

## Human Palaeontology and Prehistory

# The first peopling of southern Europe: the Italian case

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### Abstract

The peopling of Italian Peninsula began 1 Ma ago, as testified (i) by the site of Monte Poggiolo (Forlì), where industries dated 1 Ma and referred to Mode 1 were found, and (ii) by the site of Isernia La Pineta (Isernia, Molise) dated between 600 and 700 kyr BP, which provided numerous lithic and bony remains also ascribed to Mode 1. **To cite this article: C. Peretto, C. R. Palevol 5 (2006).**

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### Résumé

**Les premiers peuplements de l'Italie du Sud : le cas de l'Italie.** Le peuplement de la péninsule Italienne remonte à environ 1 Ma, comme l'atteste le site de Monte Poggiolo (Forlì), où des industries datées à 1 Ma BP, attribuables au Mode 1, ont été trouvées. L'époque du début du peuplement de l'Italie est aussi attestée par le site d'Isernia La Pineta (Isernia, Molise), daté entre 600 et 700 ka BP, qui a révélé de nombreux restes osseux et lithiques, également attribuables au Mode 1. **Pour citer cet article : C. Peretto, C. R. Palevol 5 (2006).**

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### Version française abrégée

Dans la péninsule Italienne, on peut faire remonter la présence de groupes humains à environ un million d'années. Il s'agit de complexes caractérisés par une grande quantité d'éclats et de nucléus. Cette situation semble être commune au secteur méridional de l'Eu-

rope, comme l'attestent de nombreux sites tels ceux d'Atapuerca, de Barranco León et de Fuente Nueva (Espagne) et du Vallonnet (France).

Le premier peuplement de l'Italie ne semble pas être un phénomène sporadique, et il constituerait plutôt un phénomène très étendu, comme l'attestent les sites de Bibbona (Toscane), Colle Marino, Arce, Fontana Liri et Castro dei Volsci (Latium). À ces sites, on peut ajouter ceux de l'Émilie–Romagne, parmi lesquels le site de Ca' Belvedere di Monte Poggiolo est très significatif.

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Toute la région aux pieds des Apennins est caractérisée par une ample documentation, qui atteste la présence de groupes humains appartenant à la première diffusion du genre *Homo* en Italie : Bel Poggio, Romanina Bianca, Serra, Covignano. À la première phase du peuplement humain appartient aussi, en ce qui concerne les aspects techno-typologiques de l'industrie lithique, le gisement d'Isernia La Pineta (Molise).

L'industrie se caractérise par un débitage simple et opportuniste ayant pour finalité la production d'éclats avec des marges coupantes, qui sont utilisés afin de récupérer les masses de viande ou de travailler le bois, comme le démontre l'étude des traces d'utilisation.

Les sites à bifaces semblent apparaître plus tard, en Italie, il y a 600 à 700 000 ans. On assiste avec l'Acheuléen à un important renouvellement technologique et typologique, caractérisé par l'apparition d'une importante variabilité entre les instruments, surtout en ce qui concerne les supports retouchés (racloirs, denticulés et pointes, en particulier). La diffusion progressive des supports moins épais (carénés) et de la méthode Levallois représente le début et l'anticipation du processus qui conduit à l'apparition, puis, à la diffusion des outils complexes du Paléolithique moyen.

## 1. Early peopling

Although the time scale is clearly different in Africa and Europe, the sequence of the development of lithic industries in the two continents is essentially similar. Indeed, Acheulean complexes with bifaces spread all over Europe in a relatively late period, while flake industries developed earlier all over the area. These latter are well documented, and in some cases have been investigated by means of systematic excavations and multi-disciplinary studies.

Of particular importance is the deposit of Ca' Belvedere di Monte Poggiolo, explored for about a decade between the 1980s and 1990s. Its importance is due both to the richness of the archaeological record and to its stratigraphic context, which permits a detailed reconstruction to be made of the ancient natural environments. The Monte Poggiolo deposit lies close to the town of Forlì, in the hill area between the Po Valley and the Apennines [2]. The site was occupied during a magnetic inversion phase that probably occurred before the Jaramillo period; this age has also been confirmed by several radiometric datings [14]. Palaeomagnetic analyses and datings [13] have been included in an extensive program of intervention. Datings have been performed both on the stratigraphic series of Monte Poggiolo and on other

geologic and geomorphologic sequences of the region. The results obtained perfectly match those of stratigraphic and palaeoenvironmental research, showing the deposit to belong to the Early Pleistocene.

The industry of Ca' Belvedere di Monte Poggiolo is characterised by knapped pebbles – more or less intensely worked – and by the products derived from their knapping [1]. The almost total absence of retouched tools is one of the peculiar aspects of this industry [27]. The presence of some scrapers and denticulates seems to be totally incidental and they have no distinctive features. They have no impact on the general composition of the industry, being outside the real intention of prehistoric humans, which was merely to produce cutting objects to be used immediately.

The absence of pebble-tools such as choppers and chopping-tools is widespread. These finds, usually considered as tools, are just knapping supports to be included within the 'core category'.

Experimentation shows the extreme simplicity of the techniques used. Direct percussion is dominant, while bipolar technique is desultory. This is confirmed by the presence of wide and prominent bulbs, of crosswise broken artefacts, and 'Siret' burins. Knapping is rapid, opportunistic and aimed at the production of cutting edges (flakes).

The study of the industry and analysis of refittings as well as experimentation tests have allowed a reconstruction of the reduction sequence for pebble working. The standardised *chaîne opératoire* is very surprising, since it may be observed both on pebbles with few removals and on those more exploited. In the latter case one or more flakes are removed (first flakes) by hitting the natural surface of the pebble; a flat and smooth striking platform is subsequently obtained from which a series of unidirectional flakes are detached. This striking platform can also be lowered (rejuvenation flakes) and small-size flakes are thus produced. The production may be interrupted because of knapping accidents that produce hinged scars or the breakage of the core. These activities produce first flakes, corticated flakes, slices, flakes, and cores.

The study of use-wear traces is important for understanding a number of aspects of the industry [20,31]. Only the flakes bear use-wear traces. This clearly explains the function of pebbles with unidirectional and alternated removals: they are neither choppers nor chopping-tools, but just cores, out of which flakes were removed: artefacts with cutting edges to be used in everyday life.

The industry of Monte Poggiolo is the result of a simple and opportunistic lithic technology which may only rarely be observed in all its phases on the same core, since it stops at different phases of its exploitation.

The reduction sequence outlined in Monte Poggiolo starts with the removal of the first flake from one of the pebble's edges. This may be removed either at right angles to its major axis or at varying angles. In the first case, unidirectional flakes are removed from the platform. They are small and rarely corticated and have a flat butt. In the second case, the first angled removal with respect to the axis of the pebble is followed by another removal, usually with the same direction and angle, or with an alternate direction, thus forming cores that can morphologically be considered as choppers and chopping-tools. If the flaking of the artefact continues, a number of small decorticated flakes will be produced, also with variations in the angle of the removed surfaces that may lead to the formation of cores with several platforms.

The ancient site of Monte Poggiolo is not unique in Italy. The early peopling is not an isolated trend, as is demonstrated by a number of settlements all over Italy. Several dozen sites located in similar stratigraphic and chronological positions in the Po Valley have yielded ancient industry. These deposits include Bel Poggio [12], Romanina Bianca [11,19], Serra [3], Covignano [3]. The industries of these sites show the same technical and typological features and are comparable to one another.

In the rest of Italy, there are a number of other early-period settlements such as Bibbona (Tuscany) [15], Collinaia [29], Monte Peglia (Umbria) [28], Colle Marino, Arce, Fontana Liri, Castro dei Volsci (Lazio [6,30]; Varano (Puglia) [16]; Casella di Maida (Calabria) [17], and Realmolte (Sicily) [5]. Analytic descriptions of these and other sites have been included in the work of Palma di Cesnola [22]. The settlements perfectly fit the typological and technological context of early industry in which flakes and other finds, known as choppers and chopping-tools, are dominant.

## 2. Isernia La Pineta

We can include Isernia La Pineta in a more recent phase of the context described above. Much information has been gained from the settlement through multidisciplinary studies, allowing a detailed analysis to be made of the activities of a community that existed 6–700 000 years ago and of the natural environment in which they lived.

Archaeological layers are included in a complex stratigraphical series, characterised by lake and volcano deposits that have been altered (palaeosoils) [8,26]. Eruptive materials, at the top of the sequence, have been dated to 550 kyr, while those covering the Palaeolithic archaeosurfaces have been dated from 600 to 730 kyr [7,10]. Some further potassium/argon dating performed in neighbouring areas and considered to be contemporary have confirmed these ages.

The remains of fauna (Sala in Peretto [25]) belong to bison (*Bison schoetensacki*), elephant (*Elephas Palaeoloxodon namadicus* (= *Elephas antiquus*), rhinoceros (*Stephanorhinus hundsheimensis*), and bear (*Ursus deningeri*). Less frequent are Megaloceros (*Megacerooides solilhacus*), deer (*Cervus elaphus* cf. *acoronatus*), fallow-deer (*Dama dama* cf. *clactoniana*), tahr (*Hemitragus* cf. *bonali*), roe-deer (*Capreolus* sp.), wild boar (*Sus scrofa*) and hippopotamus (*Hippopotamus* cf. *antiquus*). Carnivorous animals include lion (*Panthera leo fossilis*), hyena (*Hyaena* sp.), and leopard (*Panthera pardus lunellensis*).

Many bone finds bear evident impact areas that have been caused by deliberate breaks. They show concavities and some negatives of small flakes on the abdomen side. Cut-marks caused by the animal skeleton's dismemberment with lithic artefacts are also evident [25].

Pollen analysis (Accorsi et al., in [18,25]) shows that the natural environment was made up of *graminaceae* and by a few arboreal plants including willow, poplar, plane-tree and occasionally pine-trees, oak and cedar. Other marshland species such as *Typha*, *Artemisia* and *Plantago* have been recognised, while other species suggest an environment consisting of extensive meadowland and a watercourse running through marshland with reeds and sedges. At a distance on the uplands were woods of conifer and broad-leaved trees.

As regards the lithic industry [9,24], the dichotomy between the use of limestone and flint has been highlighted. Limestone pebbles are much larger than flint slabs and as a consequence the artefacts are totally different in size, typology and shape. Flint was often worked on anvil to obtain as many flakes as possible, even small, to be used for everyday activities (Longo, in [24]). Limestone findings include choppers and a few rabots.

## 3. Comment on early peopling with reference to bifacial industry (Figs. 1–15)

In Italy, as in the rest of Europe, the most ancient industries are distinguished by the presence of cores



Fig. 1. Ca' Belvedere di Monte Poggiolo: general view of the hill.  
 Fig. 1. Ca' Belvedere di Monte Poggiolo : vue générale de la colline.



Fig. 4. Ca' Belvedere di Monte Poggiolo: knapped pebble.  
 Fig. 4. Ca' Belvedere di Monte Poggiolo : fragment de *pebble* (*knapped* ?).



Fig. 2. Ca' Belvedere di Monte Poggiolo: stratigraphic position of the site and radiometric dates.  
 Fig. 2. Ca' Belvedere di Monte Poggiolo : position stratigraphique du site et âges radiométriques.

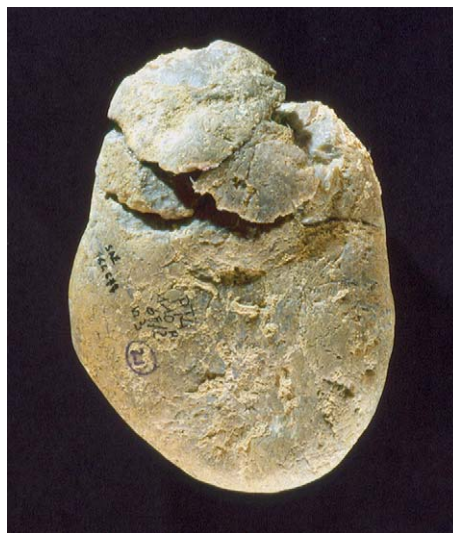


Fig. 5. Ca' Belvedere di Monte Poggiolo: refitting.  
 Fig. 5. Ca' Belvedere di Monte Poggiolo : *pebble* reconstitué.

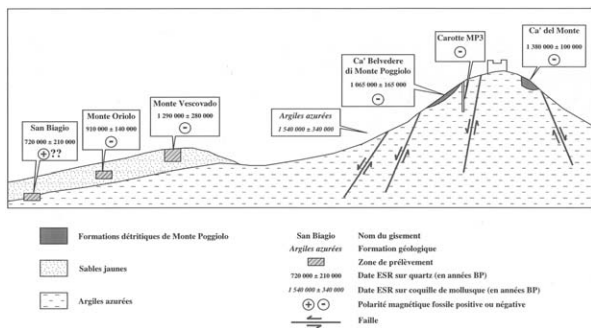


Fig. 3. Ca' Belvedere di Monte Poggiolo: general view of the stratigraphy.  
 Fig. 3. Ca' Belvedere di Monte Poggiolo : vue générale de la coupe.

and flakes. On a morphological level, choppers and chopping-tools could still be found, but they appear not to have had any functional aspect, being considered as simple cores. The most ancient industries of Italy and Europe show no typological differences, with the few tools obtained by retouching being rare, incidental and badly refined.

It was not until later, as from 6–700 000 years ago, that Acheulean industries with bifaces began [23,24, 28]. This new phase was indeed a completely new event, since a wide range of tools obtained from retouched flakes developed in a systematic way. This led to the development of different shapes, as well as



Fig. 6. Ca' Belvedere di Monte Poggiolo: refitting.  
Fig. 6. Ca' Belvedere di Monte Poggiolo : *pebble* reconstitué.



Fig. 9. Isernia La Pineta: particular view of the 3a archaeosurface.  
Fig. 9. Isernia La Pineta : détail de l'archéosurface 3a.

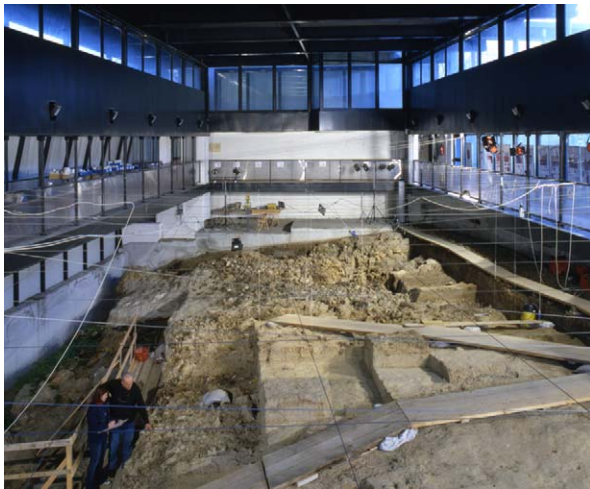


Fig. 7. Isernia La Pineta: general view of the excavation.  
Fig. 7. Isernia La Pineta : vue générale de la fouille.

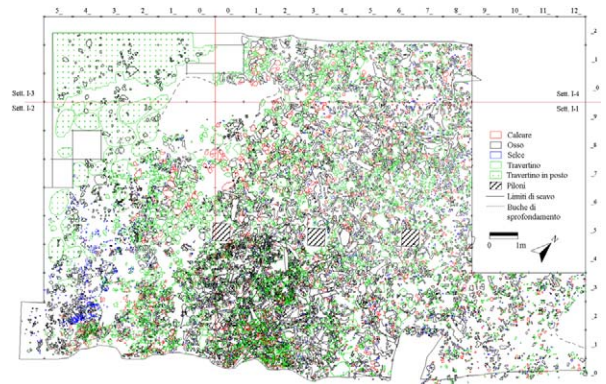


Fig. 10. Isernia la Pineta: general planimetry of the 3a archaeosurface.  
Fig. 10. Isernia La Pineta : planimétrie générale de l'archéosurface 3a.



Fig. 8. Isernia La Pineta: excavation of the 3a archaeosurface.  
Fig. 8. Isernia La Pineta : fosse dans l'Archéosurface 3a.

a wide range of scrapers. This change is likely to have been the result of a new and different relationship with the environment, especially as regards hunting and food gathering techniques.

There is as yet no evidence of an 'on-site' development of biface industries. However, there is a great difference between the two stages and it would be easy to identify the point of transition between one and the other. Since there is no concrete evidence, we may hypothesise that, prior to 1 Myr ago, there was an early peopling characterised by an industry made of cores and pebbles such as in the deposit of Monte Poggiolo. This was followed at a more recent time, around 6–7 Myr ago, by the spread of new human groups with Acheulean industries. Thus at least two different stages of development of human groups in Europe during the Early Palaeolithic need to be recognised.



Fig. 11. Isernia la Pineta: knapped limestone pebbles.  
Fig. 11. Isernia La Pineta : fragment de *pebble* calcaire.



Fig. 13. Isernia la Pineta: knapped limestone pebbles.  
Fig. 13. Isernia La Pineta : fragment de *pebble* calcaire.



Fig. 14. Isernia La Pineta: lithic industry.  
Fig. 14. Isernia La Pineta : industrie lithique.



Fig. 12. Isernia la Pineta: knapped limestone pebbles.  
Fig. 12. Isernia La Pineta : fragment de *pebble* calcaire.

#### 4. Europe and Africa: one sequence and two chronologies

The sequence of European industries recalls that of Africa. Despite this identity, it is not possible to compare the two sequences from a chronological point of view. The European sequence is certainly about 1 million years more recent. In particular it is not possible to claim that human groups began developing from Africa 1.5 Myr ago, with Acheulean industries, and that they reached Europe with an older cultural background such as pebble industries. Nor can we state that groups with pebble industries were pushed by Acheulean industry populations to peripheral, even Eurasian, areas. These hypotheses are only theoretical and do not justify the real dynamics of the transfer of technological knowledge. This is confirmed by the findings of the deposit of Ubeidiya, Israel [4], which testifies that lithic industries with bifaces had already crossed African borders long before 1 Myr ago.



Fig. 15. Isernia La Pineta: Bison's radius with percussion notch.

Fig. 15. Isernia La Pineta : radius de bison avec trace de percussion.

If the first human groups to arrive in Europe had a pre-Acheulean African cultural background, we may imagine that their development began long before we had previously expected. It is now possible to find traces of human diffusion in Europe long before previous evidence had suggested, as confirmed by data recently discovered in Dmanissi [21].

Acheulean industries with bifaces might be a late trend in Europe, more recent than 1 Myr ago, since the diffusion of groups accompanied by Acheulean industries with bifaces might have taken place only in a more recent period due to the isolation of the continent of Europe from other lands.

### 5. A new ecology for man: culture

Available data show that the development of *Homo* beyond the African borders was an ancient trend. This testifies to a sort of interaction between new and different living environments for which control of food resources was a determining feature. Cultural standardisation in geographic areas widely differing in fauna, flora and climate is important evidence of human indepen-

dence from different environments for food gathering. Right from the beginning, man develops a kind of autonomy from his natural context. All this is due to culture and the knowledge and behaviour that constitute it. Culture thus becomes man's privileged niche, allowing him to change the effects of natural selection and impacting the surrounding natural environment.

This process of separation from the environment is certainly influenced primarily by flaking, and this is supported by developments in hunting techniques and a new social organisation.

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