2–4)) and in the Mora Cavorso Cave (Figure 6e). Along the Adriatic coast, at Colle Santo Stefano (Figure 6c(7–10)) and at Torre Sabea, the only shaped beads recovered were made with hard animal matter (Figure 6d(2–4)). The shell was exploited the most (Colle Santo Stefano: 4; Torre Sabea: 3), and only one piece from Colle Santo Stefano was made from the bone.

Ring bracelets were also made from the bone (i.e., Isorella-Cascina Bocche) and, more commonly, in the shell. *Spondylus* and *Glycymeris* were the most suitable shells, but rare examples are also in *Charonia* sp. (Arene Candide Cave). The earliest evidence of shell ring bracelets come from southern Italy, at Ripatetta (Figure 6f(3 and 4)) and Torre Sabea (Figure 6d(5)). Most of the evidence, however, comes from northern Italy (i.e., Cal’ Bissara, Isorella-Cascina Bocche: Micheli, 2005; Fiorano Modenese: Starnini, Ghisotti, Girod, & Nisbet, 2000), where these kinds of ornaments often accompany the stone ones.

At Arene Candide Cave, in a layer dated to the end of early Neolithic and mostly in the upper Square Mouth Pottery layers, numerous fragments of *Spondylus* were found, which probably can be interpreted as evidence of a ring bracelets workshop. Belonging to this same cultural horizon are other examples that have been found in Liguria, at Pollera Cave (Bernabò Brea, 1946) and Arma delle Anime Cave (Giuggiola, Imperiale, Lamberti, Piacentino, & Vicino, 1966).

5 Discussion and Final Remarks

During our overview, peculiar aspects emerged that deserve some evaluation and consideration.

Data at our disposal show that the stabilization and the social definition of the early Neolithic communities have been a slow and complex process that the study of the ornaments can help to identify. Throughout the whole peninsula, most production of personal ornaments was made using shells and hard animal matter. Therefore, the spread of new ornamental practices does not seem to have marked the end of the previous traditions.

From the beginning of the Neolithic, visible differences in both the types of ornament distribution and the use of specific raw materials testifies to the variety of the cultural traditions prevalent among the farmers spreading along the peninsula (Figure 7).

The earliest shaped stone beads are in the south and along the Tyrrhenian coast, clearly underlining the trajectory of the spread of the pioneers who first reached the southern regions of the peninsula and then quickly moved northward along the Tyrrhenian coast (Favella della Corte, Serotino-Giglio Island, Arene Candide Cave, Binder & Maggi, 2001; Binder et al., 2017; Guilaine & Manen, 2007; Guilaine, 2018; Figure 7a; Radi & Petrinelli Pannocchia, 2018). It is interesting to note, and maybe not by accident, that the pottery
Figure 7: Spread of shaped beads and bracelets across the Italian peninsula during the early Neolithic, based on radiocarbon dates and excavation data: (a) 6000–5800 cal BC: (1) Arene Candide Cave; (29) Le Secche-Giglio Island; (41) Coppa Nevigata; and (46) Favella della Corte. (b) 5800–5600 cal BC: (1) Arene Candide Cave; (29) Le Secche-Giglio Island; (30) La Marmotta; (37) Villaggio Rossi di Marciànese; (41) Coppa Nevigata; (45) Torre Sabea; and (46) Favella della Corte. (c) 5600–5300 cal BC: (1) Arene Candide Cave; (9) Ostiano-Dugali Alli; (17) Sammardenchia; (18) Edera Cave; (20) Fiorano-Fornaci Carani; (24) Ripabianca di Monterado; (27) Cala Giovanna Piano-Pianosa Island; (30) La Marmotta; (32) Mora Cavorso Cave; (34) Colle Santo Stefano; and (37) Villaggio Rossi di Marciànese. (d) After 5300 cal BC: (1) Arene Candide Cave; (2) Pollera Cave; (4) Alba-Coop. Lav.; (5) Brignano Frascati; (6) Monte Albeo-Godiasco; (9) Ostiano-Dugali Alli; (10) Vhò di Piadena (Campo Ceresole and San Lorenzo); (11) Isorella-Cascina Bocche; (12) Riparo Gaban; (14) Riparò Plunacker; (15) Cesena di Azzano; (16) Buttrio; (17) Sammardenchia; (19) Ca’ Bissara; (20) Fiorano-Fornaci Carani; (21) Savignano; (23) Casa Querciolaia; (24) Ripabianca di Monterado; (25) Castagneto Carducci; and (26) Fontino Cave. (Map Data: Google Earth Pro 7.3, Data SIO, NOAA, U.S. Navy, NG, GEBCO; Image Landsat/Copernicus, elaboration by A. Vassanelli).
productions of Favella della Corte, although part of the earliest Impressed Pottery Groups of the southeast, show the absence of some peculiar stylistic features in the decoration such as the rocker pattern. The latter is also missing in the archeological contexts of the Tyrrhenian coast.

Shaped beads in the central-Adriatic area are rare but are enough to underline a difference between the two sides of the Apennine. The earliest specimens, in fact, are made from the shell and bone (Torre Sabea and Colle Santo Stefano). The stone items of Villaggio Rossi are more recent, and the evidence at Ripabianca di Monterado must be referred to exchanges with the central-northern Tyrrhenian area. Significant steatite outcrops, in fact, are in the ophiolitic masses of the northern Apennines mountain range.

In the north of Italy, although scarce, the stone beads production (Monte Alfeo-Godiasco, Riparo Gaban, Sammarindentchia, Edera Cave) seems to be attributable to local productions. Shell and bone discoid and bottle beads are disseminated throughout the whole peninsula, but along the Tyrrhenian area, these items are always associated with the stone ones, while, as pointed earlier, right through the rest of the peninsula, they often represent the only shaped types.

The chronological and geographical framework presented above shows that with the neolithization the shaped beads spread throughout the peninsula as a new “model” of ornament, rich in significance. Possibly as a vehicle for communication: a symbol of identity or social status, or as a simple “modern way” used by people to adorn themselves. This model, over time, has been absorbed and reworked with different raw materials, probably most related to the local habits. Similar considerations can be offered for the bracelets, differently transposed in the Italian territory. The occurrences of stone ring bracelets are mainly distributed in the northern area of the peninsula; however, items in the south have been found that were made from the shell and bone (Ripatetta and Torre Sabea), with radiometric dates earlier than those of the stone ones found in the north. This leads us to consider the first arrival of this type of ornament in the south, where, however, it remains a sporadic presence. On the contrary from around 5700 cal BC (Figure 7, Table 1) onward, the item was largely employed in the north as indicated by the numerous bracelets made of stone and hard animal matter collected (Ca’ Bissara, Isorella-Cascina Bocche, Fiorano-Fornaci Carani; Figure 7c and d).

To date, the only elaborate pendant has been found at Colle Santo Stefano, and the other evidence consists of minimally processed items, obtained by local raw materials. Literature about symbolic values often points out the importance of color instead of the raw material. The choice to create this pendant with actinolite, perhaps accidentally recovered, was embedding not only an esthetic value but probably also a symbolic message that the maker intended to transmit. In northern Italy, a similar choice is inferred from the ring bracelets, mostly produced from green stones. Many ethnographic and anthropological studies suggest that in ancient times great importance could be attributed to green color and surfaces that shined. These characteristics could symbolize water, a fundamental nourishment element for plants and crops, hence a clear reminder of the fertility (Bar-Yosef Mayer & Porat, 2008; Bar-Yosef Mayer, 2019). Rituals recalling fertility at Colle Santo Stefano are distinctly shown by a circular pit surrounded by pebbles, containing a zoomorphic vase (Radi & Petrinelli Pannocchia, 2018). We might use this interpretative key to link the pendant from Colle Santo Stefano with the feminine sphere and extrapolate from this that it was designed for a female member of the group. In the Adriatic area, the choice of green color rocks for pendant production also seems to be prevalent during the middle Neolithic.

The middle Neolithic Square Mouth Pottery society of northern Italy (Bernabò Brea, 1946; Barfield, 1972; Bagolini & Biagi, 1977; Bernabò Brea et al., 2010; Del Lucchese & Starnini, 2015; Laviosa Zambotti, 1943; Maggi, Starnini, & Voytek, 1997) shows, on the contrary, a change in the conceptualization of personal ornaments in favor of shaped beads and pendants manufactured from black steatite, which become an identity element of distinction among these communities (Mazzieri & Micheli, 2014; Micheli, 2014). In the same period, in the central-Tyrrhenian area, the use of steatite ornaments increases, probably due to the influence of northern cultures, but without a specific color preference.

Data show that the ornamental items were important aspects of life in every early Neolithic community that spent time and energy producing non-utilitarian objects to materialize their social and ideological beliefs (Bains, 2012). The ornaments have been found almost exclusively in residential areas; burials from this period are scarcely attested and grave goods are poor or not properly linked with single inhumations.
Although this lack of information does not allow the reconstruction of an exhaustive framework about a possible division of the ornaments by gender or age, these items were clearly linked to the everyday life and status of the individuals. To wear an ornament was a way to emphasize their own uniqueness and identity (Hodder, 1986), as a single individual or part of a specific ethnicity. Results show that, from the beginning of the Neolithic, the sharing of similar choices between individuals and groups determined the emergence of symbolic languages having specific geographical distributions, almost in accordance with the results from lithic and pottery studies (Figure 7). The use of shaped beads seems to be principally related to Impressed and Cardial Groups, with significant differences in raw materials and quantity between the south-west (numerous and made principally in stone) and the south-east part of the peninsula (numerically scarce and made predominantly with hard animal materials). Considering the dense exchange network testified by other categories of artifacts, this difference cannot be attributed to the lack of raw materials but rather to specific cultural choices. Bracelets are a primary production of the north, a symbol shared between the different groups that constitute the articulate cultural picture of the earliest Neolithic of this area (Figure 7c and d). This shared symbol attests to a cohesion that perhaps can be seen as a precursor of a collective identity that will subsequently develop in the middle Neolithic.

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