MEDICAL BIOLOGY
AND
ETRUSCAN ORIGINS
### Ciba Foundation Symposia

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CIBA FOUNDATION SYMPOSIUM ON MEDICAL BIOLOGY AND ETRUSCAN ORIGINS

Editors for the Ciba Foundation


and

CECILIA M. O’CONNOR, B.Sc.

With 60 Illustrations

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PREFACE

The occasion of the fiftieth symposium to be held at the Ciba Foundation was marked by the choice of a subject outside the range of previous conferences. The Foundation's policy of promoting co-operation between workers in various branches of science was extended to bring together those in the humanities and in science; and "The recent contributions of medical biology to ethnology; with special reference to the origin of the Etruscans" provided a common basis for discussion of the interests of archaeology, anthropology, history, philology and human genetics.

The subject was originally suggested by Professor F. G. Young who had talked it over with Mr. R. M. Cook and Mr. G. S. Kirk at Cambridge. It was felt that a group with interests so diverse as archaeology and human genetics could best be integrated in a meeting at the Ciba Foundation, and the proposal received the full support of the Director. As a result, the conference, the proceedings of which are recorded in this volume, was held in April 1958 under the skilful chairmanship of Mr. Cook, when a concerted effort was made by the group to devise practical means by which the various disciplines represented could help one another in future research. The proceedings were held in both the English and Italian languages.

The Director warmly thanks Professor Young, Mr. Cook and Mr. Kirk for putting the idea forward originally and, together with Dr. A. E. Mourant, for helping with the organization of the symposium; Dr. M. Siniscalco for invaluable assistance with problems arising out of the use of the Italian language; Sir Gavin de Beer, Director of the British Museum (Natural History), and Dr. K. P. Oakley for the loan of skulls exhibited; Mr. D. E. L. Haynes, Keeper of Greek and Roman Antiquities, and his colleagues at the British Museum for kindly arranging a reception.
and special display of Etruscan exhibits at the British Museum; and Dr. R. Guerrieri, of the Italian State Tourist Office, through whose courtesy complimentary copies of the review "Italy’s Life" (1957, No. 24. Bergamo: Istituto Italiano d’Arti Grafiche) were presented to all members of the symposium. Special thanks are due to Mr. J. and Mr. J. A. Rivers of J. & A. Churchill Limited, who readily co-operated in the production of this unusual volume.
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"Medical Biology and Etruscan Origins",
23rd–25th April, 1958

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INTRODUCTORY ADDRESS

R. M. Cook

Museum of Classical Archaeology, Cambridge

When I was invited to take the Chair at this symposium I was surprised, since I know little of Etruscology and less of biology. But I reflected that in Etruscan questions the specialists have often committed themselves to one answer or another, and that I had the advantage, if not of an open, at least of an empty mind. By such arguments I soon convinced myself that it was my duty to accept so flattering an offer.

The idea of using biological methods to determine the origins of the Etruscans occurred to Mr. Kirk and Prof. Young about two years ago, while they were talking after dinner in Trinity Hall at Cambridge. Next morning the idea still seemed good and, after some inquiries, Prof. Young put it to the Executive Council of the Ciba Foundation of which he is a member. Dr. Wolstenholme, the Director, cheerfully undertook the long and exhausting task of organizing a meeting, and now you must decide how and where the genetical connexions of the ancient Etruscans can be investigated most usefully.

The biological theory is roughly this. The population of any country or even province tends to have peculiar physical characteristics which were vulgarly called racial before “race” became a term of political propaganda, and are now better called “genetical”. These genetical characteristics are remarkably uniform and probably persistent. They can be detected conveniently in the blood of living members of a population and, it is said, in the bones of dead members. It should, then, by taking enough samples be possible to show what is the physical relationship
between different populations, present and past. As the final five papers presented at this symposium will show, the study of genetics is fairly recent and still advancing vigorously.

The genetical examination of a living population is fairly straightforward; but any dead population presents special difficulties. There are two approaches, complementary rather than alternative. One is to take samples from the descendants of the dead population, and the other to test its bones. In taking samples from descendants it must first be decided who and where these descendants now are: there may at various times have been immigrations or fusions which altered the genetical character in some districts, and on this we need the advice of our historians. For bones we rely on the archaeologists, and primarily here our Italian colleagues, to provide them and to identify the culture and context to which they belong. By these means it may be possible to discover the genetical character of our dead population. If we wish also to discover the genetical connexions of this population, we must apply the same procedures in other relevant places. In the case of the Etruscans, who may or may not have been an immigrant population, this means (I suggest) that we must first compare them genetically with other adjacent populations of their time; and afterwards, if the comparison shows significant differences, with the populations of remoter places. The choice of such remoter places would certainly be difficult and is better deferred until we know what is necessary. There is one other, preliminary problem—to define, so far as we can at this stage, what we mean by "Etruscans".

The culture known as Etruscan becomes clear about the end of the 8th Century B.C. in the region between the Tiber and the Arno, the ancient Etruria; it spreads to the eastern basin of the Po and into Campania, and then gradually retreats and loses its special character, until by the beginning of the Christian era it may be pronounced extinct. Since it falls in a historical period, i.e. one from which useful written records survive, there can be
INTRODUCTORY ADDRESS

no doubt that the population which created this culture was that known to the Greeks as Tyrrenian and to the Romans as Etruscan. But it does not follow automatically that all the inhabitants of Etruria were in the same sense Etruscan.

Interest in the Etruscans is old. The Romans, who were their neighbours and for a long time their inferiors in civilization, at first feared and learned from them. Later, when the Etruscans were no longer dangerous, they acquired an aura of venerable mystery, the more so since their language was no longer understood. With the Renaissance, historical curiosity revived, and was inflated by Tuscan opposition to Papal rule: it was comforting to remember that the greatness of Etruria was older than that of Rome. The fullest expression of what was later called "Etruscomania" was, as so often happens, the work of a foreign convert. Thomas Dempster was a Scot who became Professor of Law at Padua and there between 1616 and 1619 composed his de Etruria Regali, a monument of the widest reading and the most uncritical prejudice. Dempster's book was not published until 1723-26, and since by then the archaeological remains were taking first place with Etruscan students, F. Buonarroti, its editor, added numerous illustrations and a commentary on them. He was succeeded by A. F. Gori, among others, who "found something Etruscan everywhere", even in Homer. It is symptomatic of this new interest that painted Greek pottery, which was now being studied, received the name "Etruscan" although most specimens had been found in the Greek graves of South Italy. The scholars were soon forced to correct this error, but such is the attraction of Etruria that even now, 200 years later, Greek vases are still occasionally called Etruscan by the laity. During the later 18th Century enthusiasm for the Etruscans began to decline and in the 19th Century Greece attracted most students of classical antiquity. But the discoveries at Vulci and elsewhere after 1828 aroused a more historical interest in the Etruscans; and in 1848 George Dennis's Cities and Cemeteries of Etruria engaged
the attention of two generations of North Europeans. In our own time we have had a new breed of Etruscomaniacs, revolted by Greek perfection and finding in Etruscan art some curious psychological catharsis. It is, indeed, difficult to approach Etruscan problems with impartial detachment.

What the Etruscans achieved does not concern us here, and there are enough books already to instruct or delude us. Our problem is the origin of the Etruscans. On this, the evidence so far used comes from ancient literature and records, from linguistics, and from archaeological material.

Egyptian records of the 13th Century mention raids on their country from the sea. Among the raiders were a people whose name they spelt *Twruṣ.w* and perhaps pronounced “Turusha”. This may or may not be an equivalent of “Etrusci”. The records do not say where the “Turusha” came from, nor do the names of their allies help in locating them.

To come to Greek literature, a passage in the Hesiodic *Theogony* (1011-16), which should not be much later than 700 B.C., speaks of Agrius and Latinus, ruling the Tyrrhenians in the holy islands. But the first important witness is Herodotus (i, 94), an Asiatic Greek active around 450 B.C. and justly honoured as the father of history. In his account of Lydia, the part of western Anatolia inland of Smyrna, he includes incidentally a story which he says was told by the Lydians. In the reign of Atys, which he put not later than the 13th Century B.C., Lydia was afflicted by famine; by inventing various games and other palliatives the Lydians endured for 18 years; then they drew lots and half of them sailed away to Italy under their prince, Tyrrhenus; from him they took the name “Tyrrhenians”. Hellanicus, also writing in the 5th Century B.C., is said (in *Dion. Hal.*, i, 28) to have identified the Tyrrhenians as an immigrant branch of the Pelasgians, an elusive and ubiquitous people of Greek mythology. Anticleides, a historian of the 3rd Century B.C., is quoted by Strabo (v, 221) as bringing the Tyrrhenians from Lydia, together with some
Pelagians of Lemnos and Imbros, islands opposite the entrance to the Dardanelles. Finally, Dionysius of Halicarnassus (i, 25-30), a Greek historian of Rome active in the later part of the 1st Century B.C., asserted that the Etruscans were natives of Italy: his long disquisition relies largely on mythology no more cogent than that of Herodotus, but contains the useful observation that—presumably in his time—the Lydian and Etruscan languages were not alike. What the Etruscans themselves thought about their origins is not recorded, and it does not seem likely that the answer will be found in the surviving Etruscan texts, if ever they are fully deciphered. But, in general, the opinion of ancient writers, Greek and Roman, followed Herodotus in supposing that the Etruscans came from Lydia.

The value of these ancient testimonies is not very great. For their accounts of prehistoric times, the Classical writers relied largely on legends, speculations based on popular etymology, material remains, analogy, and patriotic, political or personal imagination; nor did they usually state their sources and reasoning. So we cannot decide directly what truth may lie behind these various accounts of the origin of the Etruscans. It is, however, worth noting that the establishment of the Etruscans in Etruria was considered to go back to the legendary period of prehistory or, to make a rough conversion into modern terms, the late 2nd millennium B.C. The modern theories are concerned with a much later period.

A different kind of evidence, provided mainly by literary sources, is about the institutions and rituals of the Etruscans, some of which were borrowed or noted by the Romans. The Etruscan cities were sovereign states, participating rather than combining in a loose federation. Within each city there seems at first to have been some sort of monarchy, superseded in later times by an oligarchy of the aristocratic families. There is nothing exceptional about this. In the social life of the aristocracy, as wall-paintings also show, women had a fair degree of freedom. In this the
Etruscans differed markedly from their Greek and probably their Oriental contemporaries: Roman parallels may, of course, be imitative. The Etruscan rituals, in their elaborate and learned detail, appear by Greek standards Oriental, and their favourite method of divination—by examining the liver of the sacrificial victim—has its best parallels in Mesopotamia. This line of inquiry too leads to divergent results.

The linguistic evidence is more trustworthy, so far as it goes. We have a large number of Etruscan texts, mostly short and of obvious meaning, and Latin and Greek writers preserve and explain some Etruscan words. So we have some notion of the vocabulary and grammatical formations of Etruscan as far back as the 7th Century B.C. We have a fair knowledge of what languages were spoken in Italy at that time: none of them is related to Etruscan; nor is Greek, nor Lydian (as we know it). Indeed, the only close analogy—so it seems—is provided by a single and unintelligible inscription from Lemnos, probably of the early 6th Century. There is, of course, the chance that a language related to Etruscan may be discovered elsewhere, but it is unwise to reason on chances.

The archaeological evidence from Etruria is unusually rich, though one-sided, in that most of it comes from tombs. Fortunately the early Etruscan society, like other early societies, believed in equipping the dead with a lavishness proper to their station in life. So we have graves of varying elaboration, a very large quantity of pottery of the kinds used in Etruria, and many objects in metal. From these remains, archaeologists busily draw conclusions about the date at which the Etruscan culture appeared and the influences that affected their arts and crafts. It is difficult to be impartial in summarizing these conclusions.

First, it appears that in the 8th Century B.C., or perhaps earlier, there existed in and around Etruria an early Iron Age culture known as Villanovan. How widely this Villanovan culture extended is in part a matter of definition, but related pottery
and metalwork are found as far afield as southern Italy. It is generally regarded as the product of native Italian societies that had entered the Iron Age but not progressed much towards urban civilization.

Secondly, by the end of the 8th Century B.C. a much richer culture is found about the sites of the historical Etruscan cities. This Etruscan culture shows a much richer variety of grave goods, and in its arts the Villanovan tradition is improved and supplemented by Greek and Oriental (principally Syrian and Phoenician) examples and imports. To take an instance from pottery, the reduced ware known conventionally as Etruscan bucchero develops out of Villanovan, but the improved techniques probably and some of the shapes certainly are imitated from Greek. At first, Greek and Oriental influences are about equally visible, but during the 7th Century the Greek prevails and gradually even Greek deities and mythological figures are accepted into Etruscan art and belief.

Such, very roughly, are the data from which proceed most of the theories about the origins of the Etruscans themselves. These theories may be divided into two classes, one asserting that the Etruscans were immigrants and the other claiming them as natives or at least naturalized before the Etruscan culture began.

That the Etruscan culture was brought or developed by immigrants or invaders is the traditional view. It has to support it the sudden or rapid appearance of the Etruscan culture, its remarkable superiority over the other cultures of Italy outside the Greek colonies, its strong artistic connexions with the East Mediterranean, its elaborate and perhaps Oriental ritual, and its un-Italic language. But where these immigrants came from is not agreed. In the 19th Century some scholars brought them from North-East Italy; but those parts were culturally no more advanced than central Italy, and the northern theory is now justly discredited.

The arguments for an Oriental origin are more alluring. Most
of the higher phenomena of Etruscan culture can be paralleled in Greece and the Near East (as it used to be called before military geographers invented the "Middle East"); the language seems to be connected with that of contemporary Lemnos; and it is always gratifying to Classical loyalists to find Herodotus right, and, indeed, ancient tradition generally. But there are difficulties. If the Etruscans migrated much before the late 8th Century B.C., when the Etruscan culture appears, then that culture or its elements can hardly have been introduced by the Etruscans themselves and they might as well be regarded as natives of Italy. But if the migration of the Etruscans occurred in the later or even the mid 8th Century, it might be expected that Greek tradition would mention it in the right context, since by then the Greeks were frequenting and colonizing southern Italy. The Greek and Oriental components of Etruscan art might be due to trade, as were the Oriental components in Greek art of that time. As for the Villanovan components, it would be surprising if a higher culture, such as the Etruscans are supposed to have brought with them, borrowed so much from the inferior culture of their Italian neighbours. Besides, if the Etruscans came with an established and advanced way of life, they should not have been so susceptible to Greek influence, especially in the field of theology and myth. Lastly, there is no part of the eastern Mediterranean, admittedly not yet completely explored, which by the tests of language, customs and art can claim to be the original home of the emigrant Etruscans: Lemnos, to be sure, is linguistically possible, but in size it is too small to have peopled the early Etruscan cities. I pass over the arguments from the rite of burial—inhumation or cremation—since, despite the prehistorians, I doubt whether it has much significance: in Athens, for instance, without any apparent reason, the rite of burial changed four times between the 12th and the 6th Century B.C. There are other difficulties, too, about an Oriental origin of the Etruscans, but none is decisive. Most Classical archaeologists still believe that the
Etruscans came from the East, and probably from some part of Asia Minor.

The theory that the Etruscans were native, or rather that they were established long before the 8th Century b.c., has only recently received a logical basis. The argument is roughly this: before Indo-European languages reached the northern lands of the Mediterranean, i.e. before what we may call the Greeks and Italians and other peoples occupied Greece and Italy and parts of Asia Minor, that region was inhabited by peoples who spoke languages belonging to another linguistic family. As Indo-European advanced the older languages became restricted to a few isolated pockets—in Italy to Etruria, in the Aegean to Lemnos and perhaps to some other places from which no linguistic record survives. In the early Iron Age these Etruscans developed or adopted the Villanovan culture, and in the late 8th Century B.C. evolved from that into what we call the Etruscan culture. The causes of this evolution were contact with Greek and Oriental traders and economic prosperity: the necessities and luxuries of a higher, urban culture were grafted onto the native Villanovan tradition. The objections to this theory are again rather subjective. The rise of the Etruscan culture was too sudden to have been achieved by Villanovan peasants. It is not clear why the Etruscans alone of the native Italians should have made such progress. The elaborate rituals, where tradition is most tenacious, do not suggest a society of Villanovan standard. This theory of Etruscan origins is held most widely in Italy, where the archaeologists are most familiar with the Villanovan material. It is in some ways neater than the Oriental theory; in some ways—notably in the linguistic explanation—perhaps too neat.

Despite their more bigoted exponents, these two theories are not entirely exclusive. It is possible that the creation of the Etruscan culture was the effect of a small band of invaders who imposed themselves on Villanovan natives of lower culture, much as in England the Normans imposed themselves on the native
Anglo-Saxons. If the invaders were few, their departure from the East might have left no mark on ancient traditions, and they or a fair part of them might have come from a place as small as Lemnos. If the newcomers formed a ruling aristocracy in Etruria, importing pottery and metalwork, and perhaps some artisans from more civilized countries, and employing native craftsmen to imitate them, then some of the archaeological requirements would be satisfied. Those who wish to do so might reconcile other anomalies by supposing that the invaders were of mixed origin, though in that case one might expect greater differences between the cultures of the various Etruscan cities. A corollary of this explanation of the Etruscans proper as being a dominant minority is that the Etruscan language should be the language only of the invaders and that at the time of the invasion the population which they subjected spoke another, presumably Italic, language: perhaps the philologists can show whether or not this is possible, but I doubt if they have the evidence. I am not arguing here that this compromise theory is right, but since it is not impossible and its genetical effects are peculiar, I think that it must be taken into account when we discuss methods to be adopted in this inquiry.

The genetical consequences of these theories must be considered carefully. Let us assume provisionally that it is possible to identify descendants of the populations living in the 8th and 7th Centuries B.C., both in Etruria and in adjacent districts of Italy, and that we can obtain sufficient samples of bones not only from Etruria and adjacent districts, but also from the two types of graves in Etruria, the "Etruscan" and the Villanovan. Then first, if the Etruscans were wholly immigrant or were a homogeneous pocket of older inhabitants bordered by alien populations of Indo-European speech, the result would be the same, namely, that there would be a clear genetical distinction. The next step would be to find where else there occurred a genotype similar to the Etruscan—whether in other probable pockets of the early
Mediterranean population or in some other region in the eastern Mediterranean. Secondly, if the examination of bones should show that the occupants of the Villanovan graves of Etruria were different from the occupants of the “Etruscan” graves, but similar to the population of adjacent districts, that would be a strong argument for an invading minority, and again the next step would be to look for relatives elsewhere. Lastly, it might turn out that the population of Etruria was genetically uniform both within itself and with the adjacent populations: that would be delightfully disconcerting to the Etruscologists.

It may be objected that the origin of a people is unimportant; what is important is the formation of its cultural or national unity. From the historical, but not perhaps the biological, standpoint this is true. But students of antiquity have wasted so much time and temper on the origin of the Etruscans that it would be a notable service to scholarship to remove this cause of foolish dissension. I hope that our symposium will lead at least to this negative success.
THE PRINCIPAL CITIES OF SOUTHERN ETRURIA
AND THEIR SPECIAL CHARACTERISTICS

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In a discussion of this subject, a brief outline must first be given of the geographical aspects of that district of the Italian peninsula which was known in ancient times as Etruria and occupied by the people who were known historically as Etruscans; because, for geographical as well as historical reasons, a distinction may be made between the cities of northern and of southern Etruria.

Etruria, which constituted the seventh Augustan district of Italy, lay between the rivers Tiber and Arno and the Tyrrhenian sea. This territory, which has altered little in character throughout history, is mountainous and hilly, softly undulating, sometimes with isolated peaks, indented by valleys through which rivers flow, with a coastline which is at times rocky, at times sandy and with some promontories. To the east, the ground rises from north to south following the line of the Apennines, and consists essentially of sandstone; the backbone of the mountains is hard stone of the types known as “serena” and “fetida” (in the district of Chiusi), with variations in grain and colour. The sandstone alternates with strata of scaly clay and clay schists which readily disintegrate, particularly where there is a lack of vegetation. Here and there different kinds of rock occur, e.g. serpentine and ololite.

Within the line of the Apennines extend the valleys of the great rivers, and the AntiApennine hills of Tuscany; here are
found the volcanic zones of southern Tuscany and northern Lazio, and the Tyrrhenian coast with its Maremma and promontories. The AntiApennines include the iron ore hills to the south of the river Cecina, where iron, lignite, galena, cassiterite and boric acid occur. Other characteristic features are the schist rocks of Mount Pisano and of the island of Elba, famous in antiquity for their iron ores; the various marbles to the west of Siena; the presence in other localities of lignite and of copper ores (in the Campigliiese); chalk strata which have the appearance of alabaster (in the Volterrano); sulphur (in the valley of Staggia); and rock-salt (in the Volterrano).

With the exception of the region between Siena and Asciano, which is chalky, the whole AntiApennine complex is rich in vegetation, mainly olive trees, grape vines, cereals and fruit trees, and sometimes cypress trees. In ancient Etruria oak woods must have covered a vast area.

In the south stretches the volcanic zone of present-day Tuscany, dominated by two mountains, true volcanic cones, Cetona and Amiata, with volcanic rocks, gaseous and sulphurous emanations and thermal springs.

Further south is found the volcanic zone of Lazio which constitutes southern Etruria, and which is separated approximately from the rest of Etruria by the Fiora which flows into the Tyrrhenian sea, and the Paglia which joins the river Tiber. This region, which continues beyond the Tiber into the Alban mountains, includes three volcanic complexes which meet at Lake Bolsena (Volsini mountains), Lake Vico (Cimini mountains) and Lake Bracciano (Sabatini mountains). The volcanic manifestations here differ from those in southern Tuscany; instead of trachyte and lava, there is a predominance of tufa which forms sheer summits or peaks, emerging like islands, or plateaux separated from one another by deep gorges. The Tolfa mountains are trachytic, and are rich in minerals already exploited in ancient times, but they form an isolated and well defined complex.
The landscape of this largely tufaceous region is at times mountainous and wild, with dense vegetation consisting of great oaks and chestnut-groves, and then slopes gradually down to the banks of the Tiber, first through thickets, until it reaches the gently undulating grasslands of the Roman countryside.

Organized life was still more concentrated, from earliest times, in these volcanic regions than in the north; primitive villages united in towns, either near the sea or leading to it, and extended their territories until they became true states. They were situated relatively close to one another. At least five of the known twelve cities, Tarquinia, Vulci, Cerveteri, Veio and Volsinii, flourished in southern Etruria. As is well known, these were the most important in Etruria and developed the most rapidly, because of their nearness to the sea, and they decayed just as rapidly in the final phase of Etruscan civilization when Rome extended its domination over their territories and when the dreadful scourge of malaria swept through the Maremma. Nevertheless, the memory of their power, handed on by history, and the limited development of the region during the Middle Ages and in modern times contributed to the preservation of their remains, which still today bear witness to their ancient splendour.

Taking as a point of departure the region confined within the limits of present-day Lazio and Tuscany, I shall describe the cities of southern Etruria and the ancient territory of their states.

The state of Vulci was the most extensive, comprising the stretch of coast between the Uccellina mountains and the source of the Arrone, with a vast hinterland which embraced the valleys of the Albegna and the Fiora and reached as far as the western bank of Lake Bolsena. It was confined to the north by the territory of Roselle, to the east by that of Chiusi, along the upper reaches of the Paglia, and by that of Volsinii; and to the south by the territory of Tarquinia, along the course of the Arrone. Its capital, Vulci, was situated about ten miles from the sea between Montalto di Castro and Canino on a plain of about 150 hectares,
almost vertically above the river Fiora to the south and east, and bounded on the north by a fosse. The site, which today is known as "Pian di Voce", has only recently been identified as that of the ancient city; and still more recently, in 1956, systematic excavation was begun there, following years of careful exploration. Such scientific investigations have revealed the walls of the city, the gates, the internal roads and the houses. These discoveries relate to works dating from the 4th Century B.C. (walls), up to the time of Imperial Rome (roads, buildings, votive objects) but here and there finds have been made which are of an earlier date (6th-5th Century B.C.), e.g. terra-cotta of temple revetments, ceramics, etc. This allows us to hope that we may yet discover Etruscan remains of monuments from the period of greatest splendour of the city, which will make a notable contribution to Etruscology.

Already in the past the vast necropolises of Vulci were well known and yielded their treasures to the various museums of the world. Besides the earlier sporadic discoveries, from the beginning of the 19th Century extensive excavations of the tombs of Vulci led by Lucien Bonaparte, Prince of Canino, in the tufa around the ancient city, yielded to the studious, and still more to the acquisitive, innumerable specimens of Greek and Etruscan pottery, finely worked bronzes, and sculpture in nenfro and peperino. But their aim was not scientific; they hoped and professed that they knew the Etruscans and their civilization, while despoiling their vast cemeteries. Then in 1857 François and Noël des Vergers discovered the "François" tomb with its now famous pictures. The French School, under Gsell, initiated the first systematic excavations in the district of Cavalupo, and the Italians, Bendinelli, Mengarelli and Ferraguti, explored the region of the rock tombs of "Ponte Rotto" and the necropolises of Cavalupo and Osteria. The material, arranged and classified, constitutes a good complex from which it is possible to reconstruct the life of the city from the 9th to the 2nd Century B.C. Thus,
we know for instance—and this has been confirmed by the explorations of 1951–55 which prepared the ground for the latest excavations—that in the most archaic period, in the so-called “Villanovan” and in the “transitional” phases, Vulci consisted of a number of villages. Various necropolises of the 9th–7th Century B.C., with trench and well tombs, have confirmed this, and the equipment discovered at more recent burial sites has furthermore indicated a certain continuity between the culture of the first Iron Age and the Orientalizing period. Elements of both periods are mixed and fused together, giving an individual character to a production which embraces all of the first half of the 7th Century B.C. Perhaps these were the most interesting discoveries, confirmed by findings at other sites in Etruria which are next discussed.

The desolate character of the site of ancient Vulci, the flat and wild landscape only partly altered in recent years by the agrarian transformation of the zone, has always attracted the visitor who ventures into the Maremma and who all at once discovers the remains of the splendour of an ancient civilization; noting the hypogeae tombs excavated on the left bank of the Fiora; la cucumella, a strange tumulus still little studied; the old Roman bridge of Abbadia (Fig. 1), in use up to a late date as an aqueduct and resting perhaps on the tufa pillars of a primitive Etruscan bridge. All these monuments, together with the few Roman remains which are found on the plain and the mediaeval castle situated on the left bank of the Fiora, form a suggestive and interesting complex. From the 6th Century B.C., when it was at the height of its power due to sea traffic and perhaps also to the mineral industries of nearby Mount Amiata, Vulci was gradually forced to relinquish the numerous centres in the hinterland which had flourished, in part, in the Villanovan and Orientalizing periods. Among these were: Suana (Sovana), Statonia (identifiable with Poggio Buco or with Castro) and Maternum (Farnese), along the valley of the Fiora; Aurinia (later known as Saturnia),