

Prehistoric Metal Artefacts from Italy (3500–720BC) in the British Museum

Anna Maria Bietti Sestieri and
Ellen Macnamara

with a scientific report by
Duncan Hook

We dedicate this Catalogue to all the members of staff of the British Museum and of the British Museum Press, who have helped us so much in its preparation.

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Front cover: short sword with ivory pommel, Final Bronze Age–Early Iron Age transition, cat. 226

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Introduction

The original conception of this catalogue arose during the 1980s, when the Department of Greek and Roman Antiquities was beginning to plan the organization of a new gallery, to be entitled 'Italy before the Roman Empire'. In 1982, the British Museum invited scholars of all nations to come and study the early Italian collections within the Museum and to contribute to the Sixth British Museum Classical Colloquium. Anna Maria Bietti Sestieri was among the scholars who came from Italy; she researched the collections held by both the Department of Greek and Roman Antiquities and the Department of Prehistoric and Romano-British Antiquities and contributed an article entitled 'Italian swords and fibulae of the late Bronze and early Iron Ages' to the resulting colloquium publication, *Italian Iron Age Artefacts in the British Museum*, 1986, edited by Judith Swaddling. At the same time, Ellen Macnamara was familiarising herself with the collections as a consultant assisting Judith Swaddling with the preparation for the new permanent exhibition on 'Italy before the Roman Empire'. Thus both authors of the present catalogue recognized the number of Copper Age, Bronze Age and Early Iron Age objects of copper alloy of Italian origin in the collections of the British Museum, the vast majority of which were unpublished and forming a very considerable addition to the material already known to scholars. So, during the 1990s, having received permission from the Keepers of both Departments involved, the authors resolved to write this catalogue.

Over past years no general policy of demarcation, either by provenance, date or type, has existed concerning the Italian bronze objects held respectively in the Departments of Greek and Roman Antiquities (GR) and Prehistoric and Romano-British Antiquities (PRB), although a number of transfers between these Departments has taken place and all objects said to be from Greece are now in GR. Here it should be noted that, after the division of the general Department of Antiquities in 1866, GR became known by the name which it has to this day. In 1866, the Department of British and Medieval Antiquities was also formed and in 1969 this Department was divided, in part forming PRB. This Department is now incorporated into that of Prehistory and Europe but the PRB registration numbering is retained in this catalogue.

The authors, therefore, diligently searched the galleries and reserve collections of the GR and PRB Departments for all the copper or copper alloy objects which in their opinion were of Italian origin and to be dated before the end of the Italian Early Iron Age or towards the end of the 8th century BC, when the use of iron was becoming increasingly common for many forms. Many of the bronze objects were difficult to date with any precision and some, possibly of later date, have been included in this catalogue, as their form is known before the end of our period. Examples of several of the types of bronze object treated in this volume, but of somewhat later date, are well represented

in the collections of the British Museum, but these objects must await a further catalogue.

The authors decided to omit from this catalogue the Sardinian bronze objects discussed in 1983 by Francesca Serra Ridgway in 'Nuraghic Bronzes in the British Museum' and those treated in 1984 by Ellen Macnamara, David Ridgway and Francesca Serra Ridgway in *The Bronze Hoard from S. Maria in Paulis, Sardinia* (see **Bibliography**). They have, however, included all the objects described by Bietti Sestieri in her article in *Italian Iron Age Artefacts* of 1986, mentioned above. With occasional exceptions, bronze needles, tweezers and fish-hooks have been omitted, as they so often are undatable. Some objects, mainly of bronze but including another material, glass, a precious metal or amber, have been included in this catalogue.

The authors agreed to order the catalogue under the major chronological periods, that is the Copper Age, followed by the Early, Middle, Recent and Final Bronze Age and Early Iron Age, the latter divided into two phases, Early Iron Age, Early, and Early Iron Age, Late (see **Chronology** below). The catalogue finishes with a short section on unclassified objects. Within these periods, the objects are ordered under their classification: for example axes, fibulae or swords, sometimes with an introduction to their form (see **Classification** below). The exceptions to this rule are, firstly, objects originally closely linked together, like the swords with their sheaths and the spearheads with their spear-butts, and, secondly, groups of objects probably once associated together in a hoard or grave group; the latter are listed in their groupings at the end of the text of the relevant period. The origin of the forms is not discussed. Each object has been given a catalogue number, which appears in the text and on the plates. All the objects are illustrated: those with a provenance or with decoration have been drawn and the others have been photographed. Unless otherwise noted on the plates, all objects are illustrated at half-scale.

Over 100 of objects were investigated in the Department of Scientific Research (now the Department of Conservation, Documentation and Science). These were selected by the authors in order to obtain significant information on chemical composition, alloys, technology and relative chronology of the artefacts, and to determine whether ancient smiths used differing alloys for the various parts of an object, for example the blade of a halberd as opposed to its associated rivets. We wanted to establish during which period of the Bronze Age, perhaps in the Middle or Recent Bronze Age, Italian bronze smiths achieved a constant ratio between copper and tin in the alloy. We wished to test the probability of the association between objects, which we believed once formed part of a hoard or grave group and we sought information concerning the methods of manufacture of some of the objects. Finally, we wished to demonstrate the genuine antiquity, or the lack of it, of

parts of some objects in the collections and even of some of the objects themselves. The results of these investigations are set out by Duncan Hook in his report and summarized in the catalogue: all his analyses are mentioned under the individual entries of the objects, together with a reference to those previously carried out by Paul Craddock (see Craddock 1986).

Under each catalogue entry, after the registration number and collection or other source, all recorded provenances of the objects are stated as in the registration books with some corrections of the spelling of place names and their modern equivalents. When no provenance is given, either in the text or in the Plate captions, this is not known. We should add here that, when the provenances given in the registration books may be checked against current knowledge of bronze typologies relevant to the various Italian regions, these provenances carry conviction. The authors agreed to use Italian place names with some exceptions, when the name is so familiar in English that it seemed pedantic to use the Italian form: thus we have used Rome and Apulia. Elsewhere, we have used place names as they appear in the registration books, so we have written Corneto, followed by its modern form of Tarquinia in brackets. We have used modern Italian boundaries for the regions and it should be noted here that these do not always coincide with ancient borders; for example modern Lazio is considerably larger than ancient Latium, reaching north across the Tiber into territory which was once ancient Etruria. The catalogue numbers of all the objects with provenances in Italy mentioned in the text are to be found on the **maps**.

We include some notes on major collectors and collections (see **Collectors and Collections** below). We give separate concordances of the catalogue numbers in this volume with the registration number of PRB (**Concordance A**), those of GR (**Concordance B**) and with the numbering of H.B. Walters, *Catalogue of the Bronzes in the British Museum*, 1899 (**Concordance C**) (see **pp.333–336** below). The **Typological Table** (**pp. 337–342**) sets out in running order the catalogue number, the relevant Plate number, registration number and their types, as described in the catalogue (see below). The **Index of Types** gives a descriptive list of all the objects in the British Museum collection in alphabetical order, from Adzes, winged, to Vessel and lid, with their relevant catalogue number (see **pp.343** below). An **Index** of place names of the provenances or alleged provenance of objects given in the registration books is also included (see **pp.345–346** below).

The authors have used Arabic numerals in all references to figures and plates of published works with the exception of those books in which the numbering of the plates is differentiated by the use of both Roman and Arabic numerals in the same volume; in these cases we have followed the published form of the plate numbering. These books are: Montelius 1895–1910, Series A in Roman numerals, Series B in Arabic numerals; Johannowsky 1983; and *Pithekoussai* 1993.

The authors have tried to keep the use of abbreviations to a

minimum, citing in full all titles of books, articles, journals and other works in the Bibliography, with the exception of *PBF* for the volumes of *Prähistorische Bronzefunde*. This abbreviation is also included in the text. The abbreviations PRB and GR have been mentioned above. We also use CA for the Copper Age, EBA for the early Bronze Age, MBA for the Middle Bronze Age, RBA for the Recent Bronze Age, FBA for the Final Bronze Age, and EIA for the Early Iron Age.

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We wish to record our deep appreciation of Judith Swaddling, Head of the Italian Collections of GR, who has given us so much support over the years, and also of Stuart Needham, the Curator of the Bronze Age collections in PRB. Other members of staff and the Museum Assistants of both Departments have helped us in every way; they include Donald Bailey, Lloyd Gallimore, Kim Overend, Clare Pickersgill, Neil Adams, Ray Waters, Anthony Spence, Pam Young, Keith Lowe, Renee Pfister, Tim Chamberlain, Marion Vian and Kate Down. P.H. Nichols was responsible for the excellent photographs of the GR collection and Sandra Marshall for those of PRB. The drawn illustrations of GR objects were by Anna Maria Bietti Sestieri, Susan Bird, Candida Lonsdale and Kate Morton and those of the PRB collection were by Anna Maria Bietti Sestieri and Nick Griffiths with Karen Hughes. We would like to record our gratitude to Yasmeen Al-Hamar and Cindy Forest-Young for their assistance in making up the plates for this catalogue and especially to Kate Morton for her immense help in providing and organizing the illustrations. We wish to thank them all for their expertise and care.

We also wish to thank Sheridan Bowman, Keeper of the Department of Conservation, Documentation and Science, her successor as Keeper, David Saunders, and Paul Craddock of the same department, as well as Duncan Hook for his close co-operation and contribution to this volume.

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Notes on the Collectors and their Collections

For general histories of the British Museum and its collections, see Miller 1973 and Wilson 2002. Here, there follow brief notes on some of the major collectors and collections which are represented in this catalogue.

Miss M.H.M. Auldjo was niece of John Auldjo, a famous mountaineer and geologist, who lived in Naples during the early 19th century and who amassed a collection of antiquities. Miss Auldjo lived in Naples for a short time and also formed a collection of antiquities, largely from Campania, which she bequeathed to the British Museum in 1859.

The Avebury Collection was acquired by Sir John Lubbock (1834–1913), who was created Lord Avebury in 1900. A banker by profession, he also served as a Member of Parliament, President of the Society of Antiquaries and a Trustee of the British Museum. He was a very distinguished man of science, antiquarian and author; he conducted excavations at Hallstatt in Austria and visited Italy, including Naples. At his death, his collection of antiquities passed to his son, the second Lord Avebury, who presented them to the British Museum in 1916.

The Blacas Collection was formed by two successive Ducs de Blacas. The elder was French Ambassador at Rome and Naples during the early 19th century and his son added to the collection after the death of his father. He directed that, after his death, the entire collection should be sold and it was bought by the British Museum in 1866.

Carlo Campanari was a member of the Campanari family of Tuscania, who excavated widely in southern Etruria during the early 19th century. They acquired a large collection of Etruscan antiquities, which they exhibited in a museum at Tuscania. In 1838 Carlo Campanari brought an exhibition of Etruscan and other Italian objects to London. Subsequently many of these objects were bought by the British Museum. There were further purchases from Campanari during the following years.

Alessandro Castellani (1823–83) was the eldest son of Fortunato Castellani, a jeweller and dealer in antiquities in Rome, who founded a school where young goldsmiths could learn the methods and styles of antiquity. Alessandro was exiled from the Papal states in 1860 and opened a branch of the family business in Paris; later he transferred his commercial and antiquarian activities to Naples.

The Reverend Greville J. Chester (1830–1892) was a clergyman, who served in several English parishes until 1865 when ill health caused him to retire. Subsequently he spent many winters abroad, travelling widely in southern Europe, Egypt, Palestine and Syria. A man of wide interests and knowledge, during his travels he acquired many antiquities and was held in great respect both by local dealers and by other contemporary collectors, archaeologists and museum curators. On his return to England, he would sell or present his antiquities to museums, including the British Museum, the Victoria & Albert Museum, London, the Ashmolean Museum, Oxford, and

the Fitzwilliam Museum, Cambridge, as well as to the Reverend William Greenwell (see Seidman 2007).

Henry Christy (1810–1865) was a wealthy banker who traveled widely and collected ethnographic material as well as prehistoric artefacts. He bequeathed his collection to trustees, one of whom was Sir Augustus W. Franks, who were empowered to present it to a permanent institution. He also left a fund to the trustees so that the collection might be further augmented. The Christy Trustees presented the collection to the British Museum in 1865 and subsequently used the Christy Fund to purchase and donate further objects.

Sir Augustus W. Franks (1826–1897) was appointed an Assistant in the Department of Antiquities of the British Museum in 1851 with the principal charge to build up the British collections. In 1866 he became the first Keeper of the new Department of British and Medieval Antiquities and served until he retired in 1896. A scholar of international reputation, Franks travelled widely in Britain and Europe, visiting Italy in 1857: he was present at many international conferences and visited many exhibitions, private and public collections and museums, often acquiring objects both for the British Museum and his own private collection. A wealthy man, in all he donated some 7,000 objects to the Museum, which covered a great diversity of material; most of the objects he gave to his own Department but he also made donations to the Departments of Coins and Medals, Egyptian Antiquities and Greek and Roman Antiquities. Franks was knighted in 1894. For further information on the life and work of Sir Augustus Franks, see Caygill and Cherry (eds) 1997.

The Reverend William Greenwell (1820–1918) was a noted antiquarian of the late 19th century. He was a Canon of Durham Cathedral from 1854 to 1907 and excavated widely in the north of England and also collected British antiquities. He presented his collection of pottery and flints to the British Museum in 1897. He also acquired a large collection of bronze objects from Europe and beyond, both by gift and by purchase; he sold this collection to the American banker and philanthropist, J. Pierpont Morgan (1837–1913), who presented it to the British Museum in 1909. Greenwell's manuscript notes with careful descriptions of the bronze objects in his collection, often recording their provenances and associations, together with his sources, are in PRB and are followed in this catalogue.

Sir William Hamilton (1730–1803), collector of fine art, vulcanologist and connoisseur of antiquities, was appointed Envoy Extraordinary or British Minister to the Court of Naples in 1764, a post he fulfilled for some 36 years until 1800. In Naples, he immediately started to collect Greek vases and other antiquities, which he acquired mainly from Neapolitan collectors and antique dealers but also sometimes from current excavations or on his travels in southern Italy. In 1772 he was in England and his collection was bought by the British Museum;

subsequently Sir William donated some objects to the Museum. In 1778, the so-called Baron d'Hancarville wrote a manuscript description of the objects exhibited in the Museum, including some not from the Hamilton collection. The Register of GR for 1772, probably written towards the end of the 19th century, was based on d'Hancarville's description, though by this time some of the objects had lost their Hamilton connection and must be among those 'Found unregistered' in 1975. Thus the complete inventory of the 1772 Hamilton collection lacks clarity but from the internal evidence of the early bronze objects, it may be said that those registered under the Hamilton collection of 1772 are mainly of Early Iron Age date and from Campania. For further information on Sir William Hamilton and his collections, see Fothergill 1969, Jenkins and Sloan (eds.) 1996 and Burn (ed.) 1997.

Richard Payne Knight (1751–1824) was a wealthy connoisseur, who during the later 18th and early 19th centuries assembled a large collection of antiquities, which he acquired from dealers in Italy and from other contemporary collectors. He often concentrated upon objects of bronze. He travelled in Italy, was a friend of Charles Townley and a friend and correspondent of Sir William Hamilton, in 1793 buying over 100 bronze objects from him. Knight's manuscript inventory of his collection is preserved in GR and his numbering was used when, in 1973, his collection was registered under the year 1824. In this registration, Knight's Arabic chapter headings were transposed to Roman numerals, followed by his numbering within each chapter, and thus do not indicate the month and day of registration, plus item number within their entry, as GR registration numbers normally do. Unfortunately, Knight seldom recorded details concerning small bronze objects within his collection, such as fibulae or bracelets, but these must have come from sources similar to those of the Hamilton collection.

The Meyrick Collection was formed by Sir Samuel R. Meyrick (1783–1848), a lawyer and antiquary. The collection was chiefly composed of arms and armour, upon which Sir Samuel was a leading authority, and of medieval works of art. Sir Samuel bequeathed his collection to his cousin, then Captain A.W.H. Meyrick; much of the collection was exhibited in the South Kensington Museum (now the Victoria & Albert Museum) between 1866 and 1871. Part of the collection was sold in 1871 and in 1878, Major General A.W.H. Meyrick presented many of the remaining objects to the British Museum.

General A.H. Lane Fox Pitt Rivers (1827–1900) was a soldier and a renowned archaeologist of the late 19th century, who amassed great ethnographical and archaeological collections. In 1880, he inherited the Pitt Rivers estate in Dorset; he became a wealthy man and changed his name from Lane Fox to Pitt Rivers in honour of his benefactor. In 1884, he gave his first collection to the University of Oxford, withholding some objects, which he exhibited in a private Museum at Farnham, together with new purchases and objects from his own excavations in Dorset. The

Museum at Farnham remained open until 1966 but subsequently its contents were sold, some being bought by the British Museum.

The Honourable Sir William Temple (1788–1856), brother of the Third Viscount Palmerston, was British Minister at Naples from 1833 to 1855. He formed a large collection of antiquities from southern Italy, which is recorded in the manuscript of R. Gargiulo, now in the archives of GR. Gargiulo noted the provenance of many of the objects but none of their associations. At his death, Sir William bequeathed his collection to the British Museum.

Charles Townley (1737–1805) is chiefly remembered as a wealthy and knowledgeable collector of marble classical sculpture, which he mainly acquired in Rome and its neighbourhood during the later 18th century. A friend of Sir William Hamilton, he traveled in Italy, visiting Naples, Sicily and Apulia. He bequeathed his collections to his family who subsequently sold them to the British Museum; his collection of marble sculpture was bought in 1805 and his 'second collection' in 1814, which included the bronze objects described in this catalogue and which Townley probably acquired from sources similar to those of the Hamilton collection. Though no complete contemporary inventory of the bronze objects of the 'second collection' exists, some were recorded in a manuscript inventory of the second Townley collection and given serial numbering. In 1971, an attempt was made to complete the GR Register of the collection, using the contemporary serial numbering, where extant, and adding objects known to have been included in the collection. For further information on the Townley collections see Cook 1985; Jenkins and Sloan 1996; Hill 2001.

Sir Henry Wellcome (1853–1936) started to assemble his vast collection at the beginning of the 20th century, intending it to form the basis for a Museum of Mankind. He employed agents to buy objects from dealers in Britain and abroad; these agents often recorded the dealers name and place of purchase, together with the provenance of the object, as provided by the dealer. At Sir Henry's death, the Trustees of the Wellcome Foundation abandoned the project for a Museum of Mankind and dispersed the collections, said to include over half a million objects. The British Museum received donations from the Wellcome Trustees, the first in 1966 and another in 1982; all those in PRB are registered under 1964.12-1 followed by their current numbering (in this catalogue, we have included in brackets after this the former PRB numbering) and those in GR were included in the registrations for the years 1975 and 1982. The inventory numbering of the whole Wellcome Collection is hard to follow, since it had four numerical sequences, two sets with A or accession numbers and others with registration or R numbers or R-year numbers. In this catalogue, the Wellcome accession number is recorded, when available; sometimes further Wellcome numbers are also noted.

Classification

The 800-plus copper and bronze Italian objects in the Departments of Greek and Roman Antiquities, and Prehistory and Europe, of the British Museum constitute a unique sample, comprising a large percentage of the groups, categories and types of artefacts at present known, dating from the Copper Age to the Early Iron Age. In good agreement with the chronological trend of the Italian metal industry, the number of metal objects as well as the variety of functional groups (tools, ornaments and

weapons), and of categories and types within each group, grows fairly systematically with time, though EBA pieces are more numerous than MBA ones. Moreover, this sample includes a few entirely new types, and several groups of associated artefacts from single hoards and burials.

Information on the provenance has been preserved for 289 pieces, i.e. 34.5% of the total of 837.

Provenances of the BM metal artefacts by present Italian regions and European countries

	CA	EBA	MBA	RBA	FBA	EIA, ea.	EIA, late	Unclass.
Friuli V. Giulia							1	
Veneto			1	4			1	
Lombardy	1	1	2		5			1
Val d'Aosta								1
Liguria							1	
Emilia Romagna		1		2		2	3	
Marche				1				
Umbria	4	8	1	1	4	2	8	2
Tuscany		1		1	3	2	10	
Lazio	1	4	3	1	3	14	10	2
Abruzzo	1	1	2	2	5	8	2	
Campania	4	4	1	1	6	23	18	2
Apulia	1				1	8	5	
Basilicata				2	1	4	2	
Calabria					2	2	5	
Sicily		5	1	1?	7	4	1	
Sardinia					1			
UK				4	1	2	8	
France					1		2	
Germany						1		
Switzerland						1		
Slovakia							1	
Austria				1	1	1	2	
Hungary							2	
Slovenia							1	
Croatia			1					
Serbia						1		
Albania				1				
Greece		1		1	2	3	3	

N.B. General indications of provenance (e.g. 'Magna Graecia', 165; 'Etruria', 270, 528) are not included in the table.

Some of the high number of pieces for which the only information now available is 'Found unregistered' may have originally been linked to provenances which were either not passed on to the British Museum, or which have been lost because there is insufficient means of identifying the pieces with earlier brief inventory entries.

As is shown by the table above, some regions of northern Italy, Friuli Venezia Giulia, Val d'Aosta and Liguria, as well as Marche in central Italy and Sardinia, are only represented by single pieces. Six to ten pieces are recorded from each of Lombardy and Emilia Romagna (northern Italy), Basilicata and Calabria (southern Italy). The main concentration of provenanced pieces is in Campania, with a total of 59, and there are also relatively high numbers from Lazio, 38, Umbria, 30, Abruzzo, 21, Tuscany, 17, all in central Italy, and from Apulia, 15, and Sicily, 19, in the south.

However, this distribution over the present Italian territory depends mainly on the overall trends in the activity of both British collectors and Italian antique dealers between the end of the 18th and the early decades of the 20th century, as is shown in detail in the section relative to the BM collections. Quite probably, the relatively high number of pieces from Campania depends basically on Sir William Hamilton's early collecting activity in this region, and on the fact that 19th-century collectors, such as R. Payne Knight, bought parts of his collection.

However, it is useful to remember that the great majority of provenanced pieces belongs to categories and types that correspond rather precisely to the local (regional) repertoires. Obviously this can be considered as an indication of the reliability of the provenances that have been recorded.

A few pieces, 42 in all, also come from other European countries, including England, France, Germany, Slovakia, Switzerland, Austria, Hungary, Slovenia, Croatia, Serbia, Albania and Greece.

As far as the sample's documentary relevance is concerned, although some Italian regions are scarcely represented, others, such as, mainly, Campania, have a significant number of types not previously documented. Another important point is the occurrence of a number of groups of associated artefacts, for many of which the provenance is also registered. These include at least six hoards or parts of hoards, dating from the CA to EIA, late, and several groups of ornaments and weapons from burials, mostly of EIA date.

Most of the bronzes which constitute the British Museum's collection of early Italian antiquities were not finds from systematic excavations, and were probably gathered with the intention of sale to collectors. Several pieces are indeed of outstanding quality and state of preservation: see for example the short sword with ivory pommel and hilt-plates, **cat. 226**, the group of weapons from Cassino, **cat. 457–459**, and the two oversize parade spearheads from Bomarzo, **cat. 799–800**.

In other words, the sample provides a valuable illustration of the development of the Italian metal industry, as well as contributing several important additions to its knowledge. In order to make these two features easily perceptible, we decided to present all the artefacts in classified form, either in relation to the current typological conventions, or according to our own, and to organize the catalogue by chronological sections.

As is well known, the Italian metal industry has been

intensely studied and classified in the last decades. Chrono-typological classifications represent the most frequent approach in this field of research, whereas compositional and provenance analyses, and technical-functional studies have been carried out rather sporadically.

A relatively high percentage of the BM pieces can be classified according to the *Prähistorische Bronzefunde* (hereafter *PBF*) Italian series, which includes the following groups: horse-bits (*PBF XVI. 1*, 1969, by F-W. von Hase); swords and sword-sheaths (*PBF IV. 1*, 1970, by V. Bianco Peroni); pins (*PBF XIII. 2*, 1975, by G.L. Carancini); knives (*PBF VII. 2*, 1976, by V. Bianco Peroni); fibulae from northern Italy (*PBF XIV. 5*, 1976, by P. von Eles Masi); razors (*PBF VIII. 2*, 1979, by V. Bianco Peroni); FBA and EIA axes (*PBF IX. 12*, 1984, by G.L. Carancini); daggers and halberds (*PBF VI. 10*, 1994, by V. Bianco Peroni); armour plates (*PBF III. 3*, 2000, by G. Tomedi); miscellaneous objects (*PBF XX. 1*, 1974, edited by H. Müller-Karpe). The volume devoted to the south Italian and Sicilian fibulae, by F. Lo Schiavo, is due to appear shortly (*PBF XIV*, forthcoming).

However, several groups of objects which are more or less widely represented in the BM sample, e.g. spearheads, CA, EBA, MBA, RBA and the majority of FBA axes, tools, personal ornaments, bracelets, and the fibulae from central Italy have only been classified in very general works (for example, Carancini and Peroni 1999) and in regional or contextual studies. Among the regional classifications which have been used in our catalogue, it is worth mentioning the works by R.M. Albanese Procelli on Sicily (Albanese Procelli 1993), by G.L. Carancini on central and southern Italy (Carancini 1991–92, 1993, 1999), and by R. De Marinis on the early metallurgy of northern Italy (De Marinis 1992, 1998). As regards contextual studies, recent complete editions of IA cemeteries, that have been especially useful for the typological definition and relative chronology of some important groups of bronzes, such as fibulae and weapons, are quoted in the bibliography by site name and year of publication. These are Veii Quattro Fontanili, published by many authors in *Notizie Scavi* between the years 1963 and 1976, and the relative chronology by J. Toms published in 1986 (*Quattro Fontanili* 1963, 1965, 1967, 1970, 1972, 1975, 1976, 1986); the cemeteries of Pontecagnano, by B. D'Agostino and P. Gastaldi (*Pontecagnano* 1988), S. De Natale (*Pontecagnano* 1992) and T. Cinquantaquattro (*Pontecagnano* 2001); the study of the Latial cemetery of Osteria dell'Osa by A.M. Bietti Sestieri (*Osteria dell'Osa* 1992); the Greek cemetery of ancient Ischia, by G. Buchner and D. Ridgway (*Pithekoussai* 1993), and the new study by M. Pacciarelli of the cemetery of Torre Galli, Calabria, which had been originally published by Paolo Orsi (*Torre Galli* 1999). Specific references to these complexes are given among the typological and chronological parallels in the individual catalogue entries.

Based on a sample of 20 pieces from the collection of the Ashmolean Museum, a study of the main technological and typological features of Italian Early Iron Age fibulae has been published recently by J. Toms (Toms 2000).

An early series of analyses of metal artefacts from Italian CA burials was carried out within the research programme of the Arbeitsgemeinschaft für Metallurgie des Altertums in Stuttgart (Otto and Witter 1952; Junghans, Sangmeister and Schröder 1960). The analyses resulting from this work have been reconsidered by G. Barker in his paper on the CA and BA metal

artefacts in the Pigorini Museum in Rome (Barker 1971), which includes new analyses by E. Slater, of the Department of Metallurgy and Materials Science, Cambridge University.

A number of Italian and Sardinian bronzes in the BM collections, including some pieces described in this catalogue, have been analysed by P. Craddock (1986).

Recently, a new consistent series of analyses, both destructive and non-destructive (XRF), has been carried out, especially in the context of regional studies or of research concerning single archaeological complexes. Some of these works have appeared in the proceedings of specific conferences: see for example Antonacci Sanpaolo 1992, Piola Caselli and Piana Agostinetti 1996.

As regards regional studies, a significant sample of the north Italian MBA and RBA bronze artefacts has been analyzed by metallographic and AAS techniques on the occasion of the *Terramare* exhibition, held in Modena in 1997 (Garagnani, Imbeni and Martini 1997). The most complete programme of analyses on a regional scale has been carried out in Sardinia by F. Lo Schiavo and other scholars (Lo Schiavo 1996, 1997; Lo Schiavo, ed., forthcoming; Giardino and Lo Schiavo, forthcoming).

Recently published studies include XRF and non-destructive metallographic analyses of the metal artefacts of the CA south Italian Gaudio culture (Giardino 2000); the most significant result is the comparatively frequent use of arsenical copper, whereas in contemporary Rinaldone contexts of central Italy the great majority of artefacts is made of pure copper. Bietti Sestieri *et al.* 2003 is a preliminary report of a programme of XRF analyses of different classes of artefact from the hoard of San Francesco, Bologna, Emilia Romagna.

Another interesting work (Caneva, Giardino and Guida 2003) is a comparative evaluation of the results of different analytical techniques (XRF, SEM and ICP) applied to the artefacts from the Sicilian IA hoard of Polizzello.

Some recent works, usually also on a regional or supra-regional scale, are concerned with the collection and systematization of existing analyses. Among them are the research studies by R. De Marinis on the earliest metallurgy of northern Italy (De Marinis 1992, 1998). The most recent paper by this author (De Marinis 2005), relative to the CA and EBA metal industry of northern Italy, is a detailed study of the chronological significance of variation in chemical composition throughout this period. The analyses indicate that CA artefacts were all made from pure copper, except for halberds and daggers, which are of arsenical copper; the earliest EBA pieces (EBA IA) are also pure copper, or, more frequently, copper with high values of As, Sb, Ag and Ni. The copper-tin alloy appeared during EBA IB, and a stable proportion of the two main components (copper with 8–10% tin) became fully established from EBA II onwards.

Other works in this group include a study by M. Pearce (1998) on the relevance of chemical analyses of CA and BA metal artefacts to a thorough understanding of prehistoric technology and artefacts function, and two works on the EBA of Tuscany (De Marinis 2001, and Giardino 2001); also, an overview of the BA metallurgy of Sicily (Albanese Procelli 2003), and the wide-ranging research by C. Giardino on the metallurgy of Italy and the west Mediterranean, 14th–8th century BC (Giardino 1995).

Technical and functional studies, usually in connection with experimental reproductions and use of bronze artefacts, constitute another field of research which has been developed recently: see for example Bellintani and Moser 2003. Fibulae are one of the most frequent subjects of these studies. Recent works comprise a technical study on Italian LBA and EIA fibulae (Le Fèvre-Lehöerff 1999), an experimental study on LBA–EIA fibulae and swords from Abruzzo (Bietti Sestieri, Formigli and Pacini 2003), a technological and typological study of FBA and EIA Sicilian bronzes, especially fibulae, from the cemetery of Madonna del Piano, and from the Modica hoard (Lo Schiavo, Albanese Procelli, and Giumlia-Mair 2002), and a collection of papers entirely devoted to the study of fibulae (Formigli 2003); see especially the general remarks by F. Lo Schiavo relative to south Italian and Sicilian fibulae (Lo Schiavo 2003), and the paper by A. Giumlia-Mair on the fibulae and pins of the east-Alpine area (Giumlia-Mair 2003).

Overall, the chrono-typological, technical and experimental studies carried out in the last decades provide a very sound basis for our study and classification of the British Museum artefacts, whereas comprehensive programmes of analyses are still lacking. For this reason, the c. 100 artefacts that have been analyzed by Duncan Hook, of the British Museum's Department of Conservation, Documentation and Science, and that are published in this catalogue, represent a significant contribution to our study, as well as to the general knowledge of the Italian metal industry from the CA to the EIA.

In order to give this catalogue a coherent structure, each of the main groups of artefacts, which as a rule has been further subdivided into more specific categories or subgroups, is arranged by types identified by running numbers. For every type, the corresponding type or types in the *PBF* series or in a few other main classifications has been indicated.

The following pages set out the classification headings and are followed by a brief discussion of the classifications. The artefacts have been divided into groups, categories or subgroups, and types; within each category or sub-group, the types (some of which encompass a few already defined types that are sufficiently close in shape and chronology) are arranged in chronological sequence.

Sections I–II comprise all the objects which have been individually classified by groups, categories/sub-groups, and types, in the order in which they appear in each chronological range. Of the last two sections, II is devoted to a brief examination of those objects which are indicated to have been originally associated by the following criteria: chronological coherence, common provenance, continuous registration numbers, similar chemical composition, similar patina. Although these objects have been classified according to the general typology, they appear in the catalogue at the end of each chronological section, so as to emphasize their association. The majority of CA and BA pieces in this section were apparently part of hoards, whereas EIA ones probably come mainly or exclusively from burials. Section III comprises a small number of relatively rare or single pieces, all of EIA, late or later date, that are described but not formally classified by categories and types.

For the specific typological parallels, chronology and bibliography of each piece see the individual catalogue entries. For the **Typological Table** see pp.337–342, and for the **Index of Types**, pp.343–344.

Section 1

Group: Axes

CATEGORIES:

- Flat (Axes types 1–5)
- Flanged (Axes types 6–18)
- With contiguous wings (Axes types 19–25)
- With medial and medial-butt wings (Axes types 26–33)
- With butt wings (Axes types 34–43)
- Shaft-hole (Axes types 44–52)
- Socketed (Axes types 53–62)
- Lugged (Axes type 63)
- With lozenge lateral profile (Axes types 64–65)
- Lugged ‘trunnion’ axes (Axes type 66)
- Tanged (Axes type 67)
- With lateral loop (Axes type 68)
- Sardinian double axes (Axes types 69–70)

Section 2

Group: Tools

SUB-GROUPS:

- Needles (Needles type 1)
- Chisels (Chisels types 1–4)
- Winged adzes (Winged adzes type 1)
- Sicilian socketed tools (Sicilian socketed tools types 1–2)
- Hammers (Hammers type 1)
- Sickles (Sickles type 1)
- Spindles (Spindles type 1–2)

Section 3

Group: Knives

CATEGORIES:

- Tanged (Knives types 1–7)
- Socketed (Knives type 8)
- With separately cast rectangular handle (Knives type 9)

Section 4

Group: Razors

CATEGORIES:

- Symmetrical (Razors types 1–9)
- Lunate (Razors types 10–16)

Section 5

Group: Ornaments

SUB-GROUPS:

- Pins (Pins types 1–9)
- Embossed sheet bronze discs (Sheet disc type 1)
- Hair rings (Hair rings type 1)
- Pendants (Pendants types 1–12)
- Belt clasp ring
- Torques (Torques types 1–2)

Section 6

Group: Fibulae

CATEGORIES:

- Derived from the violin-bow series (Fibulae types 1–2)
- Arch (Fibulae types 3–13)
- Composite arch (Fibulae types 14–15)
- Arch with disc foot (Fibulae types 16–18)
- Leech-boat-lozenge (Fibulae types 19–30)

- Arch with foliate bow (Fibulae types 31–34)
- Composite arch with disc foot (Fibulae type 35)
- With disc foot and bow formed of graduated bronze discs (Fibulae types 36–37)
- One-piece serpentine (Fibulae types 38–41)
- Two-piece serpentine (Fibulae types 42–45)
- Serpentine with two coils and elongated catch-plate (Fibulae types 46–49)
- Drago (Fibulae types 50–51)
- Spectacle (Fibulae types 52–55)
- Four-spiral (Fibulae types 56–58)

Section 7

Group: Bracelets

CATEGORIES:

- Spiral (Bracelets types 1–2)
- Ribbon (Bracelets type 3)
- Coiled wire (Bracelets type 4)
- Coiled rod (Bracelets types 5–9)
- Annular (Bracelets type 10)
- Penannular (Bracelets type 11)
- D-shaped (Bracelets type 12)
- Hollow (Bracelets type 13)

Section 8

Group: Halberds and Daggers

Halberds 1–2

DAGGERS, CATEGORIES:

- With socketed hilt (Daggers type 1)
- With cast hilt riveted to the blade (Daggers types 2–5)
- Triangular (Daggers type 6)
- Tanged (Daggers type 7)
- With triangular tang (Daggers types 8–9)
- With flanged hilt (Peschiera daggers) (Daggers types 10–12)

Section 9

Group: Swords and Sword sheaths

CATEGORIES:

- BA short (Swords types 1–2)
- Flanged (Swords types 3–5)
- T-hilt (Swords types 6–10)
- Tanged short swords with shoulder cap (Swords type 11)
- Antennae (Swords type 12)
- Sword sheaths (Sword sheaths types 1–4)

Section 10

Group: Spearheads/Javelins and Spear-butts

SPEARHEADS, CATEGORIES:

- With conical socket and elongated symmetrical blade (Spearheads types 1–17)

SPEAR-BUTTS, CATEGORIES:

- Conical, with pointed or flat tip (Spear-butts types 1–5)

Section 11

Group: Arrowheads

CATEGORIES:

- Socketed (Arrowheads types 1–3)

Section 12

Groups of associated artefacts

CA:

- 1 – Two flat axes and an axe blade, **cat. 15–17** from Terni, Umbria.

EBA:

- 1 – Group of five flat and flanged axes, **cat. 47–51** from Agrigento, Sicily.
 2 – Group of eight flanged axes, **cat. 52–59** from Terni, Umbria, probably from a hoard.
 3 – Two daggers, **cat. 60–61**, probably from central Italy.

MBA:

- 1 – Two flanged axes, **cat. 82–83** from Lodi (Milan), Lombardy; part of a hoard.
 2 – Two winged axes, **cat. 84–85** from Nemi (Rome), Lazio; part of a hoard.

FBA:

- 1 – Group of three winged axes and a tanged knife, **cat. 241–244** from near Lake Como, Lombardy; probably part of a hoard.

EIA, EARLY:

- 1 – Two fibulae, **cat. 443** and **444**, probably from a tomb.
 2 – Two fibulae, **cat. 445** and **446**, probably from a tomb.
 3 – Two bracelets, **cat. 447** and **448**, found at Bologna, Emilia Romagna, probably in a tomb.
 4 – Two bracelets, **cat. 449** and **450**, probably from a tomb.
 5 – A javelin-head and a spearhead, **cat. 451** and **452**, found at Sulmona (L'Aquila), Abruzzo, probably in a tomb.
 6 – Two spearheads, **cat. 453** and **454**, found at Bari, Apulia, probably in a tomb.
 7 – Two spearheads, **cat. 455** and **456**, found at Arezzo, Tuscany, probably in a tomb.
 8 – Group of a sword and two spearheads, **cat. 457–459**, found at Cassino (Frosinone), Lazio, probably in a tomb.

EIA, LATE:

- 1 – Pair of fibulae, **cat. 784** and **785**, probably from a tomb.
 2 – Pair of bracelets, **cat. 786** and **787**, probably from a tomb.
 3 – Pair of bracelets, **cat. 788** and **789**, probably from a tomb.
 4 – Group of five bracelet-weights, **cat. 790–794**.
 5 – Pair of bracelets, **cat. 795** and **796**, probably from a tomb.
 6 – Pair of bracelets, **cat. 797** and **798**, probably from a tomb.
 7 – Two spearheads, **cat. 799** and **800**, part of a group, from a tomb at Bomarzo (Viterbo), Lazio.

Section 13

Miscellaneous artefacts

Section 1 – Axes

Besides forming the most substantial group of metal artefacts in the British Museum's early Italian collection (212 pieces), axes provide some of the most significant new data on the Italian metal ages. The study of these pieces was supported by a consistent number of analyses of the metal and alloys, but could be based on *PBF* classification for only one section of the sample, i.e. the axes of all groups and categories dating mainly from the EIA (see G.L. Carancini, *PBF* IX.12, 1984).

Flat, flanged and winged axes

The first category, **flat axes**, includes a total of 16 pieces which belong mainly, although not exclusively, to the CA. Metal analyses have been essential to the separation between copper and bronze pieces, which presumably implies a specific chronological significance, not always identifiable on purely typological grounds. A valuable feature of this sample is the relatively high number of pieces for which a provenance is indicated.

The main recent research on CA Italian metal artefacts, including the analyses of several pieces, has been carried out by R. De Marinis (1992, 1998), mainly on north Italian material, and recently on Tuscany (De Marinis 2001). Carancini's 1993 and 1999 works are a typological assessment of the CA metal industry in the Tyrrhenian regions, while the main study on Sicily is the 1993 book by R.M. Albanese Procelli. It may be interesting to remark that the CA types circulating on the whole territory of mainland Italy are relatively homogeneous.

Axes types 1, 2, and 3, all plain shapes with flat surfaces, comprise some well identified CA types; the analyses of many pieces in this group indicate consistently that they are made of pure copper. **Axes type 1: cat. 1**, from Naples, Campania, is the most archaic in shape, since it is rather close to some types of Neolithic stone axe with narrow upper end, which were first described by G.A. Colini (Colini 1898, pl. 15.4); parallels are known mainly from Lombardy and Emilia. **Axes type 2:** the only example in the collections (**cat. 2**, from Naples), is a large and heavy tool with good parallels both in northern and central Italy (De Marinis, type Bocca Lorenza; Carancini, type Bibbona), probably dating from an early phase of the period. **Axes type 3:** (**cat. 15** and **16**, a group of pieces from Terni, Umbria, that also includes **cat. 17**, unclassified: see **Section 12**), are small tools with close analogies in central and northern Italy, especially De Marinis' type Cumarola.

Axes type 4: cat. 3, 4, from Abruzzo; **cat. 5** from Corneto (Tarquinia, Viterbo), Lazio, **cat. 6**, from Ruvo (Bari), Apulia; **cat. 7** from Capua (Caserta), Campania, is a group of heavy copper tools (average weight 500g) characterized by slightly dished faces, that in some of the pieces are marked by a slight step running parallel to the edges; this seems to be a technological feature meant to improve the effectiveness of the hafting. The closest parallel is Carancini's type Poggio Aquilone, which is dated by this author to an advanced phase of the CA. The inclusion in this type of **cat. 5**, which is considerably smaller than the other pieces, is based on its general shape and on its close similarity to a piece from tomb 62 of the cemetery of Remedello (Brescia), Lombardy.

The following type, **Axes type 5a** and **5b**, is constituted by a group of small and medium-sized tools, relatively thin in section, with flat faces and flaring blade, apparently a late

feature. **Type 5a** includes two pieces, **cat. 8** and **9**, presumably from mainland Italy, close to Carancini's types Orvieto and Città di Castello, possibly CA; **Type 5b**, three axes, **cat. 47–49** from a group found at Agrigento (Sicily), are all bronze, and belong to local types dating from the EBA to the LBA (Albanese Procelli 1993).

Unclassified pieces in this group include the copper axe blade from Terni, **cat. 17** and an unprovenanced miniature flat axe(?), **cat. 13**.

Flanged axes are the next category; these constitute one of the main markers of the European and Italian EBA, as well as of the earliest part of the MBA. Two technological and formal features which are specific to the great majority of flanged axes are still found in a decreasing number of axes of MBA and LBA date: the continuous profile, which implies that the blade is not separated from the haft by a distinct element; and the extension of the wings over at least two-thirds of its total length, so that the blade usually is very short. These two features characterize the category of **axes with contiguous wings**, which is well represented in the BM sample.

A general classification of Italian BA axes, that will also be the mainframe of the next *PBF* volume, has been published by Carancini and Peroni (1999); this has been widely used in this catalogue, although other works have also been considered.

Overall, the basic principle of Carancini and Peroni's classification is the formal evolution shown by the different types of axes, while relatively little attention is paid to functional features and to technical and technological change. However, it should be mentioned that formal change in this kind of artefact corresponds, in a more or less direct way, to the adoption of technical and functional innovation. Another implication of Carancini and Peroni's formal typology is that it generates a sequence that bears little or no reference to specific contexts, local features, and the possible co-existence of what were formerly thought to be later chronological shapes and types: the relative chronology which is built directly upon a series of formally defined types should be considered as an ideal sequence, rather than as an actual temporal development. We have consistently tried to point out these limitations, although it is quite clear that they can hardly be avoided in a catalogue of objects which were collected at random in the course of more than two centuries.

Axes type 6 includes two slightly flanged axes, **cat. 18** from Rome, and **cat. 50** from the Agrigento group above; the type is well known in Sicily throughout the BA, and the occurrence of a formally similar piece in Lazio might be casual. **Axes type 7: cat. 51**, also from the Agrigento group; **cat. 19** from Brescia, Lombardy; **cat. 20** from Naples, correspond to the simplest types of flanged axes identified by Carancini and Peroni in their first horizon of EBA hoards. **Axes type 8: cat. 21, 22** from near Naples; **cat. 23** and **24**, also comparable to types in the first horizon, is more regular in shape and with a central notch or a slight indentation of the butt.

Axes type 9 is constituted by an exceedingly large and heavy flanged axe, **cat. 25**, also comparable to the earliest types in the EBA series. A totally identical piece from Campania (type Salerno) is published by Carancini 1993. **Axes type 10: cat. 26, 27** from Capua (Caserta), Campania, **cat. 28–30** from Tarquinia (Viterbo), Lazio, and **cat. 31**, are a group of axes with a central

notch to the butt and relatively developed flanges; parallels can be found both in the second and third horizons of the EBA hoards.

Axes types 11, 12 and **13** differ significantly from the earliest BA types, and can all be connected to the third and fourth EBA horizons. The former two types are characterized by wide faceted flanges with concave profile, apparently an important improvement in the efficiency of the hafting, and by a more or less sharply distinct butt with central notch. **Axes type 11: cat. 32** from Anagni (Frosinone), Lazio, **cat. 33** from Bazzano, Emilia Romagna, and **cat. 34**. **Axes type 12:** this type includes an axe from the Greenwell collection, **cat. 35**, which was recorded as found at Athens; **cat. 36–38** from Alba (L'Aquila), Abruzzo, and a group of eight axes, **cat. 52–59**, all probably part of a hoard found at Terni, Umbria, and almost identical in size, composition (Cu-Sn proportion in the alloy, and trace elements), and patina. **Axes type 13** includes two large pieces, **cat. 39** and **40** from Bagni di Lucca, Tuscany, with markedly concave sides and a central notch to the butt.

The parallels for the formal and technical characteristics of **Axes types 14–18**, the most recent group of flanged axes in the BM collections, can be found in some MBA hoards and complexes, especially from the north-western regions of Italy: the hoards of Lodi (end of the EBA and MBA, early) and Cascina Ranza (MBA, early), both in Lombardy, and the lake settlement of Avigliana, in Piedmont, dating from MBA, middle (Carancini and Peroni 1999, pls. 6, 9.1–14 and 15–18). As is well known, several MBA and LBA bronzes from this part of Italy show a strong connection to the adjacent European regions north-west of the Alpine range: south-eastern France and Switzerland.

Axes type 14: two pieces, **cat. 62** and **63**, are still close in general shape to the most common EBA flanged types, although the width and overall profile of the flanges probably indicate an early MBA date. **Axes type 15:** two flanged axes with distinct blade **cat. 64** and **65** with close parallels in the hoard of Cascina Ranza (Milan), Lombardy.

Axes types 16 and **17:** two slightly different types of flanged axes with rounded blade, each represented by a single piece, **cat. 82** and **83**; both were probably part of a bronze hoard found in the area of Lodi (Milan), Lombardy. Close parallels can be found in the hoard of Cascina Ranza, as well as in some axe types which are specific to the regions north-west of the Alps (France and Switzerland, see *PBF IX*. 4).

Axes type 18, probably the most recent type in this category, comprises a flanged-winged axe with straight butt and distinct blade, **cat. 66**, from Terni, Umbria, close to some of the pieces from the lake settlement of Avigliana, in Piedmont.

The category of **Axes with contiguous wings** includes **types 19** to **25**, dating mainly from the MBA.

Axes type 19: cat. 67 and **68** corresponds to Carancini and Peroni type Sezze, early MBA, a group of elongated tools with almost parallel sides and a short flaring blade. **Axes type 20**, very close to **Axes type 19** in general shape, is a Sardinian type (type Orosei), also present in Sicily. However, given the persisting difficulties as regards the dating of the Sardinian bronze-hoards and bronzes, especially the earliest ones, an attribution of these axes to the MBA should be considered as tentative. The type includes **cat. 69, 70**, and possibly **cat. 71**, from Nola (Naples), Campania.

The seven pieces classified as **Axes type 21** are rather homogeneous as regards the overall shape, that is flaring toward the blade, with slightly convex sides and wings widening in the central part; however, there is a certain degree of variability between **cat. 72** and **cat. 75**, two elongated tools, apparently rather close to **Axes type 19**: and **cat. 84**, with a wide flaring profile and heavily hammered wings, both of which probably are late features in the MBA series. Arranged in this hypothetical evolutionary sequence, **Axes type 21** comprise **cat. 72**, from Abruzzo, **cat. 73–76** from Poli (Rome), Lazio; **cat. 84** and **85**, probably from a hoard found at Nemi (Rome), Lazio. It is interesting that, besides being apparently linked in a close typological sequence, both **Axes types 19** and **21** are among the very few types of this date that seem to be specific to the central Tyrrhenian zone south of the Tiber, i.e. Lazio and the adjacent interior area.

Axes type 22: **cat. 77**, a single piece with straight butt and flaring blade from Palermo, Sicily, is at home among the axes of MBA, middle phase, from northern and central Italy; no close published parallels are known in Sicily. **Axes type 23** and **Axes type 24** belong to a different typological series, found mainly in the central and eastern regions of northern Italy, especially in Terramare contexts; the majority of the pieces are characterized by a rather long butt, usually ending in an indentation or with a central notch; moreover, there is a clearly identifiable development of blades both in length and width, accompanied by a parallel decrease of the wings. These changes appear in **Axes type 23**: **cat. 78**, with narrow wings and wide trapezoidal blade; the best parallels are to be found in some types of axes which are specific to the Terramare and Palafitte region. A date in the middle phase of the MBA can be based on its similarity to axes from the hoard of Rocca di Badolo, Emilia Romagna, and to an axe from the lake settlement of Fiavé (Trento), Trentino Alto Adige, phase VI. **Axes type 24**: **cat. 86**, with a long butt and a very short blade, also belongs to a Terramare type, probably of RBA date.

Axes type 25, the only FBA type in this category, is very close to Carancini and Peroni's type Silea, dating from an intermediate phase of the period. The only piece, **cat. 241** is one of a small group of four FBA objects, **cat. 241–244**, a hoard or part of a hoard from around Lake Como, Lombardy.

The following category, **winged axes with medial and medial-butt wings**, reflects the generalised adoption of an important technological innovation: the sharp distinction between haft and blade. This feature had already appeared in some axe types dating from the end of the EBA and the MBA (see **Axes types 15** and **18**), although it was never widely adopted. This category appeared probably in northern Italy in an advanced phase of the MBA (see Terramare 1997, fig. 232.61–63). **Axes type 26**: **cat. 87**, a relatively small artefact with wide wings and thin blade, possibly a weapon, is rather close to these early pieces. However, the main technological implication, i.e. the availability of a longer, and presumably more efficient blade, that was especially needed for the large heavy tools, was only achieved in the RBA. The technological evolution of these axes includes a gradual increase in overall length and curvature of the wings, as well as in blade thickness; also a moderate decrease in butt height and width and the gradual appearance of slight lateral protrusions marking the distinction between haft

and blade can be observed on these axes. **Axes type 27**: **cat. 88**, **89** and **Axes type 28**: **cat. 90** found at Foxcote, (England); **cat. 91** from Pozzuoli (Naples), Campania, **cat. 92** from Talamone, in the Tuscan Maremma, may be seen as an ideal RBA sequence, at least as regards the formal development of both wings and butt. It is interesting to note that the latter three pieces, all heavy tools, are extremely close both in shape and in weight (755–774g); the implication might be the existence and wide circulation of detailed technological know-how and models.

Axes type 29: **cat. 134** from Perugia, Umbria, **cat. 135** from the Marsica, Abruzzo, **cat. 136** from Canino (Vulci, Viterbo), Lazio, and **cat. 137** from near Naples, Campania; **cat. 138–141**, and the variant **142**, represent the subsequent development of this series, which can be dated to the earliest phase of the FBA. These axes are characterized by the continuing decrease in butt height and, mainly, by the smoothing of the blade, which is consistently oval or elliptical in section. This feature is found also on shaft-hole axes dating from the same period (see **cat. 161**), and should bear a specific significance. It is possible that the absence of angular edges allowed a deeper impact of the blade, especially if the axe was used as a weapon. Also an aesthetic factor might be implied, since the smooth surface clearly adds a special elegance and refinement to both winged and shaft-hole axes, many of which are finely decorated (cf. Bietti Sestieri 1973, figs. II.1, 3, 4; 15.3-5; Jurgeit 1999, no. 221). The nine axes in this type range from a few large, heavy tools (**cat. 134**, **139**, **142**, weighing between 630 and 850g) and a majority of smaller pieces, probably weapons. **Cat. 135** has a fine pointillé decoration on the blade. The fact that small pieces of precisely this type circulated widely throughout Europe, from northern Germany (a decorated axe from Osternienburg, Anhalt; Bietti Sestieri 1997: 392, fig.7.d) to Greece (the mould from the House of the Oil Merchant at Mycenae; Bietti Sestieri 1973, fig. 15.2) indicates that they were highly valued prestige objects.

Axes type 30, the immediate successor to **Axes type 29**, dating from a relatively early phase of the FBA, is characterized by the markedly concave sides of the blade. It comprises a number of small elegant pieces which were apparently manufactured in central Italy (Tuscany, Umbria, Marche, Romagna: sporadic pieces, and hoards of Poggio Berni and Casalecchio) and in the northern Po plain, especially Veneto (settlement of Frattesina), and circulated in eastern Europe (Austria and the Balkans); they were probably prestige objects, meant as accompanying gifts along the main trade routes in this area of Europe (Bietti Sestieri 1997), which reached as far as mainland Greece, as is indicated by the provenance of the typologically earliest piece, **cat. 143**. The other two, **cat. 242** and **243**, are slightly later and belong to the FBA hoard from Lake Como, Lombardy.

Axes type 31 is represented by a single piece, **cat. 144**, that belongs to a contemporary type (type Teor) also found in north-eastern Italy and in the adjacent area of the Balkans.

Axes types 32 and **33**, both comprise single pieces, from the River Ticino, Lombardy (**cat. 145**, a massive tool with narrow trapezoidal butt, also found north of the Alps) and from the Tyrol (**cat. 146**, a wide, heavy winged axe in Alpine style); although formally close to more elegant contemporary types such as **Axes types 34** and **36**, these two types are very local in character, and overall quite different from the Italian FBA metal

production.

The following category, **Winged axes with butt wings**, marks the FBA–EIA transition and the EIA. A small group of axes, mostly unprovenanced, illustrates the main types to be found in the central Italian bronze hoards dating from the final phase of the FBA (hoards of Gabbro, Pariana and Limone) and the FBA–EIA transition (Campese, Goluzzo, Piediluco–Contigliano, S. Marinella). These are **Axes type 34: cat. 148–151**, and the variant **152**, with wide trapezoidal blade, a feature especially found in the bronze hoards of Gabbro and Limone (Livorno), Tuscany, dating from FBA, late; **Axes type 35: cat. 153**, a specialized type of later FBA date, probably a heavy working tool, and **Axes type 36: cat. 154–156** from Terni (Umbria), all close to the Piediluco–Contigliano group.

The following winged axe types are of full EIA date. The majority of the provenanced pieces comes from the Villanovan regions of central and northern Italy (Tuscany and Emilia Romagna), the most important areas of the Italian metal industry in this period. It is interesting to note that a relatively large number of BM Italian axes in this group was found in different parts of Europe, including France, Hungary, Greece and Britain. The reliability of these provenances is supported by the fact that EIA Italian axes from many European countries have been published in the *PBF* series; this is a further indication of the wide international circulation of Villanovan metal and metal artefacts.

The earliest group, which, however, is generally dated to the second phase of the EIA, includes **Axes type 37 (cat. 460** from Fiesole (Florence) Tuscany; **cat. 461** from Tarascon, France; **cat. 462–464**), and **Axes type 38 (cat. 465**, and the variant **cat. 466**, both from Tuscany; **cat. 467** from Olympia, Greece; and **cat. 468**). These are all winged axes of regular shape and accurate making, with wide wings, marked shoulders and wide trapezoidal blade, (see *PBF* types Grottazzolina v. A, San Francesco, Bambolo, Cignano, Benacci var. A).

The bulk of the pieces belongs to the two types (San Francesco and Ardea) which are more widely represented in the most important Italian bronze hoard, found in the early years of last century near the church of San Francesco, Bologna, Emilia Romagna (Zannoni 1907). The hoard included over 14,000 pieces, mainly of EIA date, and was probably buried early in the 7th century BC. Another relatively important contemporary hoard was found in 1963 at Ardea, south of Rome. It is worth noting that the majority of the EIA axes in the BM collection belong to the two types which are most widely represented in the archaeological record in Italy. **Axes type 39** corresponds to type San Francesco, an elegant artefact of regular proportions, with upturned shoulders and wide trapezoidal blade, probably a weapon. It includes **cat. 469** from Tuscany, **cat. 470** and **471** from Emilia Romagna, **cat. 472** from Hungary, and **cat. 473–478**, unprovenanced. **Axes type 40**, type Ardea, is a considerably less refined, stout artefact; its wide range of formal variation is particularly remarkable if compared to the regularity of the San Francesco type, and probably indicates its main function as a widely-adopted working tool. It includes **cat. 479** from Sarzana, Liguria; **cat. 480** from 'Alba della Massa', probably Massa d'Albe (Aquila), Abruzzo, and **cat. 481** from Naples, **cat. 482** from France, **cat. 483** from England, and five unprovenanced pieces, **cat. 484–488**.

Axes type 41: cat. 489 and **490**, *PBF* type Marsiliana

d'Albegna, characterized by wide sloping shoulders, is also found in the hoards of San Francesco and Ardea, although in relatively smaller proportion.

Axes type 42, type Roselle, is a slightly later type found in the San Francesco hoard, dating to the EIA–Orientalizing transition (late 8th–early 7th century BC); it comprises **cat. 491** from Lake Trasimeno, Umbria, and **cat. 492**.

Finally, **Axes type 43** is a rare type of axe with faceted wings, type Mazzone, EIA, early; the only piece is **cat. 245**, from Rome.

Shaft-hole axes

The earliest pieces in this group, **Axes type 44**, belong to a distinctive type with markedly concave sides and central nervature on the haft, which is found in Sicily and the Aeolian islands in local Thapsos–Milazzese contexts of MBA–RBA date (Albanese Procelli 1993, type R8A). The technical innovation in the hafting of these axes is believed to have been brought to Sicily from the eastern Mediterranean. One of the three pieces, **cat. 93** is from Sicily, the second, **cat. 94**, is unprovenanced, while **cat. 95**, an axe rather close, though not identical to the former two, was found near Bournemouth, Dorset, England.

Axes types 45 and **46** are heavy massive tools with continuous lateral profile, and belong to RBA–FBA types found both in Sicily–Aeolian islands and in southern-central Italy. **Axes type 45** corresponds to *PBF* type Cuma: **cat. 96–98** from Potenza (Basilicata), probably RBA; close to this type are **cat. 157** from Castrovillari, Calabria, and **cat. 158** from Paternò, Sicily, probably FBA. Two axes from Abruzzo, **cat. 159**, **160** are classified as **Axes type 46**, which corresponds to *PBF* type Menaforno, also dated to the FBA.

Except for a few pieces of late EIA date, all the subsequent shaft-hole axes belong to south Italian types. The main area for the development of this series of artefacts throughout the FBA and the beginning of the IA was Apulia, which was strongly connected to Basilicata, Calabria, eastern Sicily and Campania. A limited number of shaft-hole axes of southern type is known also from central Italy and from the coastal Adriatic regions of the Balkan peninsula.

Axes type 47 comprises a group of seven pieces with angular butt and distinct blade, which constitute an evolutionary FBA series. The earliest one, **cat. 161**, has a distinctive rounded blade section also found on contemporary winged axes (see **Axes type 29**); along with **cat. 162** from Cuma (Naples), Campania, it corresponds to *PBF* type Zinzulusa var. B (FBA early–middle). **Cat. 163** from Bovino (Apulia), **cat. 164** from Pozzuoli (Naples), **cat. 165** from 'Magna Graecia' (= southern Italy) and **cat. 167**, can be attributed to *PBF* type with pentagonal profile to haft (FBA, late); **cat. 166** from Lake Trasimeno (Umbria), is close to *PBF* type San Francesco var. B, same date.

Axes types 48 and **49**, close to *PBF* types Chiusi var. A, Soletto var. B and Cerchiara, show some FBA features, such as the angular butt, hammered in some of the pieces, and wide trapezoidal blade slightly separated from the haft. **Axes type 48: cat. 168** from Populonia (Livorno), Tuscany, **cat. 169** from Corinth (Greece), **cat. 170** and **171**. **Axes type 49: cat. 172** from Mineo (Catania), Sicily, **cat. 173**, **174** from Naples, and **175**. **Axes type 50: cat. 246**, a wide tool with hammered butt from Mineo (Sicily), with no close parallels, can be associated to this group; it might be dated to FBA, late, or possibly, to EIA, early. This period is also represented by **Axes type 51**, with continuous

profile and straight edges, close to *PBF* type Manduria; the type comprises **cat. 247, 248** from Capua (Caserta), Campania, and **cat. 249** from Calabria. **Axes type 52: cat. 493**, a decorated piece with asymmetrical haft, close to *PBF* type Doss Trento, dates from an advanced phase of the EIA.

Socketed axes

Socketed axes with continuous profile appeared for the first time in central and northern Italy in the RBA, probably in connection with the flourishing of the Palafitte-Terramare metal industry: see **Axes type 53**, *PBF* type Casinalbo, **cat. 99** from Bologna, Emilia Romagna, and **cat. 100** from near Ancona, Marche. However no subsequent development of this class is documented in these regions of the central and northern Adriatic area. Probably not earlier than the FBA–EIA transition, a new autonomous series developed in Apulia, especially in the Salento peninsula, which was systematically connected to the Balkan coast opposite. **Axes type 54**, a single decorated piece with raised double collar, **cat. 250**, belongs to one of the earliest types in this series, *PBF* type Manduria var. H. **Axes type 55: cat. 494**, with no close parallels, and **Axes type 56: cat. 251** from Terni, Umbria, and **cat. 495**, is close to *PBF* types Manduria var. C (EIA, early) and Ripatransone (EIA, late), both plain types with oval socket, also connected to the Apulian series.

The last three types in this group, **Axes type 57**, with lateral lugs, **Axes type 58**, with lateral loops, and **Axes type 59**, with slightly marked shoulders, belong mainly to the San Francesco-Ardea metal industry, centered in Villanovan Emilia Romagna and Tuscany and dating from the late phase of the EIA (see **Axes types 39** and **40**). **Axes type 57**: close to *PBF* type Cortona, **cat. 496** from Fondi, Lazio, and **cat. 497**. **Axes type 58**: *PBF* types Città della Pieve and Ardea var. A, **cat. 498** from Bari, Apulia, **cat. 499** from Verona, Veneto, **cat. 500** from Naples, and **cat. 501**. **Axes type 59**: **cat. 502** from Grosseto (Tuscany).

Socketed axes with separate blade

These pieces also are of EIA date, although it is possible to divide them into two main groups, which differ in style as well as in chronology. The earliest one, **Axes type 60**, probably dating from the beginning of the EIA and later, corresponds to *PBF* type Cuma, which is loosely distributed in central and southern Italy and is characterized by a conical socket inserted at the centre of a thin flat blade. **Cat. 252** from Perugia, Umbria; **cat. 253** from near Rome, Lazio, and **cat. 254** can be dated to EIA, early; **cat. 503** and **504** are probably slightly later.

Axes types 61 and **62** both comprise slightly different variants of the *PBF* socketed axes type San Francesco; their main features, which show their strong formal and functional connection to the winged axes from the San Francesco-Ardea metallurgical tradition (see **Axes type 39**), comprise the wide trapezoidal blade and protruding shoulders, often combined with geometric decoration. **Axes type 61: cat. 505** from Talamone (Grosseto), Tuscany; **cat. 506** from Orvieto, Umbria; **cat. 507** and **508**. **Axes type 62: cat. 509–513**.

A few other axe types, all relatively rare in the Italian archaeological record, are each represented by no more than one or two pieces.

Lugged axes

Axes type 63 (type Terni, Carancini 1993): a single CA axe

with thick blade and pointed lugs, **cat. 10** from Pozzuoli (Naples).

Axes with lozenge lateral profile

Axes type 64 (type Terni, Carancini 1993): heavy tools of late CA date, known from central and southern Italy, mainly from Gaudio contexts, **cat. 11** from Terni, Umbria.

Axes type 65 (type Mirabella Eclano, Carancini 1993): heavy tools with elongated butt and raised and hammered concave edges to the blade, probably CA, late, **cat. 12**.

Lugged ('trunnion') axes

Axes type 66: cat. 176 from Enna, Sicily: this type belongs to a widely diffused class of FBA date, found in Sicily, Sardinia, central Italy, the Iberian peninsula and France (Giardino 1995).

Tanged axes

Axes type 67: cat. 177 from the Marsica, Abruzzo; this is a FBA–EIA type found mainly in southern Italy.

Axes with one lateral loop

Axes type 68: cat. 178 from Castro Giovanni (= Enna), Sicily: a 'western' FBA type, found in Sicily, and the Iberian peninsula (Giardino 1995).

Sardinian double axes

Axes type 69: double axe with parallel or converging cutting edges: **cat. 179, 180**; **Axes type 70**, axe-adze **cat. 181** from Cagliari, Sardinia; these are specific Sardinian types, both of late FBA or EIA date (Giardino 1995).

Unclassified axes

Two axe-blades, **cat. 823** from Naples, and **cat. 824**.

Section 2 – Tools

Tools make up a small and mixed collection dating from the RBA to EIA, late.

Needles

Needles type 1: two pieces, **cat. 101** and **102**, both from Peschiera (Verona), Veneto, made from thin wire with bent eye, a specific north Italian RBA type.

Chisels

Chisels type 1: rod chisels without stop ridge. **Cat. 103** is of square section, only slightly narrowing at the tang. Parallels for this basic shape are known in RBA Terramare context of northern Italy. **Cat. 104** is more elaborate, with section square at tang and circular in the central portion. The type is rather standardized, and is known from RBA–FBA bronze-hoards in central and southern Italy: Gualdo Tadino, in Umbria and Surbo in Apulia.

Chisels type 2: cat. 182, thick rod of square section with marked stop ridge; this is a type usually found in bronze hoards dating from FBA, late, and FBA–EIA transition.

Chisels type 3: cat. 514, and **Chisels type 4: cat. 515** from near Naples, both are socketed tools with EIA, late, parallels in Campania (cemeteries of Pontecagnano) and in the hoard of San Francesco (Bologna, Emilia Romagna).

Winged adzes

Winged adzes type 1: this is a previously unknown type, consisting of a hafting section identical to those of RBA–FBA winged axes, and of a narrow blade set transversely to the haft. Based on the decreasing height of the butt, the three pieces can be dated to the RBA (**cat. 105** from Potenza, Basilicata) and to FBA, early, **cat. 183** and **184**, possibly from Tuscany.

Sicilian socketed tools

A very specific group of blunt tools, known from the Sicilian FBA hoards of Niscemi and Noto Antica, consisting of a conical or angular socket with bulging upper edge and wide openings on each face. A function as plough-heads seems likely.

Sicilian socketed tools type 1: **cat. 185**, straight; **Sicilian socketed tools type 2:** **cat. 186**, L-shaped, from Syracuse (Sicily). Both types can be dated to FBA, middle.

Hammers

This category of tools is represented by a single type, **Hammers type 1**, which includes a piece, **cat. 187**, possibly from Florence (Tuscany). This is a massive FBA tool with parallels in bronze hoards from southern Italy, such as Mottola (Taranto, Apulia).

Sickles

This category, too, is represented by one type, **Sickles type 1**, including a single piece, **cat. 188**, which belongs to the most common type found in Italian bronze hoards of FBA middle and late date.

Spindles

The two types in this category correspond to the most common types found especially in Villanovan cemeteries both in central and southern Italy, from EIA, early, and are quite similar in basic shape (a straight rod with discs set upon the shaft).

Spindles type 1: **cat. 255**, is made from a thick rod with three discs; **Spindles type 2:** **cat. 256**, is of thin rod with two discs only.

Unclassified tools

This group includes a wide trapezoidal blunt blade of pure copper, possibly of CA date, **cat. 825**, and two chisel blade tips, **cat. 826, 827** from Terni, Umbria.

Section 3 – Knives

The small BM sample includes 13 pieces, dating from the FBA to EIA, late; except for two pieces, **cat. 193** and **194**, they correspond to well identified *PBF* VII.2 types.

Tanged knives. The specific technical feature of this wide category, spanning the FBA and EIA, is the hafting system: the blade ends in a tang, which may be flat, either plain or flanged, or a narrow rod of rectangular section. The handle, usually of organic matter, encapsulated the tang, or was riveted to it.

Knives type 1: **cat. 189–191; 244**, from a bronze hoard found near Lake Como (Lombardy), and **Knives type 2:** **cat. 192**, belong to a group of tanged tools with slightly serpentine blade mainly from north Italian FBA contexts, especially *PBF* VII.2 types Bismantova and Iseo.

Knives type 3: **cat. 193** from Regalbuto (Enna), Sicily, a tanged and flanged piece with markedly serpentine blade, is comparable for its general features to the FBA north Italian

type Fontanella, although no precise Sicilian parallels are available.

A provenance from Sicily is also possible for **Knives type 4:** **cat. 194**, with curved blade and tang ending in a ring, that is close to FBA pieces from the Sicilian cemetery of Cassibile (Turco 2000).

The two types of EIA, early, date belong to the same general category with the FBA types above. **Knives type 5:** **cat. 257**, with serpentine blade and tang, is close to *PBF* type Piediluco; **Knives type 6:** **cat. 258**, tanged with continuous profile, belongs to the south Italian type Spezzano Calabro.

EIA, late, pieces, include a tanged type, **Knives type 7:** **cat. 516**, with flat tang, close to *PBF* central Italian type Leprignano.

The other types of EIA, late, date belong to two different categories, based on the hafting system.

Socketed knives. **Knives type 8:** **cat. 517** from Castiglione del Lago (Perugia), Umbria, with narrow cylindrical socket attached to the end of the blade, and close to *PBF* type Morlungo, which is found mainly in northern Italy.

Knives with separately cast rectangular handle. This is a specifically Latial and Campanian group dating from EIA, late, and the Orientalizing period. Given their technical complexity, as well as their consistently large size and the frequent occurrence of incised decoration, these were probably ceremonial tools. **Knives type 9:** **cat. 518**, and **519** from Palestrina (Rome). See *PBF* type Caracupa.

Section 4 – Razors

The 32 pieces belong to two general categories: symmetrical (i.e. with two symmetrical cutting edges), and lunate (with a single convex cutting edge and a concave back). Symmetrical razors are known from the MBA, although no pieces of this date are included in the BM sample. From the FBA, the two categories run in chronologically parallel series. The great majority of the BM pieces belongs to types defined in *PBF* VIII.2.

Symmetrical razors include the earliest specimens in this group, dating from the RBA or the FBA: **Razors type 1**, a narrow tool with a wide triangular tang: **cat. 106, 107** found in Suffolk, England, **cat. 108**, and **109** from Abruzzo. The type is comparable to the Sicilian type Pantalica defined by Giardino 1995. **Razors type 2:** **cat. 110–112**, with a narrow tang, is more similar to south Italian pieces (e.g. *PBF* VIII.2, 64, from Tropea, Calabria, type Pertosa). **Razors type 3:** **cat. 195**, characterized by a wide blade cast in one piece with the suspension loop, belongs to a common FBA type (*PBF* type Pianello). **Razors type 4:** **cat. 196, 197**, *PBF* type Terni, marks the FBA–EIA transition. The attached handle ending in a ring of twisted wire is found also on the earliest EIA types in this category, **Razors type 5** (**cat. 259** and **260**, the former found at Athens, cf. *PBF* type Capua), and **Razors type 6** (**cat. 261**, also from Athens, **cat. 262**, and **263**; they correspond to *PBF* type Savena). **Razors type 7** (**cat. 264**, cf. *PBF* miniature razors with two cutting edges) is a miniature reproduction of an actual symmetrical razor; it probably comes from ancient Lazio, where the miniaturization of grave goods was a common feature of FBA and EIA cremation graves.

Razors type 8: **cat. 265**, belongs to a specific south Italian EIA group (*PBF* types Cairano and Amendolara); **Razors type**

9: **cat. 520**, with blade and handle cast in one piece, is comparable to *PBF* type Suessula, dating from EIA, late.

Lunate razors: the earliest lunate razors are characterized by the mild curvature of both cutting edge and back, a feature reminiscent of the FBA type Fontanella; they include **Razors type 10: cat. 266**, *PBF* type Tarquinia, and **Razors type 11: cat. 267–269**, a miniature piece from Rome; cf. *PBF* types Vulci and Tarquinia). Both can be dated to the earliest phase of the EIA. **Razors type 12 (cat. 270)** from Etruria, with a more marked blade curvature, had the handle originally riveted to the blade, a rare feature for lunate razors. It is identical to *PBF* type Sirolo-Numana var. B, EIA early and late. Also **Razors type 13: cat. 271**, belongs to a well identified EIA type, *PBF* type Fermo, with an angular spur surmounted by a knob and a decoration of hatched meander elements along the upper edge.

The last three types date from the late phase of the EIA and are characterized by the pronounced curve of both cutting edge and back. These include **Razors type 14 (cat. 521)** from Chiusi, Tuscany, **cat. 522, 523**, similar to *PBF* type Grotta Gramiccia var. A; **Razors type 15 (cat. 524)**, also from Chiusi), close to *PBF* type Valle La Fata both in shape and decoration; and **Razors type 16 (cat. 525–528)**, from Etruria), similar to *PBF* type Benacci.

Section 5 – Ornaments

This is a mixed group, which comprises different sub-groups of ornaments dating from the RBA to EIA, late.

The sample includes a total of 36 pieces: 9 pins, 1 small bronze disc, 1 hair-ring, 21 pendants, 3 torques, 1 belt clasp ring. Owing to the limited typological variation within each group of ornaments, some of which are represented by single pieces, they have not been divided by categories, but only by general sub-groups and by types.

Pins. From the EBA, pins were an important accessory to fabric clothes, both as a decoration and, mainly, as a functional device for fastening cloaks or mantles. During the RBA and FBA the functional role of pins became progressively more important than their decorative element, as is indicated by their usually small, barely discernible heads. In these periods they were first the functional precedents, and then the alternative to fibulae, especially in northern Italy: the bronze pin was securely fastened to the cloth by a thin string of leather or by thread, as is indicated by the relatively high number of pins which were curved in order to fasten the cloth more efficiently in this way. In the IA, the use of pins marks a significant difference in fashion between the northern regions and the rest of Italy: in the north elaborate pins were the most popular ornament and dress fastener in use, just as were serpentine fibulae with disc foot in the Tyrrhenian regions of central and southern Italy (see for example Pincelli and Morigi Govi 1975, 570 and fig. 77.1-8, for the use of pins in male burials in the EIA cemetery of San Vitale, Bologna; see below for serpentine fibulae in male burials from Lazio and Campania).

The BM sample for this group of ornaments is made up of a few pieces, mainly of RBA and FBA date; all correspond to *PBF* XII.2 types.

Pins types 1 to 4, all represented by a single piece (**cat. 113–116**), belong to some of the most common north Italian types of RBA date, which are found mainly in Terramare contexts.

The same applies to the three FBA pieces, **Pins type 5: cat. 198**, **Pins type 6: cat. 199**, and **Pins type 7: cat. 200**, close to *PBF* types Sarteano, Fontanella, and ‘a capocchia di chiodo’, and found in FBA Protovillanovan contexts from both central and northern Italy.

Pins type 8: cat. 272, and **Pins type 9: cat. 529**, from Florence, belong to the wide group of pins in the shape of a spoked wheel; both are found in EIA cemeteries from central and northern Italy, although **Pins type 9** (*PBF* type Vetulonia) is later, and dates from EIA, late, and the Orientalizing period.

Embossed sheet bronze discs. These relatively rare artefacts probably were used to perform different functions in Italian and Sicilian contexts of FBA and EIA date, such as the cemeteries of Lipari, Piazza Monfalcone, FBA, and Molino della Badia-Madonna del Piano (Catania, Sicily), FBA–EIA. **Sheet disc type 1** includes a single piece, **cat. 201**, from the Marsica (L’Aquila), Abruzzo. The general decorative style of the disc, although also known in EIA contexts, might indicate a FBA date.

Hair rings. This is one of the most common ornaments found especially in IA female graves over the whole Italian territory, with some precedents dating from the FBA. The basic shape is a spiral ring of varying diameter, usually made from thin double wire, and with undulating ends.

Hair rings type 1: cat. 273, is close to EIA, early, types from Villanovan, Latial and south Italian fossa-grave cemeteries, as for example Osteria dell’Osa and Pontecagnano.

Pendants. This group comprises a variety of pendants of different shapes and types, probably all of IA date. Except for **type 1** and possibly the unclassified saltaleone **cat. 275**, all the other pendants are of EIA late or later date.

Pendants type 1: cat. 274, from Ruvo (Bari), Apulia, is a spectacle, or two-spiral, pendant with suspension loop.

The general shape was already known in the BA, but the parallels from southern Italy can be dated to the FBA–EIA transition (cemetery of Carinaro, Caserta, Campania) and to the EIA (cemeteries of Pontecagnano and Capua).

Pendants or Ornaments unclassified, cat. 275, a cylindrical ornament of coiled bronze wire (so-called ‘saltaleone’), is an ubiquitous find from EIA and later graves especially in central and southern Italy.

Pendants type 2: cat. 530 from Gela (Sicily), a miniature shaft-hole axe, belongs to a category of ornaments which is specific to Sicily from the FBA. The circular hole of this piece might indicate a date in EIA, late.

The next two types, both of solid bronze, **Pendants type 3: cat. 531**, a small pointed globe, and **Pendants type 4: cat. 532**, a composite ornament formed by a decorated tube with smaller pendants suspended, are quite common in EIA, late, cemeteries from central and southern Italy, as for example Veii Quattro Fontanili.

Pendants type 5: cat. 533, 534 from Torre Annunziata (Naples) and the variant **535**, **Pendants type 6: cat. 536**, and **Pendants type 7: cat. 537–539**, all belong to a different metallurgical tradition; the main feature is a globe with a pair of opposed birds’ heads attached. They are specific to southern Italy, especially to regions and contexts with strong Balkan connections: Campania (cemeteries of Suessula, Capua, and of the Oliveto-Cairano group) and Apulia, and they all date from EIA, late, and later. See *PBF* XI. 2, for parallels from Serbia and Thessaly.

A small group of pendants in the form of animals includes **Pendants type 8: cat. 540**, a small horse with incised decoration, and **Pendants type 9: cat. 541 and 542**, in the form of a bird. Similar ornaments appear in Italian EIA, late and later contexts from Villanovan Etruria and Campania, and are also found in the cemetery of Ischia and in Greece (see *PBF* XI. 2 for bird pendants).

The next group, **Pendants type 10: cat. 543**, **Pendants type 11: cat. 544, 545** from Ruvo (Bari), Apulia, and **cat. 546**, are more or less complex types of bullae, a circular bivalve ornament that was quite popular in central and southern Italy from EIA, late, to the Orientalizing and later periods.

The two stylized horse-birds, **cat. 547 and 548**, which make up **Pendants type 12** are very close in shape and general style to a type of horse-bit of EIA, late, and Orientalizing date, also found in Etruria and southern Italy (see *PBF* XVI.1); they were probably part of the decoration of horse trappings.

Belt clasp ring. Cat. 549, a small ring of thick wire with incised decoration, is the only representative of this sub-group, with parallels in EIA, late, graves from ancient Lazio and Etruria.

Torques. This group comprises two rather similar types of open collars, both made from rod of circular section with coiled ends. **Torques type 1: cat. 276 and 277** from Cuma (Naples), of thin rod of circular or square section, is close to pieces from FBA and EIA, early, contexts from southern and central Italy, for example the FBA cemetery of Castellace (Calabria), and the EIA cemeteries of Torre Mordillo, also in Calabria, Rome Esquilino and Osteria dell'Osa. **Torques type 2: cat. 550**, made from thick circular rod, is close to EIA, late, collars from Campania (Capua, Calitri) and Calabria (Francavilla Marittima).

Section 6 – Fibulae

Italian fibulae have been the subject of several classification works, as part of both regional studies and the analysis of individual cemeteries; moreover, they have been systematically classified by three major specific corpora: the classic book by Sundwall (1943), and two volumes of the *Prähistorische Bronzefunde* series. The first, by Patrizia von Eles, was published in 1975 and is devoted to the fibulae from northern Italy (*PBF* XIV.5); the second, by Fulvia Lo Schiavo, is on the fibulae from southern Italy and Sicily and is due to be published shortly (*PBF* XIV, forthcoming).

Overall, these ornaments are among the best known and studied of Italian protohistory; close parallels for many types that have been defined for the present catalogue can be found in published contexts.

The group as represented in the BM collections consists of 181 pieces, dating from the FBA to the EIA, late. For 40 of these a provenance has been recorded: there is a comparatively low percentage of pieces from Campania (9, c. 5%), 14 from other Italian regions, of which 7 are from near Rome, 1 each from Serbia, Greece, Hungary, France, Germany and Czechoslovakia, 3 from Austria and 8 from England.

The majority of the unprovenanced pieces belongs to south Italian, especially Campanian types.

Seventeen pieces are of FBA date, while all the others are divided between the early and late phases of the EIA. The great majority, or perhaps the totality of them probably were part of sets of grave goods. This is indicated by their generally good

state of preservation, as well as by the occurrence of a few pairs of associated identical pieces, probably from female burials, where they were often worn symmetrically on the shoulders or on the chest to fasten a cloak or a mantle.

The first category, **fibulae derived from the violin bow series** includes two types.

Fibulae type 1: cat. 202, a transitional shape between violin bow and stilted fibulae with two knobs, is the only representative of the initial phase of the FBA. **Fibulae type 2** is a late version of the violin bow type; **cat. 203**, with two coils, is a Campanian and Sicilian type and an early predecessor of the EIA 'Sicilian' fibulae (see here **Fibulae types 46–48**), while **cat. 204** (close to **Fibulae type 2**), a large fibula of similar shape with multiple coils, is a unique piece, with possible EIA parallels in Umbria (Terni) and Lazio (Rome).

Arch fibulae form a consistent group of types, mainly of EIA, early, date. They were one of the most popular functional ornaments from a late phase of the FBA to the EIA, and throughout the Italian peninsula and Sicily. Especially during the EIA, they were mainly worn by women. Although the basic shape is extremely simple, there is a wide range of variation in all its main features, depending both on regional-local fashion and on chronology. These include the relative thickness of the bow, its section and general profile, the proportions of symmetrical catch-plates, and the different varieties of discs attached to some types, as well as a wide range of incised and plastic decorations. As a rule, it is possible to identify rather precise regional parallels for the unprovenanced pieces in this category.

Fibulae types 3 and 4 (cat. 205 and 206) are two versions of the FBA arch fibula with two knobs: the first one is relatively standard both in shape and size, while the second belongs to a well-known group of very large pieces from southern Italy (Calabria and Basilicata).

Fibulae type 5 (cat. 207 and probably cat. 208) with stilted and slightly thickened bow, is a FBA type which is very close to EIA fibulae from Lazio to Calabria. **Fibulae type 6: cat. 209**, is an arch fibula with straight ends to the bow and a distinctive incised decoration, found in FBA–EIA cemeteries of eastern Sicily and Calabria.

Fibulae type 7 is one of the most common types found in female graves, especially inhumations of EIA, early, date, in Lazio, Campania and southern Italy. **Cat. 278** from the Blacas collection, could be a transitional FBA–EIA piece from Lazio. **Cat. 279**, from Belgrade, former Yugoslavia, and **cat. 280** have an incised and plastic decoration especially found in EIA, early female inhumations from Lazio, Campania and Calabria. The slightly asymmetrical arch of these four pieces is probably reminiscent of FBA stilted arch fibulae. The other three, **cat. 281, 282** (possibly from Zürich, Switzerland) and **283**, are common pieces possibly of slightly later date, as indicated by the more regular curvature of the arch.

Some features of both **Fibulae type 8: cat. 284, 285** and **Fibulae type 9: cat. 286–288**, such as the wide symmetrical catch-plate and the patterns of the incised and plastic decorations, indicate a provenance from Campania, with parallels especially at Cuma. The thickened arch is specific to EIA, early, fibulae, although these Campanian shapes and decorations probably continued in the subsequent phase.

Fibulae type 10: cat. 289–292, with bow thickened and

lowered, mark the transition between the early and late phase of the EIA, and are found especially in Villanovan contexts of central and southern Italy. This also applies to the relative chronology of **Fibulae type II**, with thickened bow lowered in the central part, and **Fibulae type 12**, with thickened leech bow. The former (**cat. 293–295** from Germany, **cat. 296**, and **297** said to be from England) is found especially in Villanovan cemeteries of both central and southern Italy, and in Lazio. The second type includes four pieces with a standard decoration of encircling lines and chevrons, that is well known from EIA, early, contexts of Etruria, Lazio and Campania (**type 12a**, **cat. 298** perhaps from England, **cat. 299** from Steiermark, Austria, **cat. 300**, and **301**), while the wide oblique engravings on the arch of **cat. 551** (**type 12b**) probably indicate a slightly later date.

Fibulae type 13: **cat. 302**, belongs to an exclusive Campanian type, especially found at Cuma, and probably of transitional date.

The next category, **composite arch fibulae**, includes two types characterized by the arch of thin wire threaded with glass beads. **Fibulae type 14**: **cat. 303**, a small fibula with high bow and wire coiled at both ends, is a distinctive Villanovan type, spanning the EIA and the subsequent period. **Fibulae type 15**: **cat. 552**, is a specific type of leech fibula with the bow concealed by a large glass bead, found especially in the Villanovan cemetery of Verucchio, in Emilia Romagna, and dating from the EIA, late and later.

Fibulae type 16: **cat. 210**, is the earliest type in the category of **arch fibulae with disc foot**; it is closely related to a group of FBA fibulae from central Italy with thin arch with multiple coils (see for example Peroni *et al.* 1980, pl. XXIIIC).

Fibulae type 17 includes a group of nine pieces (**cat. 304–308** from near Rome, **cat. 309–311** also from near Rome, and **cat. 312**) with thickened arch and spiral disc of hammered bronze sheet. This is a specific Villanovan type of EIA, early, date, worn mainly by women, which is also found in relatively small numbers in Latial and south Italian fossa-grave contexts, as for example Osteria dell'Osa and Torre Galli. **Fibulae type 18**: **cat. 313** from near Rome, is closely related to the former type, except for the arch, which was probably covered by graduated amber or bone beads.

Although they constitute a formal development of arch types, the category of **leech, boat and lozenge fibulae** belongs entirely to the late phase of the EIA, with some types continuing into the Orientalizing period. The introduction of these types brought some significant innovations in the making of fibulae: first, the body of the fibula was modelled by casting, and its shape was largely unmodified by further hammering; then leech fibulae were cast hollow over a core of clay; and finally there was the introduction of the boat fibula, with open lower bow. Moreover, the complex incised decoration of these types was mainly obtained by the lost-wax technique. These widespread technical innovations also favoured a higher degree of homogeneity among the productions of local and regional workshops.

Fibulae type 19 is characterized by some features which are specific to the earlier, thickened arch types: solid arch and symmetrical or very slightly elongated catch-plate. Another early trait, the encircling decoration, appears only in some of these pieces. **Cat. 553–555** from Slovakia, and **cat. 556** from

Orvieto, Umbria, have the standard early decoration for this type of fibulae, which is found in southern Etruria, Lazio and Campania: rows of bands with an incised herringbone pattern, separated by plain ones. The other three pieces **cat. 557**, **558** from Steiermark, Austria, and **cat. 559** show some later decorative patterns such as deeply incised oblique lines and concentric circles.

Fibulae type 20, another type with solid leech bow, includes two pieces **cat. 560**, and **561** from York, England, probably made in northern Italy, as is indicated by the incised meander pattern on the upper side of the bow. A similar provenance is also likely for **Fibulae type 21**: **cat. 562** and **563** from Semlin, Hungary, with lowered leech bow decorated with parallel grooves. The lowered and flattened arch of **Fibulae type 22**: **cat. 564**, is specific to an advanced moment of EIA, late. **Fibulae type 23** marks the beginning of the casting of leech fibulae over a clay core; the decoration of these pieces spans from the bands of herringbone pattern seen on early leech fibulae, **cat. 565**, to bands of concentric circles, **cat. 566** from the Tyrol, Austria; **cat. 567**, from Reculver, Kent, England, and **cat. 568** from Perugia, Umbria, hatched triangles, **cat. 569**, **571**, and meander patterns, **cat. 570**, the latter probably a north Italian feature.

Fibulae type 24, expanded hollow leech, **cat. 572**, and **573**, is a transitional type between the leech and boat shapes, also as regards the increasingly complex patterns of the decoration, and the elongated catch-plate. The standard boat type, with lower face wide open and elongated/long catch-plate is represented by **Fibulae type 25**: **cat. 574** from Box, Wiltshire, England, **cat. 575** from Orvieto, Umbria, **cat. 576**, **577**, **578** from near Taunton, Somerset, England, **cat. 579**, and **580** possibly from Dorset, England. A north Italian variant of this shape is represented by **Fibulae type 26**: **cat. 581**, a hollow lozenge fibula with elongated catch-plate and an incised decoration of longitudinal lines.

Along with the main steps of the chrono-typological evolution of this category of fibulae as represented by **types 19–21**, and **23–26**, there is another, relatively late series of types (**Fibulae types 27–30**) all characterized by the association of a solid leech or lozenge bow and an elongated or long catch-plate. This difference in technical and typological development probably depends on the fact that since, with few exceptions, the fibulae in the latter series are of relatively small size, it would have been difficult or impossible in this case to adopt the technique of the casting over a clay core.

Fibulae type 27: **cat. 582–584**; **585** from Athens, and **Fibulae type 28**: **cat. 586–588**, and the variants **cat. 589–591**, are two rather close types with elongated catch-plate and incised decoration including longitudinal bands on the upper body; the main difference is represented by the slight lateral expansions of the arch of **type 28**, which makes it closer to the later lozenge types. It is interesting to note that **cat. 585**, the only large piece in this group, was probably made by the clay core technique, as is indicated by an opening on its upper face. The closest parallels for both types are in Campania, especially the cemeteries of Capua, Suessula and Pontecagnano, while **cat. 590** and **591** are close to types from Veii.

Fibulae type 29 (four decorated pieces, **cat. 592–595**, and two plain ones, **cat. 596** and **597**) is a group of small solid lozenge fibulae with elongated catch-plate; the decorated pieces

are common Campanian types, mainly from Capua, while the plain version is widely diffused in Italian contexts of the end of the EIA. **Fibulae type 30**, small solid leech or lozenge fibulae with elongated catch-plate, decorated by three plastic birds' heads, probably is a Campanian type that is also found in Villanovan cemeteries of southern Etruria. The type is represented by two slightly different varieties, **Fibulae type 30a: cat. 598** and **type 30b: cat. 599–602**.

The category of **arch fibulae with foliate bow** is perhaps best included with the next type in this classification, along with some more common shapes.

Fibulae type 31 is a relatively modest representative of the outburst of flamboyant parade fibulae that appeared at the end of the EIA in northern Campania, especially in the cemeteries of Capua and Suessula.

The basic shape is an arch fibula with large symmetrical catch-plate, with bow formed by two flat bands, and rows of aquatic birds attached to the arch and originally also suspended from its outer edge. The pair in the BM sample, **cat. 784** and **785**, probably come from the same tomb. A unique feature of this pair is that the two fibulae are symmetrical, i.e. in one of them the foot opens on the left, and in the other on the right side of the front face, so that these very special ornaments look identical.

Parallels in EIA, early, contexts of Sicily and Campania can be found for **Fibulae type 32: cat. 314**, a small foliate type with a distinctive incised zigzag decoration. **Fibulae type 33 (cat. 315 and 316**, both found near Rome) is a more common, central Italian type of foliate fibula with disc foot, also of EIA, early date. A later version of this basic shape is represented by **Fibulae type 34: cat. 603**, from Gorizia (Friuli Venezia Giulia), formerly Görz, Austria: this is a large parade fibula with close parallels in Abruzzo, probably an Adriatic type also found in Umbria (Terni).

Composite arch fibulae with disc foot, the bow made of thin wire of square section covered by groups of bronze discs and amber beads (**Fibulae type 35**) are only represented by a pair, **cat. 443** and **444**, probably from an important female burial dating from EIA, early.

Fibulae with disc foot and thickened or leech bow formed of graduated bronze discs are a technically complex product of the Villanovan metal industry, with parallels in Campania in the cemetery of Pontecagnano; **Fibulae type 36**, the thickened arch version, **cat. 317**, and **Fibulae type 37**, with leech bow, **cat. 318** from Ruvo (Bari), Apulia, and the pair **cat. 445–446**, both date from EIA, early.

The earliest types in the wide category of **one-piece serpentine fibulae**, usually with spiral disc, appeared in Italy in a late phase of the FBA and continued during EIA, early. They are widely distributed in the southern and central regions of Italy, and are found both in Villanovan and in fossa-grave contexts. The early version, with straight pin, is represented in the BM sample by two types: **Fibulae type 38**, with disc of spiral wire, dating from FBA, late, and the FBA–EIA transition (**cat. 211** from France; **cat. 212–215**, possibly from Dorset), and **Fibulae type 39**, with spiral disc of hammered sheet, mainly of EIA, early date (**cat. 216**, still with some FBA features, **cat. 319–322**).

A small fibula of Protovillanovan tradition, with loops on the arch and spiral-wire disc foot (**Fibulae type 40: cat. 323**,

from near Rome) can be dated to the initial phase of EIA, early, e.g. in the cemetery of Pontecagnano (Salerno), Campania.

The most popular types of serpentine fibulae which are found throughout EIA, early, are those with curved pin; an early version, **Fibulae type 41a: cat. 324**, with plastic decoration, has parallels mainly in central Italy (the Piediluco hoard and the Latial cemetery of Castel Gandolfo, in the Alban Hills). The slightly later version, **Fibulae type 41b: cat. 325**, with incised decoration, is the most common fibula type used by men in Villanovan Etruria, Lazio and the Villanovan groups of Campania (see for example *Osteria dell'Osa* 1992, 372–373, pl. 38, types 40a, 40b, 40c; *Pontecagnano* 1988, 52–53, pl.18 and fig. I.12, 21: types 32B4, 32B4a, 32B5, 32B6).

Two-piece serpentine fibulae make up another important category spanning the FBA–EIA transition and EIA, early. **Fibulae type 42: cat. 217, 218**, the earliest type in this group, characterized by the straight pin and plastic decoration of the bow, is a well-known product of the Piediluco-Contigliano metallurgical tradition, which probably originated in Etruria, and distributed its models and artefacts over the whole territory of the Italian peninsula. The other two types, **Fibulae type 43: cat. 326**, and **Fibulae type 44: cat. 327**, from Nola (Naples), both specifically Campanian, can be dated to an advanced moment of the local EIA, early, and probably continued in the following phase; this also applies to **Fibulae type 45: cat. 328**, with parallels in the Adriatic regions of Italy. Three unclassified pieces, **cat. 348** from the Marsica, Abruzzo, **cat. 349**, and **350** belong to fibulae in this category.

Serpentine fibulae with two coils and elongated catch-plate (so-called Sicilian fibulae) are apparently an elaboration from FBA types which took place between FBA, late, and the FBA–EIA transition (see for example Giardino 1995, 240, fig. 120.C.1, 2, from Molino della Badia and Modica, Sicily). They are a basically Sicilian and south Italian group, which in its earliest phase is found as far north as ancient Lazio. The basic shape of the Sicilian fibula was also adopted in the Villanovan cemeteries of Campania and of southern Etruria in an advanced moment of EIA, early.

The EIA, early, pieces are characterized by a markedly limited degree of formal variation and by a basic decoration of incised chevrons.

Fibulae type 46: cat. 329–331, the earliest type in this group, are characterized by the circular section of both bow and coils. **Fibulae type 47**, a slightly later type, with a higher proportion of relatively large pieces (**cat. 332–336**), have rectangular section to the coils, while for **Fibulae type 48: cat. 337–339**, both bow and coils are quadrangular in section. **Fibulae type 49** comprises a single piece, **cat. 340**, a small fibula with a foliate expansion substituting the back coil, with parallels from both southern Italy and Lazio.

Drago fibulae represent the formal development of the former group, dating from EIA, late, and later. The main typological features which characterize this group are the bow forming an elbow instead of a coil above the long catch-plate, the symmetrical protrusions decorating the bow, and the pin with double upper end. The types, with slight variations, include **Fibulae type 50: cat. 604**, **type 51a: cat. 605**, and **type 51b: cat. 606–608**.

The next categories all belong to a metallurgical tradition which was radically different from the Italian ones (both arch

and serpentine fibulae), and was probably introduced to Italy from the Balkan regions at the end of the FBA. The basic shape is the spectacle fibula, made from two joined flat spirals of bronze wire, with the relatively early four-spiral variants. These fibulae are rather popular in southern Italy, especially during EIA, late. In northern Campania, especially Capua and Suessula, these fibulae developed into spectacular oversize ornaments, decorated by plastic figurines representing both humans and animals, also present in the BM Italian collection.

Spectacle fibulae. Formally, the earlier type in this category is **Fibulae type 52**, with pin and hook springing from the centre of the spirals, which are joined at the centre by a figure-of-eight loop. This type includes **cat. 341**, from Paestum (Salerno), Campania, **cat. 342–344**, all probably dating from EIA, early.

Fibulae type 53a: cat. 609, and **type 53b: cat. 610** and **611**, are later large spectacle types, with backing-plate of violin-bow shape and figure-of-eight loop; the backing plate may be with or without coiled spring. **Fibulae type 54: cat. 612**, also dating from EIA, late, is a large spectacle fibula without figure-of-eight loop; the spirals are supported by a violin-bow backing plate without spring and by perpendicular bronze bands. **Fibulae type 55: cat. 613** from Ruvo (Bari), Apulia, **cat. 614, 615**, includes large damaged spectacle fibulae with central figure-of-eight loop, conical or hemispherical cap at the centre of each spiral, and violin-bow backing plate, mostly missing. **Cat. 616, 617** from Naples, **cat. 618**; three pieces, **cat. 619–621** from Torre Annunziata (Naples), and **cat. 622**, might belong to this type. Another damaged piece, **cat. 623** from Ruvo (Bari), Apulia, might belong to **Fibulae types 54** or **55**.

Four-spiral fibulae: Fibulae type 56 includes relatively large pieces (**cat. 624–626** from Caserta, Campania) with a small bronze disc attached to the centre of the spirals and pin and hook springing from the centre of two opposing spirals; it is close to the *PBF* types *Incoronata* and *Amendolara*, of EIA, late, date.

Fibulae type 57, a small four-spiral type with central disc- or diamond-shaped plate, violin bow backing plate with spring, and supporting bronze bands is close to *PBF* type *Torano*, EIA, early. **Cat. 345**, and **346** from Santa Maria Maggiore di Capua (Caserta), Campania, belong to this type, while **cat. 347**, two spirals from a four-spiral fibula, might belong to **Fibulae types 56** or **57**.

Fibulae type 58: this type of four-spiral fibula of EIA late date is well known from Suessula and other Campanian sites. The type's main features are the four-spiral bow with a horned bird figurine attached at the center, and the violin-bow backing plate. Of the two BM pieces, **cat. 627** includes the backing plate and horned bird figurine, **cat. 628** the bird only.

Cat. 629–631 from 'the Maremma, near Veii' (Rome), Lazio, **cat. 632–634** are spirals, possibly from large spectacle fibulae of **types 54** or **55**.

Section 7 – Bracelets

Although it constitutes a relatively frequent component of Italian Bronze and Iron Age contexts, the group of bronze artefacts which goes under the label of bracelets is not among those that have been given particular attention by specialists. However, as we shall see, it is not without interest. As regards the present sample, which includes a total of 134 pieces, all

dating from the EIA or later, at least two significant features can be highlighted: first, there is a rather consistent group of pieces belonging to a specific archaeological component of the Campanian Iron Age, the so-called Oliveto-Cairano culture; and, second, a relatively significant percentage of pieces made from coiled bronze rod, especially those classified as **Bracelets types 5, 6, 8**, and perhaps **7** and **9a**, probably are bracelet-shaped weights (see below).

Based on a number of differences in technique and/or aesthetic value, these bracelets can be divided into several categories: spiral, ribbon, coiled wire, coiled rod, annular, penannular, D-shaped, hollow. Spiral and ribbon bracelets are among the earliest in this group, with some FBA precedents, and also continuing in EIA, late; all the other categories are found mainly in context dating from EIA late, and later.

Spiral bracelets: Bracelets type 1, a pair from Bologna, **cat. 447–448**, and another pair unprovenanced, **cat. 449–450**, are made from thick wire of plano-convex section with coiled ends. This type is usually found in pairs especially in Villanovan cemeteries, as part of the funerary set of young girls. **Bracelets type 2a: cat. 351–354**, and **Bracelets type 2c: cat. 635** from Armento (Potenza, Basilicata), formed by several coils of thin wire of even or decreasing diameter, usually with flattened coiled ends, are south Italian female ornaments, found in fossa-grave, Oliveto-Cairano and Villanovan contexts. **Bracelets type 2b: cat. 355** from Cuma (Naples), Campania, and **type 2d: cat. 636**, rod of triangular section, (probably slightly later), with ends forming one or two flat spirals, are close to pieces from Villanovan cemeteries in northern, central and southern Italy (Bologna, Veii Quattro Fontanili, Pontecagnano).

Ribbon bracelets: the types in this small group of coiled ribbon bracelets with spiral or coiled ends are probably of south Italian origin. **Bracelets type 3a: cat. 356** from Armento (Potenza), Basilicata, made from flat decorated ribbon with spiral ends), and **type 3b: cat. 357**, ribbon with central ridge with flat coiled ends, can be compared to EIA, early pieces from Calabria and eastern Sicily (cemeteries of Torre Galli and Molino della Badia); **Bracelets type 3a variant, cat. 637** probably is a later version of **type 3a**.

Coiled wire bracelets: Bracelets type 4, the only type in this category, consist of a group of remarkably standardized coiled double-wire bracelets with ends wrapped together, **cat. 638–643**, probably **cat. 644** from Armento (Potenza), Basilicata, and the two pairs **cat. 786–787** from Palestrina (Rome), and **cat. 788–789**. This is a specific Campanian, Oliveto-Cairano type, as is the group of D-shaped pieces labelled as **Bracelets types 12a-d** (see below): all are of EIA, late, or later date.

Coiled rod bracelets: as already noted, rather than personal ornaments, **Bracelets type 5** quite probably should be identified as weights. The type includes nine unprovenanced pieces; **cat. 645–648**, entered the BM at different times and as part of distinct lots, as is indicated by both registration data and marked differences in patina. The other five pieces (**cat. 790–794**), all identical in shape, colour, patina and general state of preservation, probably were found together, and should be considered as a group, although no information on their provenance has been recorded.

They are all made from relatively thick rod of rounded or

roughly square section, with ends narrowing and overlapping. Although extremely simple, the shape is clearly identifiable. Their weights all seem to refer to a unit of approximately 19.5g.

Cat.	Weight	Relation to the unit of 19.5g			
645	10g	19.5	x ½	=	9.75
646	62g	19.5	x 3	=	58.5
648	77g	19.5	x 4	=	78
647	138g	19.5	x 7	=	136.5
790	78g	19.5	x 4	=	78
791	118g	19.5	x 6	=	117
792	162g	19.5	x 8	=	156
793	197g	19.5	x 10	=	195
794	215g	19.5	x 11	=	214.5

The approximation is rather close, especially as regards the five pieces that were probably found together.

The parallels, mainly in Campania and in Etruria, indicate an EIA, late, or later date.

An interesting point relative to this and to the other types of bracelet-weights (**Bracelets types 6, 8**, perhaps 7 and 9a) is whether or not they are related to the early Greek (or Phoenician) presence in Campania.

Bracelets type 5 variant, cat. 649, apparently is a real bracelet made from thin rod, that is close to **type 5** in general shape. It probably belongs to a group of plain bracelets usually found in male burials, especially in Villanovan contexts.

Bracelets type 6: cat. 650–652, made from thick circular rod, with overlapping ends decorated with groups of parallel grooves, are also quite likely to be weights, although the identification of a common weight unit apparently is more difficult. Similar pieces are rather common at Pithekoussai, in LGI-II graves.

Cat.	Weight
650	567g
652	112g
651	70g

Bracelets type 7: cat. 653 and 654, with a ring and a bulla and ring suspended to the rod, are similar to **type 6**, although both size and weight might indicate their use as real bracelets.

Bracelets type 8, cat. 655 and 656, made from thick rod in two coils, and also with parallels at Pithekoussai, may definitely be identified as weights, both from the amount of metal used for their making, and from the small diameter of **cat. 655** (5.2cm).

Cat.	Weight
655	140g
656	462g

Bracelets type 9, coiled rod with molded ends, comes in two varieties: **type 9a**, plain (**cat. 657–660**) and **type 9b**, with incised decoration (**cat. 661**). This is mainly a late Villanovan type, found both in Campania and Etruria.

Annular bracelets: Bracelets types 10a: cat. 662–666, and **10b, cat. 667**, are plain circular bracelets made from bronze wire, with parallels in Villanovan II and Latial III contexts.

Penannular bracelets: Bracelets type 11: cat. 668, 669, plain or incised rod with ends touching, probably a Campanian

type of EIA, late, date, found in fossa-grave and Oliveto-Cairano contexts.

D-shaped bracelets: this category is specific to the Oliveto-Cairano culture; the two main types, **Bracelets types 12a and 12b**, both comprise several pieces, whose most notable characteristic is a high degree of standardization in shape as well as in decoration. The same feature has been noted relative to **Bracelets type 4**, that also belong to the Oliveto-Cairano repertoire. This group of artefacts in the BM collection, almost all unfortunately found unregistered, might come from an unknown cemetery of this culture, which is confined to inner Campania, provinces of Salerno and Avellino, along the Sele and Ofanto valleys. The chronology of this category of bracelets, as known in the cemeteries of Cairano, Calitri, Oliveto Citra, and Bisaccia, ranges from EIA, late, to the Orientalizing and archaic periods.

Bracelets type 12a: 54 pieces, **cat. 670–723**, all made from plain thin bronze rod with open ends; **cat. 724, type 12a variant**, is of plain thick rod with plano-convex section.

Bracelets type 12b: 13 pieces, **cat. 725–737**, made from thick bronze rod of circular or plano-convex section, with ends open and touching; the outer surface is covered by parallel incised lines. A provenance from Tarquinia (Viterbo), Lazio, is recorded for **cat. 726**.

The other two types, both consisting of a single piece, are similar in general shape, and may be tentatively attributed to the Oliveto-Cairano group, although no precise parallels are known: **Bracelets type 12c: cat. 738**, is a flat bronze ribbon with incised *tremolo* decoration, while **Bracelets type 12d: cat. 739**, is made from a thicker ribbon with separate ends of narrow cylindrical form.

Hollow bracelets: the pieces in this category are made from hammered bronze sheet, bent to form a hollow bracelet, either coiled or with open ends; they are of EIA, late, or Orientalizing date, with parallels in Etruria, Lazio and Campania. **Bracelets type 13a: cat. 740**, and a pair probably from a tomb, **cat. 795–796**, is coiled, with moulded overlapping ends; **Bracelets type 13b: cat. 741**, is also coiled, with plain ends. **Type 13c**, a pair, **cat. 797–798**, and **type 13d: cat. 742** from Locri (Reggio Calabria), are penannular, of plano-convex section; the latter has a rich incised decoration, with close parallels in the cemetery of Veii, Quattro Fontanili.

Unclassified bracelets: part of two coiled wire bracelets, probably of EIA date, **cat. 828** from Sesto Calende (Varese), Lombardy, and **cat. 829**.

Section 8 – Daggers and halberds

Two halberds and 17 daggers, dating from the EBA to the RBA, make up the BM sample. Most of the types correspond to the *PBF VI.10* classification.

Halberds

This relatively rare type of weapon, characterized by a slightly asymmetrical triangular blade, was in use from the CA, and apparently went out of use after the EBA. **Halberds type 1**, a single piece, **cat. 14**, from Calvatone (Cremona), Lombardy, made from arsenical copper, belongs to a distinctive type with large triangular blade and central rib. *PBF* pieces classified as type Calvatone come mainly from contexts of the CA Rinaldone culture, in central Italy; this piece is the only one

from northern Italy. The use of arsenical copper can be considered as a confirmation of its CA date.

Halberds type 2: **cat. 41** from Frosinone, Lazio, belongs to a group probably of EBA, late, date, distributed in central and southern Italy (see *PBF* type Cotronei).

Daggers

The earliest BM pieces in this group of metal artefacts, which also appeared in Italy from the CA, can be dated to the EBA.

The sample includes seven pieces of EBA date, divided into five types, that show a general correspondence with some EBA types classified in *PBF* VI.10. However, the parallels are not absolutely precise, and the combination of formal and decorative features does not seem to correspond to a linear chronological development. All the pieces are decorated prestige weapons, that were probably selected from their contexts by both finders and collectors as the most valuable pieces. **Cat. 60** and **61** were found together.

Daggers with socketed hilt

Daggers type 1: **cat. 42**, is a superb weapon originally c. 50cm long, with triangular blade and socketed hilt for a composite handle. It is close to *PBF* types Ripatransone var. B (for the socketed handle) and Montemerano (for the blade with converging nervatures).

Daggers with cast hilt riveted to the blade

Daggers type 2: **cat. 43** and **60**, and **Daggers type 3:** **cat. 61**, are close to *PBF* types Cetona var. B, with a rich incised decoration, and Montemerano var. B, with nervatures on the blade. **Daggers type 4:** **cat. 44**, a small plain piece, is comparable to type Loreto Aprutino var. B, and **Daggers type 5:** **cat. 45** and **46** from Torre Annunziata (Naples), Campania, both with a central rib, are close to *PBF* type Parco dei Monaci.

MBA and RBA daggers are more standardized, and usually belong to specific north Italian types found in Palafitte-Terramare contexts.

Each of the two MBA pieces is representative of a specific category. **Daggers type 6:** **cat. 79** from Magliano (L'Aquila), Abruzzo, is an elongated **triangular dagger** that belongs to *PBF* type Monte Castellaccio, and **Daggers type 7:** **cat. 80** from Peschiera (Verona), Veneto, 26cm long, is a compromise between a well-known type of **tanged dagger** with thick diamond section (e.g. *PBF* VI. 10, no. 1119) and a short sword.

The majority of RBA daggers correspond to common Terramare types; for some of them a possible use as domestic tools, the predecessors of knives, is indicated especially by their small size (weight 23–37g, length c. 12–14cm). This is probably the case with the category of daggers with triangular tang: **Daggers type 8:** **cat. 117**, and **118** from Bologna, Emilia Romagna, with open triangular tang, close to *PBF* types Torre Castelluccia var. C and Campegine, and **Daggers type 9:** **cat. 119** from Teramo, Abruzzo, also with triangular tang, and close to *PBF* type Glisente.

The pieces in the category of **daggers with flanged hilt**, usually called Peschiera daggers, are all of larger size (average weight c. 60g, except for **cat. 124**, 97g; length c. 18–25cm), and with a more efficient hafting. A function as proper weapons seems therefore more likely. This group, probably originating from the Peschiera-Terramare metal industry, is widely

distributed in Europe and the Aegean (see for example *Terramare* 1997, fig. 343), as is confirmed by the provenances of some of the BM pieces. **Daggers type 10:** **cat. 120** from Peschiera (Verona), Veneto, has a tapering flanged hilt terminating in a suspension ring; a *PBF* parallel is type Toscanella var. C. **Daggers type 11:** **cat. 121** from Steiermark, Austria, **cat. 122** from Peschiera, and **cat. 123** from Sussex, England, belong to types Bertarina and Verona.

A specific type of Peschiera dagger, which is found in Greece as well as in Italian contexts with Aegean connections, is represented by **Daggers type 12:** **cat. 124**, with blade widening towards the lower part, and ivory or bone hilt-plates extant, from Naxos, Greece, *PBF* type Pertosa var. A.

Section 9 – Swords and sword sheaths

The majority of the 41 pieces corresponds to the types defined by Bianco Peroni in *PBF* IV.1. The BM sample is largely representative of Italian bronze swords of LBA and EIA date. It includes a few MBA–RBA short swords (**Swords types 1** and **2**); a few flanged weapons (**Swords types 3** and **4**) of the Naue II group, widely distributed in Europe and the Aegean; a transitional FBA–EIA flanged type (**Swords type 5**); a chronologically significant series of the EIA, so-called Italic T-hilt swords (**Swords types 6** to **10**); a late EIA type of tanged short sword (**Swords type 11**), and two early antennae swords (**Swords type 12**). The swords are often associated with their sheaths.

The division between long and short swords, not always coinciding with overall typological differences, can be placed around a length of c. 45cm, which obviously does not include the full height of the pommel.

BA short swords

This rather heterogeneous category includes the short MBA sword from the Island of Cres, Croatia, with plain trapezoidal blade base (**cat. 81**, **Swords type 1**), and the single unprovenanced piece classified as **Swords type 2:** **cat. 125**, apparently a short version of some of the earliest (RBA) tanged and flanged swords known in Italy.

Flanged swords

Swords type 3: **cat. 126**, from Scutari, Albania, a plain flanged long sword, is close to *PBF* type Treviso, an early type in this series.

Swords type 4, an Italian type with close parallels in central Europe (Erbenheim type) and in Greece, corresponds to *PBF* type Allerona (RBA–FBA); the piece from Frosinone, Lazio, **cat. 127**, is one of the finest long swords of this type known in Italy, while the short sword from Bisignano (Cosenza), Calabria, **cat. 219**, probably is a local version of the type, which might be either of FBA, late, or of EIA date, as is indicated by its reduced length and by the incised decoration on the blade.

Swords type 5, consisting of six pieces, **cat. 220** from Naples, Campania; **cat. 221** with its sheath **cat. 222**; **223**, **224** from near Perugia (Umbria), **cat. 225**, and **226**, close to the type, correspond to *PBF* type Contigliano, a group of flanged swords characterized by a wide range of variability; this type, dating from the FBA–EIA transition, marks the earliest appearance of the Italian EIA short swords. However, while the

latter are characterized by a cast T-hilt which was originally covered with plates of organic matter, the hilt of the Contigliano type swords was surmounted by a pommel entirely made of organic material, as is shown by the magnificent sword **cat. 226**, with ivory pommel, hilt and shoulder plates.

The fragment of sheath **cat. 222**, associated with the sword **cat. 221**, probably belongs to the *PBF* type Torre Galli (**Sheaths type 1**), also dating from the end of the FBA or the initial phase of the EIA.

T-hilt swords

Swords types 6 and **7** illustrate the FBA–EIA transition in southern Italy. **Swords type 6**, a solid cast T-hilt from Armento (Potenza), Basilicata, **cat. 227**, is very close typologically to the Torre Galli-Modica and to the Contigliano swords, and its pointillé decoration has good parallels in other categories of Italian FBA bronzes. The latter type, **Swords type 7**, comprises a single specimen of T-hilt short sword, **cat. 358**, from Naples, Campania, of a type known both from the EIA cemetery of Torre Galli, in Calabria, and from the FBA–EIA hoard of Modica, in Sicily; its sheath, **cat. 359**, belongs to **Sheaths type 1**.

T-hilt short swords and sheaths dating from the earliest phase of the EIA form the largest category in this sample. The nine swords correspond to two *PBF* types rather close in shape and chronology. **Swords type 8a**, close to type Cuma, includes **cat. 457**, part of a group of weapons found at Cassino (Frosinone), Lazio; **cat. 360**, **361** from Naples, **cat. 362** from Ruvo (Bari), Apulia, **cat. 363** from Naples, **cat. 364**, **365** from Armento (Potenza), Basilicata, with its sheath **cat. 366**, **Sheaths type 3**. **Swords type 8b**, (*PBF* type Pontecagnano) comprises **cat. 369**, and **367**, associated with its sheath, **cat. 368**, **Sheaths type 2**, which also corresponds to the *PBF* sheaths type Pontecagnano. **Cat. 373** is another sheath of the same type.

Flanged T-hilt short swords dating from EIA, late, correspond to three *PBF* types: **Swords type 9a**: **cat. 743** from Locri (Reggio Calabria), is close to type Terni; it is associated with its sheath, **cat. 744**, **Sheaths type 3**.

Swords type 9b, close to type Vulci, includes **cat. 745**, and **746**, an Italian sword found at Sticna, Slovenia, still in its sheath, **unclassified**. **Cat. 747**, from Naples, is also classified as **Sheaths type 3**.

Swords type 10, *PBF* type Ardea, a very short weapon ending in a narrow carp's tongue, is the most recent of the T-hilt EIA types in the sample; the only piece, **cat. 748**, is associated with the sheath **cat. 749**, **Sheaths type 4**.

Tanged swords with shoulder cap

Cat. 750, from Acerra (Naples), Campania, **Swords type 11**, belongs to a different and much less popular category, with short carp's tongue blade and a long and narrow tang; a cast bronze shoulder cap covers the junction of blade and tang, and the hilt and pommel, now disappeared, were of organic matter. The corresponding *PBF* pieces belong to a small group from Etruria and Lazio, dating from the final phase of the EIA.

Antennae swords

The two pieces in this category, **cat. 370**, and **371**, with the

remains of its sheath, **cat. 372**, **unclassified**, grouped in **Swords type 12**, correspond to *PBF* types Tarquinia and Fermo, both EIA, early, continuing into the advanced phase.

Unclassified swords

The sample includes two pieces: **cat. 830**, another antennae sword, probably a fake, as is indicated by its unusual technical and typological features as well as by the composition of its alloy, and **cat. 831**, possibly a BA sword point.

Sword sheaths: the pieces in this group are all made of hammered bronze sheet joining on the back side, usually decorated on the front with vertical nervatures and incised geometric patterns. The lower terminals, which are riveted to the bronze sheet or joined to it by casting, end with a solid bronze globe or with discs in the later pieces: see for the experimental reproduction of a sword sheath Bietti Sestieri *et al.* 2003. In general, only the outer, metal part of these objects is preserved. From a few well-preserved pieces, e.g. the sword **cat. 746** from Sticna, we know that the sheath's inner lining was made of wood. In some pieces (see **cat. 359**, **Sheaths type 1**), the decoration on the front ends some centimetres below the rim; this is an indication that the upper end of the sheath was covered by a strip of organic matter, usually leather, which served the purpose of joining the outer metal part to the wooden lining, as well as of attaching some bronze suspension rings. The upper section of the sheath could be covered with an ivory plate decorated with discs (two swords from Torre Galli) or with a bronze terminal bearing different kinds of decorations (e.g. *PBF* IV.1, nos. 347, 259a).

Several sheaths from our sample were associated with their swords, and belong to chronologically matching types. **Cat. 359** and probably **222** belong to **Sheaths type 1**, *PBF* type Torre Galli, EIA, early, and are associated with swords **cat. 358** and **221** (**Swords types 7** and **5** respectively).

Cat. 368 and **373**, **Sheaths type 2**, correspond to *PBF* type Pontecagnano, also of EIA early date; **cat. 368** is associated with the sword **cat. 367**, **Swords type 8b**. The lower part of a sheath, **cat. 372**, associated with the antennae sword **cat. 371**, is generally close to **Sheaths type 2**.

Cat. 366, **744**, and **747** are classified as **Sheaths type 3** (cf. *PBF* type Guardia Vomano, EIA early and later): **cat. 366** goes with sword **cat. 365**, **Swords type 8a**; **cat. 744** with **743**, **Swords type 9a**. **Cat. 749**, a short sheath ending in a narrow carp's tongue with discs terminal (**Sheaths type 4**, cf. *PBF* type Narce, EIA late) is associated with sword **cat. 748**, **Swords type 10**.

It was not possible to classify the sheath associated with sword **cat. 746** (**Swords type 9b**).

Section 10 – Spearheads/javelins and spear-butts

The 130 plus pieces in this group, mainly spearheads with the addition of a few spear-butts, constitute a substantial section of the BM Italian bronzes. However, due to the highly functional characteristics of this class of offensive weapons in the Italian metallurgical tradition, which from the MBA consist of a conical socket and elongated symmetrical blade, the range of typological variability is limited.

Among the few pieces which can be attributed to the FBA, an especially interesting one is **cat. 228**, registered as found in

the River Tiber near Rome, probably following the widespread European BA tradition of offering weapons to the waters of lakes and rivers.

Apparently, the majority of the spearheads belong to EIA south Italian types, with a concentration between the end of period I and period II, early, as documented in the southern Villanovan cemeteries, especially Pontecagnano. It is important to remember that throughout EIA I the practice of including real functional weapons in men's funerary sets was specific to inhumation burials; in particular, weapons are exceedingly rare in early Villanovan contexts, where cremation is almost exclusive, and were often broken before being placed in the grave. We can therefore assume that the great majority of weapons dating from EIA I are more likely to come from inhumation burials, which were specific to the so-called fossa-grave culture of Campania, possibly southern Lazio, and Calabria (e.g. the cemetery of Torre Galli), as well as to the inhuming communities of Abruzzo, Apulia and Sicily. The most interesting group of EIA spearheads is represented by the large decorated pieces classified as **Spearheads types 4 and 5**, possibly the distinctive weapons of military/political chiefs.

In general terms, bronze weapons were rather rare after the beginning of EIA II, when the use of iron became quite common. However, some bronze weapons, especially a group of oversize spearheads and spear-butts of very accurate manufacture, clearly ceremonial in scope, are known from contexts dating from the final phase of the EIA (phase IIC in the usual relative chronology of Villanovan complexes) as well as from the subsequent Orientalizing period. Besides being of bronze, these weapons conform to the EIA tradition also as regards their formal features. The BM sample includes some pieces which belong to this group: the two huge spearheads from Bomarzo, **cat. 799** and **800**, and the large spearhead and butt bought from Castellani, **cat. 765** and **766**.

Several pieces in this group have provenances, including two pieces from Olympia, Greece, **cat. 395** and **764**; **cat. 458** and **459** were found at Cassino (Frosinone, Lazio) along with a sword, **cat. 457**, while **cat. 453** and **454** were found together at Bari (Apulia) and were part of funerary sets, as were two more pairs, **cat. 451–452** from Sulmona (L'Aquila), Abruzzo and **cat. 455–456** from Arezzo, Tuscany.

Spearheads/javelins

Spearheads type 1, a FBA type found in north Italian and trans-Alpine contexts, consists only of a spearhead from the River Tiber at Rome, **cat. 228**. **Spearheads types 2 and 3**, both plain types of spearheads/javelins, with wide conical socket and foliate blade, can be dated between the FBA and the EIA: **cat. 229–232** (**Spearheads type 2**), and **cat. 233** from Pozzuoli (Naples), Campania; **cat. 234–236** from Rome, (**Spearheads type 3**) and the variant **cat. 237** have parallels in FBA bronze-boards as Monte Primo (Marche) and Poggio Berni (Romagna) (*PBF IV.1*, pl.78B.8; *PBF VII.2*, pl.67.10,11,12), while an EIA date is more likely for **cat. 374–376** from Capua (Caserta), Campania; **cat. 451** and **452** from Sulmona (L'Aquila), Abruzzo; **cat. 377–383** and **751** (**Spearheads type 2**); **cat. 384**, **385**, **752** (**Spearheads type 3**), and two variants, **cat. 386** and **753**.

Spearheads type 4 is one of the most interesting types of the whole collection: it consists of large weapons with foliate

blade and faceted upper socket, characterized by a rich incised decoration, which in some of the largest pieces creates the approximation of a human face. Apparently, these are prestige weapons, as is indicated by the association of **cat. 458** with another spear and a sword; the human face probably is meant to add a magic or supernatural power to the spear. **Cat. 389**, possibly a variant of the type from a cremation burial, is a miniature spear with an incised decoration clearly reminiscent of the full size pieces. Apparently, the earliest pieces are those in which the figurative purpose is clearly identifiable: **cat. 458**, from Cassino (Frosinone), Lazio; **cat. 387**, from Bari, Apulia, and **cat. 388**, along with the miniature spear **cat. 389**. **Cat. 390** and **391** can be compared to a spearhead with some figurative elements from Pontecagnano, tomb 180, dating from phase IA or IB of this cemetery. The other pieces, **cat. 754**, **755** from Bari, Apulia, **cat. 756** from Naples, **cat. 757**, and the variant **cat. 758**, all of which bear some decorative elements that are clearly reminiscent of the earliest image, can be compared to a number of pieces from south Italian cemeteries dating to EIA, late.

Spearheads type 5: **cat. 392**, **393**, from Capua (Caserta), Campania, **cat. 394** from Popoli (Pescara), Abruzzo; **cat. 395** from Olympia, Greece; **cat. 396**, **459** from Cassino (Frosinone), Lazio, is an early type that is apparently specific to southern Italy and characterized by the faceted upper socket. **Spearheads type 6** with faceted socket, **cat. 397** from Naples, **cat. 453** and **454**, both from Bari (Apulia), the variant **cat. 398** from Bovino (Foggia), Apulia, associated with its spear-butt, **cat. 399**, is a popular EIA type, which was in use from the beginnings of the period; the two larger pieces, **cat. 759** and the variant **760**, probably are the most recent in this group.

Spearheads type 7: **cat. 761–763** from Arezzo (Tuscany); **cat. 764** from Olympia, Greece, **cat. 765** with its spear-butt **cat. 766** (**Spear-butts type 5**), can possibly be dated to the advanced phase of the EIA, since **cat. 765** and **766** are almost identical to the spear and spear-butt from the Warrior grave of Tarquinia (Kilian 1977b, fig.7.5, 6), of late Villanovan or Orientalizing date. **Spearheads type 8** (**cat. 400–402** from Capua (Caserta), Campania, and **cat. 403** from Naples) of general EIA date, is characterized by the narrow elongated shape of both blade and socket.

Spearheads type 9: **cat. 404** probably from the Marsica, in Abruzzo, and **cat. 405** from Cuma (Naples), Campania, is a well-characterized type of javelin with angular foliate blade decorated by two nervatures. No precise parallels have been found, although an EIA date is likely.

Spearheads type 10 (**cat. 406** from Cuma, **cat. 407** from Calabria, **cat. 408** from the Marsica, Abruzzo, **cat. 409**, **410**, **411**, **413** and **412**, variant), and **Spearheads type 11**: **cat. 414**, **415** from Pozzuoli (Naples), **cat. 416** found near Metaponto (Matera), Basilicata, **cat. 417** from near Naples, **cat. 418** from Capua (Caserta), Campania, **cat. 419** from Marsica, **cat. 420** and **cat. 421**, are plain EIA types of spearheads/javelins with rounded profile to the blade, which is narrower in **type 11**.

Spearheads type 12: **cat. 767–770** from Capua (Caserta), Campania, is a prestige weapon of accurate making, including some very large parade pieces. It can be dated to EIA, late (see *Quattro Fontanili* 1975, fig. 51.7, tomb A-B 11–12, phase IIB). **Spearheads/javelins type 13**, with flame-shaped blade, **cat.**

422 from Abruzzo, **cat. 423** from Agrigento, Sicily, **cat. 424** from near Naples, **cat. 425, 426** from Naples, **cat. 427–432** and **455** from Arezzo (Tuscany), associated with **cat. 456**, and **Spearheads type 14** with flame-shaped blade (**cat. 456** from Arezzo, Tuscany, **cat. 433, 434**) have parallels in EIA contexts spanning both the early and late phases.

Spearheads type 15: **cat. 799** and **800**, part of a group from Bomarzo (Viterbo), Lazio, **cat. 771, 772** probably associated with spear-butt **cat. 773 (Spear-butts type 4)**, **cat. 774–777** from Capua (Caserta), Campania, comprises some very large, probably ceremonial spearheads, the two from Bomarzo nearly 1m in length, with flame-shaped blade and faceted socket. The shape of these pieces indicates a late phase of the EIA, although especially the largest ones are likely to be later versions of traditional models. See for another large parade spear of similar size (L. c. 50cm), **cat. 765, Spearheads type 7**.

Spearheads type 16, also with flame-shaped blade, **cat. 435** from Capua (Caserta), Campania, **cat. 436, 437** from Viterbo, Lazio, and **cat. 438** from Mineo (Catania), Sicily, associated with spear-butt **cat. 439**, can be compared to pieces of both early and late EIA date. **Cat. 435** belongs to the Piediluco-Contigliano metal industry, which originated in southern Etruria and Umbria in coincidence with the FBA–EIA transition and circulated widely over peninsular Italy.

Spearheads type 17: **cat. 238**, from S. Maria di Licodia, near Paternò (Catania), Sicily, is a specific Sicilian type with narrow straight blade, of FBA to EIA date.

Unclassified spearheads include a few fragments and unidentified pieces: **cat. 832** from Rome, part of a javelin-head covered by thick incrustations, **cat. 833**, perhaps part of a miniature spearhead, **cat. 834** from Perugia, Umbria, a broken spearhead point probably re-used as an arrowhead, and **cat. 835** from Val d'Aosta, a conical socket.

Spear-butts

Like the spearheads, spear-butts are basically functional artefacts with little formal variation. Therefore, the division into types may be simply the result of functional convergence, as is probably the case with the simplest shapes, especially **type 1**, while those of more accurate manufacture, apparently part of prestige or parade weapons, are proper types depending on specific models. An EIA, late, date is probable for most of the pieces, although types 4 and 5 also include some earlier ones.

Spear-butts type 1: **cat. 778** from Calabria, **cat. 779** from the Marsica (L'Aquila), Abruzzo, **cat. 780** from Bolsena (Viterbo), Lazio: plain conical form with lower end more or less sharply pointed.

Spear-butts type 2: **cat. 781** from Calabria, is characterized by its flaring, flat lower end. The last three types, **Spear-butts types 3, 4** and **5**, all are accurately manufactured, with outer surface faceted (see **Spear-butts type 3:** **cat. 782** from Orvieto, Umbria, and **cat. 783**), and with plastic or incised decoration below the opening: **Spear-butts type 4:** **cat. 440, 773** probably associated with spearhead **cat. 772**; **Spear-butts type 5:** **cat. 399** from Bovino (Foggia), Apulia, associated with spearhead **cat. 398**; **439** from Mineo (Catania), Sicily, with spearhead **cat. 438**; **766**, probably associated with the spearhead **cat. 765**.

Cat. 239, unclassified, with two lateral prongs, could be an

unusual type of spear-butt; however, the closest parallel, a piece from the FBA Sicilian hoard of Niscemi, is identified as a spit point.

Section 11 – Arrowheads

Owing to the obvious fact that they are often the result of sporadic finds, and to the basic formal homogeneity of both solid and socketed pieces, the relative chronology of bronze arrowheads can only be considered as an approximation. Bronze arrowheads probably replaced the traditional flint ones as late as the RBA, although socketed javelins/spearheads were already in use from the MBA (see for example *Terramare* 1997, fig. 223.14, 15).

The BM sample amounts to a total of 11 pieces.

Socketed arrowheads are the only category in this group of weapons which has been divided into types.

Arrowheads type 1: **cat. 128, 129** from Lake Trasimeno (Umbria), and the variants **cat. 130, 131**, all are rather close to the most popular RBA Terramare type, with triangular blade with pointed ends.

Arrowheads type 2: **cat. 132, 133**, with elongated winged ends, could be dated to the RBA or later.

A FBA and EIA, early, date is also possible for **Arrowheads type 3:** **cat. 240**, similar to **Spearheads type 2**, FBA, **cat. 441** and **442**, which are rather close to **Spearheads types 10** and **11**, both EIA, early.

Unclassified arrowheads: two solid cast pieces of uncertain chronology, **cat. 836** from Tarquinia (Viterbo), Lazio, and **cat. 837** from Cuma (Naples), Campania.

Section 12 – Groups of associated artefacts

The identification of a significant number of groups of associated artefacts, many of which are of known provenance, is an important contribution by the present catalogue to our knowledge of the Italian CA, BA and EIA.

Three CA pieces from Terni, Umbria, flat axes **cat. 15** and **16**, both **Axes type 3**, and an **unclassified** axe blade, **cat. 17**, all pure copper, make up the earliest group in the BM sample. They might be a small hoard, or part of a larger one.

The EBA sample includes three significant groups. The first one is formed by five axes from Agrigento (Sicily): three flat axes, **cat. 47–49, Axes type 5b**, and two with slight flanges, **cat. 50, Axes type 6**, and **cat. 51, Axes type 7**. The provenance from Sicily is confirmed by the fact that, unlike the Italian mainland pieces, which are usually made from pure or arsenical copper, the flat axes are a copper-tin alloy; moreover, the two flanged axes belong to specifically Sicilian types.

The second group comprises eight identical flanged axes, **cat. 52–59, Axes type 12**, all probably found together at Terni (Umbria) in the early decades of the 20th century. The axes weigh between 420 and 484g, and are quite similar as regards both chemical composition and patina. They were probably part of an important hoard from Umbria, in central Italy, which confirms the wide circulation of this type of flanged axe, dating from a rather late phase of the period, which is also found in southern Italy, Campania and Molise.

The third EBA group is formed by **cat. 60, Daggers type 2**, and **cat. 61, Daggers type 3**, both central Italian types with hilt riveted to the blade, dating from the middle phase of the period. They were found together, probably in central Italy, as

part of a hoard or a set in an important burial; this is indicated by their consecutive registration numbers as well as by the similarity in chemical composition and patina; moreover the blade of **cat. 60** was originally tinned, so as to give them the appearance of silver.

The two groups of MBA date are part of already known bronze hoards. **Cat. 82, Axes type 16**, and **cat. 83, Axes type 17**, are early MBA types of flanged axes with rounded blade, found mainly in north-west Italy and in the adjacent regions of France and Switzerland. They belong to a hoard found in the 19th century near Lodi (Milan), Lombardy, which had been partly dispersed by its owner (De Marinis 1975).

The two axes with contiguous wings, **cat. 84** and **85**, both **Axes type 21**, from Nemi (Rome), Lazio, are the only surviving pieces from another hoard which originally included a total of nine or ten similar axes. These belong to a category of MBA heavy working tools, probably slightly later than the two from Lodi, and specific to central Italy between Lazio and Abruzzo.

No groups are included, or have been identified, among the RBA bronzes.

The only FBA group, probably part of a larger context from the area of Lake Como, Lombardy, includes four pieces: a relatively rare type of axe with contiguous wings, **cat. 241, Axes type 25**, two winged axes with slightly protruding shoulders and concave sides to the blade, **cat. 242** and **243**, both close to **Axes type 30**, and a small tanged knife with serpentine blade, **cat. 244, Knives type 1**. It is interesting to note that the composition of the four pieces in this group is characterized by a considerable similarity as regards the occurrence of trace elements, especially the relatively high percentages of elements such as antimony and cobalt; this apparently indicates that the objects belong to the same workshop, or at least to a specifically local metal industry, and confirms their original association.

The great majority of the groups is to be found in the two EIA samples, which from a quantitative point of view are also considerably more important than all the earlier ones. Apparently, they are mainly from burials, and were part of sets of grave-goods, formed especially of personal ornaments and weapons.

The EIA, early, sample includes four pairs of ornaments, probably from female burials: **cat. 443** and **444**, composite arch fibulae (**Fibulae type 35**) with disc foot and the arch threaded with bronze discs and amber beads. These are early sophisticated products of Villanovan craftsmanship, with parallels in the Campanian cemetery of Pontecagnano. **Cat. 445** and **446, Fibulae type 37**, a pair of leech fibulae with disc foot and the arch covered by graduated bronze discs, probably slightly later than the former pair, belong to the same metallurgical tradition. Two pairs of small spiral bracelets with coiled ends, all **Bracelets type 1**, include **cat. 447** and **448**, from Bologna, Emilia Romagna, and another pair unprovenanced, **cat. 449** and **450**. These bracelets, usually worn on the upper arm, are a relatively common ornament of very young girls that is found in EIA cemeteries throughout Italy.

There are also four groups of weapons, all probably from male burials. Three of these consist of pairs of spear or javelin-heads of relatively small size. **Cat. 451** and **452**, both **Spearheads type 2**, are from Sulmona (L'Aquila), Abruzzo;

cat. 453 and **454, Spearheads type 6**, from Bari, Apulia; **cat. 455, Spearheads type 13**, and **cat. 456, Spearheads type 14** from Arezzo, Tuscany. During EIA, early, real weapons are relatively common in the funerary sets of inhumed males, while they are absent or extremely rare in early Villanovan cremation cemeteries. Their occurrence in EIA, early, graves in Abruzzo and Apulia, where inhumation was the usual funerary ritual in this phase, is therefore quite likely; the provenance of the third pair from Etruria possibly indicates their association with an inhumation burial of relatively late date within the EIA.

The fourth, and most interesting group of weapons consists of a T-hilt sword and two spearheads from Cassino (Frosinone), Lazio. The sword, **cat. 457, Swords type 8a**, belongs to one of the earliest EIA types (*PBF IV.1* type Cuma), and provides the main ground for the group's relative chronology. The largest of the two spearheads, **cat. 458, Spearheads type 4**, is the most important piece in this group, both for its outstanding proportions (L. 37cm) and technical quality, which qualify it as an indicator of prestige and status, and for its incised decoration, a rare example of figurative representation consisting of a human face surmounted by a complex headdress. The other spearhead, **cat. 459, Spearheads type 5**, is a relatively large weapon (L. 29cm) of accurate manufacture. Quite probably, this group was found in a male inhumation burial. The sword is a rather rare weapon as compared with spears and javelins, that as a rule were given to all the able-bodied male members of EIA communities. Its presence indicates that the owner held an important social role in his group. The large spearhead, whose decoration may represent a supernatural being, is an extremely rare item, and probably a further indication of the social relevance of its owner. It is interesting to note that the three weapons, as well as the decoration of the spearhead, all are specifically south Italian features. This group from southern Lazio is a significant indication of the close cultural and ideological relationships linking Lazio to the southern Tyrrhenian regions of Italy.

Seven groups can be dated to EIA, late. Six, at least, of these may be rather safely identified as parts of funerary sets. A pair of identical fibulae, **cat. 784** and **785, Fibulae type 31**, make up the first group: these belong to a rare type with flat arch with two rows of aquatic birds attached, almost certainly a product of the rich metal industry which characterized northern Campania during this period, and is known mainly from the cemeteries of Suessula and Capua.

The next two groups are two pairs of bracelets made from coiled wire, **cat. 786–787**, from Palestrina (Rome), Lazio, and **cat. 788–789**, unprovenanced, all **Bracelets type 4**, a type specific to the Campanian group of Oliveto-Cairano (see above). The c. 70 pieces belonging to the distinctive metal production of this group, found unregistered among the BM Italian collections, seem to indicate that a lot of material from an unknown cemetery of the Oliveto-Cairano group entered the BM at some time. It is not surprising, therefore, that the only pieces of Oliveto-Cairano type for which a provenance is indicated are those that did not belong to the main lot: the pair from Palestrina and another piece already mentioned, **cat. 726, Bracelets type 12b** from Tarquinia.

The most interesting group in the EIA, late, sample is the one which has been described in the typological section

(pp.19–20). It consists of five bracelets of thick coiled rod, **cat. 790–794**, all **Bracelets type 5**, very close in shape, with the same patina, and apparently all belonging to a weight system based on a unit or sub-unit of 19.5g; a provenance from Campania is rather likely. This group might be part of a funerary set, since coiled rod bracelets, probably weights, appear frequently in Campanian cemeteries, especially at Ischia (Pithekoussai) and Cuma. Another possibility is that this small group of weights was lost or intentionally buried by a craftsman or merchant.

Two other pairs of bracelets, **cat. 795–796**, **Bracelets type 13a**, and **cat. 797–798**, **Bracelets type 13c**, both types of hollow sheet-bronze ornaments, were almost certainly found in burials.

Another rather spectacular pair of grave offerings is represented by two oversize decorated spearheads, **cat. 799–800**, **Spearheads type 15**, c. 1m in length, which were found with several other identical pieces in an Orientalizing burial at Bomarzo (Viterbo), Lazio. As already noted, these two spearheads are representative of a development in the use and function of spears which took place in Etruria in the Orientalizing period: traditional EIA types were reproduced in huge proportions, and, rather than as functional weapons, were clearly meant as parade and prestige indicators, which accompanied their owner in the grave.

Section 13 – Miscellaneous objects

This small group includes 22 bronze objects, some of which are 19th-century pastiches made from parts of different ancient bronzes held together by means of modern metal plaques and wire.

All the original pieces date from EIA, late, or later.

Cat. 801 and **802** are horse-bits with articulated mouth pieces, outer loops and rings; both can be attributed to types classified in *PBF XVI, 1*, with parallels especially at Veii, Quattro Fontanili.

The openwork disc **cat. 803**, probably part of a horse harness, with human figure and birds at centre, is very similar to a type of openwork handle for bronze cups which is found in several Villanovan II and Orientalizing contexts in Etruria and at Bologna.

Cat. 804 and **805** are elliptical belt plaques also of late Villanovan type, with close parallels for example in the cemetery of Veii, Quattro Fontanili. A more unusual type of

belt-plaque is **cat. 806**, also elliptical in shape, with an embossed decoration of bosses and concentric circles that is not known in Villanovan belt-plaques, whereas a good parallel can be found in the Latial cemetery of Riserva del Truglio (Marino, Rome), in the Alban Hills.

Cat. 807, an openwork disc formed by concentric rings joined by radial bars, is a relatively common type of ornament found in IA graves from Campania and Calabria.

A decorated armour disc of Adriatic type, that belongs to the *PBF III, 3*, Collarme group, is **cat. 808** from Perugia, Umbria.

Cat. 809, a complete piece, and **cat. 810**, a finial from a similar object, are composite items made from a hollow sheet-bronze tube surmounted by an openwork globe. Similar objects, probably relative to a specific function, are known from important burials in Campania (Suessula, Capua), Etruria (Vetulonia, Tomba del Duce), and Bologna.

Two pieces representative of the Villanovan production of sheet-bronze vessels and other objects, usually with embossed decoration, are **cat. 811**, a crested helmet probably from southern Etruria, dating from Villanovan II, and **cat. 812**, a biconical vessel with its lid, of late Villanovan or Orientalizing date.

To the same industry belong **cat. 813–816**, bronze bands with inset plastic birds, probably originally riveted to the edges of wheeled incense burners. These are prestige objects, usually found in important burials of EIA, late, and Orientalizing date from Etruria, Lazio and Campania.

Cat. 817–819 are three 19th-century pastiches, all probably from Campania. They consist mainly of parts from composite parade fibulae, derived from the spectacle and four-spirals tradition and decorated with plastic figurines of humans and animals, that are specific to the metal industry of northern Campania (Suessula and Capua), dating from EIA, late and the Orientalizing period. The pastiches were further enriched with spiral pendants (*saltaleoni*), glass beads, sheet-bronze buds, and other ancient pieces. These objects have been described separately, according to their original function and association.

Cat. 820–822 are solid cast bronze figurines of humans and animals, which belong to the figurative tradition of central and, mainly, southern Italy during EIA, late and the Orientalizing period.

Note on Chronology

Due to the publication of several new series of calibrated BC 14C dates from secure contexts, both settlement stratigraphies and burials, by Italian, European and American laboratories, the definition of the absolute chronology of the Italian metal ages (Copper Age to Early Iron Age) has been significantly improved in the last few years. An important contribution also came from dendrochronology, although the application of this technique is strongly conditioned by the comparatively high, though not exclusive, concentration of BA lake settlements in northern Italy.

However, for different reasons, the generally higher chronology resulting from the adoption of dendrochronology and the calibration of 14C dates has not yet been explicitly accepted and adopted by all the specialists concerned, mainly as regards the crucial period between the Final Bronze and Early Iron ages.

Two main factors, both deeply rooted in the Italian research tradition, are responsible for this situation:

1 – The role of literary sources, the main basis for the absolute chronology of the Greek colonization in southern Italy and Sicily, and thus of the Greek Geometric pottery, which is found in Italian indigenous and colonial contexts. This combination of historical and archaeological factors is the main basis for the traditional absolute chronology of the Italian EIA and Orientalizing period.

Although in recent years this stronghold of Italian and European chronology was radically challenged especially by the dendro-dates of German and Swiss lake settlements, the authority of some ancient historians, mainly Thucydides, and the chronological framework which has been traditionally linked to his writings, are still perceived by many scholars as the only legitimate source of IA chronology, rather than as one of the factors which should be involved in this discussion.

2 – The established practice of founding the relative chronology of all archaeological complexes upon the typological classification of pottery and, mainly, metal artefacts, has been stretched to its extremes by Peroni and his collaborators. This method is meant to provide a detailed chronological framework which is explicitly considered as the necessary premise to the analysis and interpretation of the overall archaeological evidence from any given context. The obvious result of the widespread adoption of this procedure is that clearly identifiable types, especially bronze types included in the *Prähistorische Bronzefunde* Italian series, are strongly considered to be more reliable chronological indicators than the 14C dated stratigraphic layer, or, more generally, the archaeological context they belong to. Another implication of this approach is the chronologically parallel development of the cultural areas involved, including all the local subdivisions into periods and phases. Absolute dates are considered with scepticism, and often ignored or dismissed, especially if and when they do not conform to the relative sequence which has been already

established on typological grounds.

No recent series of cal BC dates are at present available for Sicily; therefore, although the island's cultural sequences is definitely different from the Italian ones as regards both the archaeological aspects and their time span, the relative and absolute chronology of mainland Italy is currently used as the main point of reference (Albanese Procelli 2005).

This is not the proper place for a thorough discussion of the role of absolute chronology and its relationship with archaeologically based sequences of relative chronology; our purpose here is only to recall that in the recent Italian literature an absolute chronology based on 14C cal BC and dendro-dates is systematically adopted for CA contexts, whereas many publications on EBA, MBA, RBA, FBA and EIA complexes still rely on chrono-typological sequences and traditional absolute chronology. For a full discussion of the problem of LBA and IA absolute chronology, with papers devoted to the East Mediterranean, the Aegean region, Italy and Europe, see Bartoloni and Delpino 2005.

For a general assessment of Italian absolute dates see Skeates, Whitehouse 1994, and the updatings which appear regularly in the volumes of the *Accordia* series.

The following pages are a brief summary of the absolute chronology of the metal ages, based essentially on 14C cal BC and dendro-dates from Italian contexts. Neither the chrono-typological relationships between Italy and central Europe, nor the chronological implications of the occurrence of Mycenaean-Late Helladic artefacts and of Greek Geometric pottery in Italian Bronze Age and Iron Age contexts have been discussed in this text.

Moreover, it should be remembered that the absolute chronology which will be proposed is based on a limited number of reliable dates, and is only meant to provide a very general framework rather than a detailed account of the chronology of the Italian Copper Age, Bronze Age and Early Iron Age regional cultures. Moreover, the cal BC dates which are at present available are not uniformly calibrated with 10 or 20. Therefore, in the following paragraphs, details on calibration depend on the present state of information relative to single regions and contexts.

The chronology of the Copper Age (CA) is based on a number of 14C cal BC dates, especially from northern Italy, and from new complexes in central Italy.

The earliest phase of the period in northern Italy (Remedello cemetery, phase I) can be dated between 3350 and 2900 cal BC; the second phase (Remedello II) between 2900 and 2500 cal BC, and the final phase (Bell beaker) between 2500 and 2200 cal BC (De Marinis 1998, table at fig. 1).

In central Italy the earliest complexes which can be archaeologically identified as eneolithic are dated to the first half of the 4th millennium BC: in the Marche the 14C cal BC dates

(10) of the cemetery and settlement of Fontenoce-Area Guzzini range between 3760–3540 cal BC and 3360–3100 cal BC; those from the settlement of Conelle di Arcevia range between 3895–3650 cal BC and 3485–3100 cal BC; and the CA layers of the site of Maddalena di Muccia (Macerata), which include the advanced and late phases of the period, range between 2870–2580 cal BC and 2470–2310 cal BC (Cazzella and Silvestrini 2005, tab. I).

The absolute dates for the complexes of the central Tyrrhenian area are slightly later: the earliest date, from tomb 3 of the cemetery of Lunghezza (Rome), is 3630–3380 cal BC (Anzidei *et al.* 2003, 383). The cemetery of Selvicciola (Ischia di Castro, Viterbo) ranges between 3500 and 2000 cal BC (10) (Petitti *et al.* 2002; De Marinis 2001, fig. 5).

An overview of recent cal BC dates from eneolithic contexts from Sicily and southern Italy is presented by A. Cazzella (2000: 89, 92, 94). The dates for an early phase of the period, as represented in the Sicilian funerary complex of Piano Vento, are 3990–3370 (both 10). The central phase can be dated between the middle of the 4th and the beginning of the 3rd millennium BC both in Sicily and southern Italy: Toppo Daguzzo, Basilicata, 3653–3365 cal BC; Buccino, 3485–3040 cal BC (both 10). The approximate absolute dates for the final part of the period should range between c. 2600 and c. 2000 BC.

For the Early Bronze Age (EBA), the earliest absolute dates, marking the beginning of the period, are around 2200 BC in contexts from northern, central and southern Italy. Based on several 14C cal BC and dendro-dates, in northern Italy EBA I lasted until c. 1900 BC, while the second phase, EBA II, ended around 1700–1600 BC. (Gambari 1997; De Marinis 2005). Throughout the time span of the period, the main archaeological aspect which developed across the present territory of northern Italy was the so-called Polada culture.

The situation in southern Italy is definitely more complex: the earliest part of the period coincides with the final phase of the Laterza culture, a CA archaeological aspect extending from Apulia and Calabria to Lazio and Abruzzo. The immediately subsequent aspect is the so-called Proto-Apennine, with 14C cal BC dates from an important Apulian site, Coppa Nevigata (Foggia), around the 19th–17th century BC (Cazzella, Moscoloni 1998: 29–30). This high absolute chronology, which should place the beginnings of Proto-Apennine in the EBA, is not accepted by those scholars who would rather consider this archaeological aspect to be exclusive to the early and advanced phases of the Middle Bronze Age (MBA).

A stronghold of EBA chronology in Campania is represented by the 14C cal BC dates for the eruption of Mount Vesuvius that buried a number of villages characterized by the well-identified aspect of Palma Campania (the eponymous site discovered and excavated in the 70s of the last century: see Albore Livadie, D'Amore, 1980). The recent systematic excavation of the village of Nola – Croce del Papa (Naples) (Albore Livadie 2002; Albore Livadie, Vecchio 2005) is providing a complete documentation of the Palma Campania culture; the absolute chronology of the eruption is now established at 1782–1686 cal BC (10) (Albore Livadie, Vecchio 2005, 44, fig. 48 and note 3; see Lubritto *et al.* 2003, in press). Whether or not the Palma Campania culture continued after the widespread destruction wrought by the eruption is still a matter of discussion.

From the EBA-MBA transition to the Final Bronze Age

another important component of the Italian relative chronology is constituted by the evidence of systematic relationships with Greece and the Aegean area; the best identifiable archaeological evidence is the occurrence possibly of Middle Helladic (MH), and mainly of Late Helladic (LH) and Mycenaean pottery in several contexts, especially in southern Italy and Sicily. Some imports of glass, faience, ivory and bronze objects are also documented.

However, apart from the problems of the absolute dating of LH material in its areas of origin, the Italian situation is further complicated by the fact that local productions of Aegean-style pottery became quite common in southern Italy in the Late Bronze Age, especially from LHIII B.

The earliest part of the MBA, dating between 1700/1600 and 1500/1400 cal BC, corresponds to three main archaeological aspects: Palafitte-Terramare in northern Italy, Grotta Nuova in the central regions, essentially Tuscany, Umbria and Marche, Proto-Apennine in southern Italy, including Lazio south of the Tiber and Abruzzo. As already remarked, the beginning of Proto-Apennine probably dates from the EBA.

A substantial series of cal BC dates from Palafitte-Terramare contexts is assembled by De Marinis 1999, figs. 42–43. As regards southern Italy, the final date for the Proto-Apennine aspect at Coppa Nevigata, is c. 1500 cal BC.

During the final phase of the MBA the Palafitte-Terramare culture continued in northern Italy, while most of the territory of central and southern Italy was characterized by the so-called 'Apennine aspect', with its distinctive incised pottery. The range of absolute dates for the Apennine layers at Coppa Nevigata is c. 1500 to c. 1300 cal BC; in another series of dates, from the village of Portella di Salina (Aeolian Islands, Messina, Sicily), where Apennine pottery is associated with all the structures, the range is 1525–1320 cal BC (10) (Martinelli 2005: 289–297).

The LBA is conventionally divided into Recent Bronze Age (RBA) and Final Bronze Age (FBA).

In archaeological terms, the RBA is generally associated with the appearance of a distinctive aspect, the so-called Sub-Apennine, which is specific to central and southern Italy; the main archaeological feature is a class of undecorated impasto (coarse hand-made) pottery with plastic protrusions on the handles of cups and bowls. Some features of Sub-Apennine style also appear in northern Italy in Terramare and Palafitte contexts. The dates for Piedmont range between c. 1350 and c. 1200 cal BC (Gambari 1997); in Lombardy, the RBA feature A from the site of Parre (Bergamo) has a 14C date of 1392–1329 cal BC (Poggiani Keller and Raposso 2004, 443). In central Italy, the RBA structure 61 of the settlement of Scarceta (Grosseto, Tuscany) is dated to c. 1312 cal BC (Poggiani Keller 2004, 469); 1407–1265 cal BC (10) is the date presently available from the Sub-Apennine layers of the Capitol Hill at Rome (Baroni 2001, 294).

As regards southern Italy, the earliest RBA layers at Coppa Nevigata date from 1310–1140 cal BC (10) (Muntoni 1997).

Overall, the absolute chronology of the period is considered to span c. 1350/1300 to c. 1200 cal BC.

FBA, the second part of the LBA, is characterized by a new style of decorated impasto pottery and by a distinctive bronze industry (so-called Protovillanovan), but also by the emergence of regional aspects in several areas of Italy. As already noted, the beginning of the period can be placed around c. 1200 BC, while

the possible subdivisions into three or, more plausibly, two phases, can only be proposed by individual regional contexts.

The best available sequence of cal BC dates are all from the Groningen Laboratory. A number of cal BC dates have been obtained by the Groningen Laboratory on several LBA and EIA contexts (Bietti Sestieri and De Santis, forthcoming), from Latium Vetus (the part of the present Lazio region between the Tiber and Mount Circeo). FBA early is represented by cal BC dates from two 'Protovillanovan' contexts: a date of c. 1300–1100 BC (1 σ) from the settlement of Quadrato (Rome), and two dates from the coastal site of Torre Astura (Latina): 1310–1000 cal BC and 1400–1080 cal BC (both 2 σ) (Attema *et al.* 2003, 120). FBA late is known mainly from cremation burials found at Rome and in the adjacent area, which, unlike the earlier contexts, belong to a specifically local aspect (Latial period I). Tombs 1 and 2 from Quadrato: 1017–897 and 1041–901 (both 1 σ); tombs 1 and 2 from Foro di Cesare (central Rome): 1255–1013 and 995–833 (1 σ) (Bietti Sestieri, De Santis 2003, 747–750).

An approximate chronological range for the period spans the 12th, 11th and possibly part of the 10th century BC.

On account of the complexity of the general historical framework, as well as of the co-existence of chronologically relevant factors originating from distant and inherently different areas (Italian archaeological sequences, dendro-chronological sequences from Switzerland and southern Germany, relative chronology of the Greek Geometric pottery, and historically based sequences from the east Mediterranean), the absolute chronology of the Italian EIA can be defined only in rather approximate terms. Moreover, given the wide range of regional cultures, which are unlikely to have started and developed simultaneously, it will only be possible to propose a general subdivision into two main periods, without considering the specific chronological details of the local sequences.

Some dates from the Groningen Laboratory are on bones from inhumation burials of the cemetery of Castiglione (Roma), which in terms of archaeological relative chronology apparently coincides with the greatest part of EIA early (Latial period II). Excluding those with an excessively wide range of oscillation, all the dates from tombs belonging to the whole archaeological range considered are rather close: tombs 71 and 86, phase IIA1: 919–833 and 999–876 cal BC (1 σ); tomb 75, phase IIA: 1107–901 cal BC (1 σ); tomb 85, phase IIB1: 1001–839 cal BC (1 σ). A chronological range including most of the 10th and part of the 9th century BC seems likely for the early period of the EIA (Latial II, Villanovan I).

For the beginning of the second period (EIA late: Latial III, Villanovan II) a series of five 14C cal BC dates comes from the IA building of Fidenae (Rome), a closed context which was

destroyed and sealed by a fire (Nijboer *et al.* 1999–2000: 168–170; Nijboer 2005: 530). Three dates, from wood, have a very wide range of oscillation: 1130–830 cal BC (2 σ); the other two, both on cereal seeds, range between 1020 and 820 cal BC (2 σ), and 970 and 835 cal BC (1 σ). Thus EIA II should begin around 900 BC or slightly later.

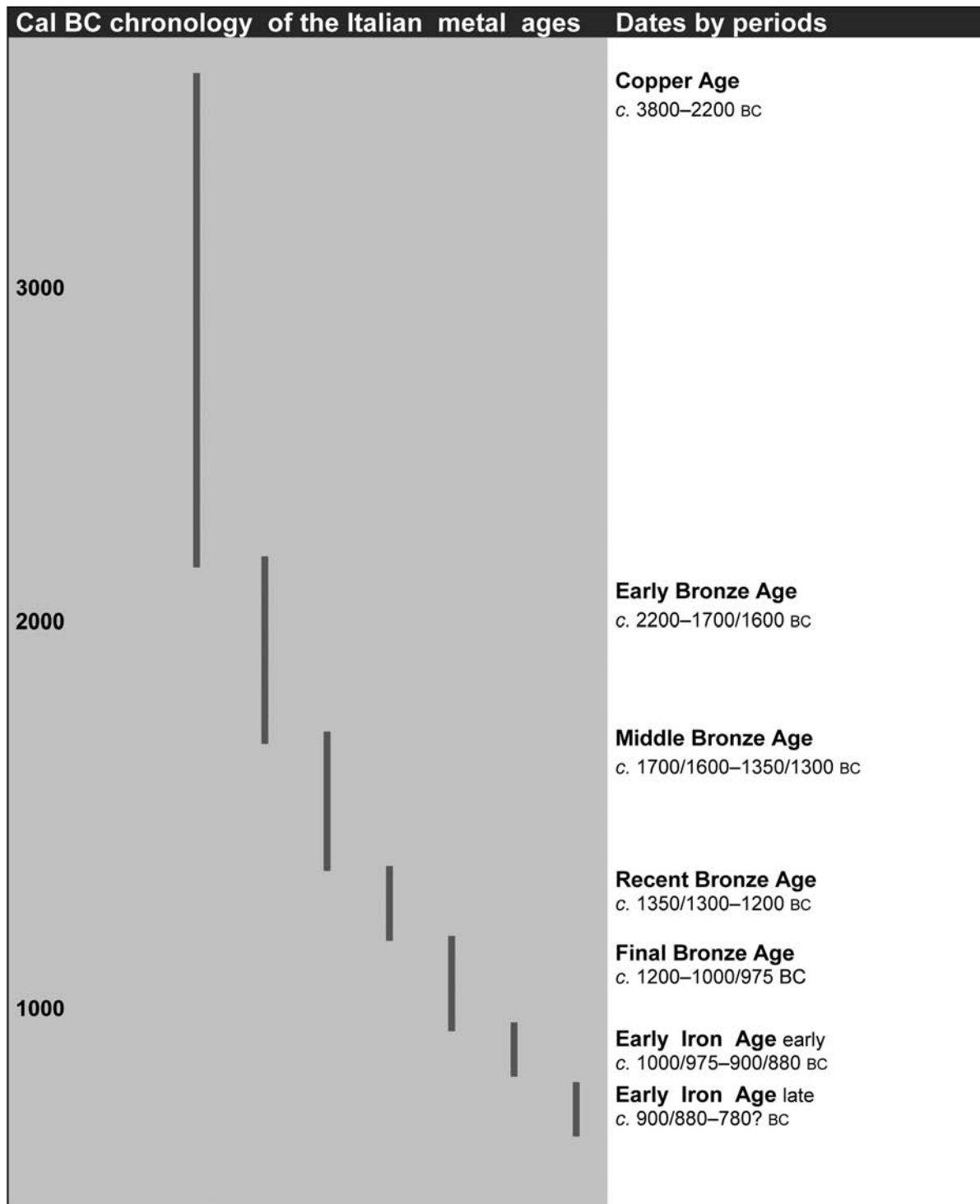
The most difficult point is the transition EIA late–Orientalizing, which is traditionally dated to c. 730–720 BC on both archaeological and historical grounds: the archaeological dates for the Greek Geometric pottery found in central Mediterranean contexts: MG (from 830 BC), LGI (from 770 BC) and the beginning of LG II (which corresponds to EPC) around 730/720 BC; and the chronology based on Thucydides' historical account for the earliest foundations of Greek colonies in the west (Naxos 734, Syracuse 733, Cuma 730, Sybaris and Caulonia 709, Taras 706). No independent absolute dates from Italian contexts are available for this period, and many scholars would prefer to leave the traditional date unchanged.

An important new element which should be taken into account is the new, high absolute chronology for the earliest archaeological evidence relative to the foundation of Carthage: based on the presence of Greek LG pottery, the beginning of the Phoenician colony was usually dated to c. 760–740 BC, whereas the 14C cal BC dates obtained by the Groningen laboratory indicate a date within the 9th century (Nijboer 2005: 530–31, and pl. 2).

Moreover, as is well known, the absolute date for the HaB3–HaC transition (c. 700 BC), which has long been considered as a relatively close central European match to the EIA–Orientalizing transition in Italy, has been recently raised to c. 778 BC by a number of dendro-dates from tomb 8 at Wehringen (southern Germany) (Hennig 1995). This absolute date has been widely discussed, and its correlation to the Italian chronology has been usually dismissed, essentially because it seems too high for the beginning of the Orientalizing period in Italy (see for a brief summary of this discussion Peroni, Vanzetti 2005, 64–65).

Nevertheless, given the high cal BC dates for the Italian EIA, and the lack of independent absolute dates for the Greek Geometric pottery, the current retention of the traditional chronological term, 730–720 BC, for the end of the EIA and the beginning of the Orientalizing period should be considered merely as a temporary convention.

As regards Sardinia, the local absolute chronology is rather uncertain: recently, based on a series of cal BC dates (2 σ), a chronological sequence from MBA to the Medieval period has been proposed by G. Webster (2001) for the settlement of Borore - Duos Nuraghes: MBA c. 1800–1300; LBA c. 1300–900; IA c. 900–500.



Note on the catalogue and illustrations

Under the Bibliography of individual objects, we have usually included only publications in which the object has been illustrated. Under the *comparanda* of the objects, we have given the author's or editor's name with the date of publication, all to be found in the Bibliography. The exceptions to this rule are some frequently mentioned sites, including Osteria dell' Osa, Pontecagnano, Cuma, Pithekoussai, Torre Galli, and Quattro Fontanili at Veii.

All line drawings are reproduced at 1:2 unless otherwise stated.