Introduction

I. The Animals and Their Chora

Joseph Coleman Carter

This volume of archaeozoological studies marks the renewal of a major program to document more than thirty years of research in the chora of Metaponto (*Fig. I*). Bringing this book to print has been made possible by the generous ongoing support of the Packard Humanities Institute. This study and those to follow are the first serious attempts to deal with the ancient rural economy in the context of Classical Archaeology in South Italy. Despite the tradition of such research by prehistorians, faunal reports even from prehistoric sites have not been standard in this geographical area. With this publication, the Institute of Classical Archaeology (ICA) begins to fill a serious gap in our knowledge of ancient Italy, and hopes to set a precedent for similar studies.

The archaeozoological analysis, an integral part of the studies of the chora of Metaponto, receives the

pride of place at this time because of a special set of circumstances. The full publications of the archaeozoological sites from which these materials originate are underway and will appear soon and at regular intervals in the coming years, but Sándor Bökönyi's study of the fauna from the chora was essentially complete in 1989. There was much more that he would have wished to do, but the main results had already been reached before his work was cut short by his premature death in 1994. Fortunately, his younger colleague, László Bartosiewicz, rose to the challenge of completing the project, and along with his students—Erika Gál, Eva Nyerges, and Anna Biller—brought this book to its present form. Each made their individual contributions, carefully editing, annotating, and illustrating Bökönyi's original manuscript. As a result, this volume is the first of the projected stud-

Figure I Chora of Metaponto. View of a valley in the Tempe Rosse locality between the Bradano and Basento, looking northwest (AP).

ies and will take its place in the series, *The Chora of Metaponto*, after the initial two-volume study, *The Necropoleis* (Carter 1998a), which was published a decade ago. Subsequent volumes will include the farmsites from the chora—several of which furnished important material for this work—and the major sites of Incoronata and Pantanello. The latter, with its Greek sanctuary, Roman tile factory and Late Neolithic site, produced the bulk of the evidence for the fauna of the chora of Metaponto. The dates given here are based on our current understanding of the sites, although further refinement is expected when the final analyses of the ceramic materials—particular the Pantanello complex—are completed.

From early on, the research that ICA began in 1974 was interdisciplinary in nature. How can a countryside or any ancient settlement be fully understood without comprehending the plants and the animals—both wild and domesticated—that populated it? First

came the study of plant remains in 1978, when Lorenzo Costantini began to analyze the extraordinary material emerging from the Greek sanctuary at Pantanello. That project led directly to the study of faunal remains and the participation of Sándor Bökönyi. What followed was a study of the human remains from the Pantanello Necropoleis (and two other burial sites) by Renata and Maciej Henneberg, who eventually analyzed the burials in the urban necropolis and elsewhere in the chora. Subsequent volumes in *The Chora of Metaponto* series will present these palaeobotanical and physical anthropological studies.

While there were delays in finding trained personnel to analyze the skeletal remains, bone material was systematically recovered at every phase of the excavations, beginning with the first excavation at Pantanello in 1974. The animal and human bone material was recorded with the same attention to context as the ceramics and other archaeological materials. This

Figure II Map of the chora of Metaponto, showing sites with faunal collections. Inset shows location of ICA excavation sites (JN/DB).

Site	Date
Pantanello Pits	Late Neolithic
Termitito	Late Bronze Age
Incoronata	8 th –6 th c. BC
Pantanello Complex: Greek and Roman Periods	6 th c. BC–3 rd c. AD
Greek Pit (Mixed Deposit)	6 th c. BC–3 rd c. AD
Pantanello Sanctuary	6 th c. BC–3 rd c. BC
Pantanello Necropolis	6 th c. BC–3 rd c. BC
Pantanello Kiln Deposit	2 nd c. BC–1 st c. AD
Metaponto Sanctuary	4 th c. BC
Sant'Angelo Grieco	6 th c. BC–1 st c. AD (primarily 2 nd c. BC–1 st c. AD)
San Biagio	Late 3 rd –4 th c. AD

Table I Sites in the Chora of Metaponto.

procedure resulted eventually in large representative collections of precisely dated faunal material from all of the sites excavated by ICA in the chora. Careful recording was also practiced by the Soprintendenza for two additional collections—the Late Bronze Age site at Termitito and the drain (*cloaca*) at the Metaponto Sanctuary—that add new temporal and spatial dimensions to this study. Unfortunately, the constraints of time and resources permitted only limited screening for fine bones at a few sites.

Figure III Aerial photograph of Pantanello. *Foreground*, Neolithic Pits; *left*, Greek Sanctuary; *right*, Roman tile factory and Kiln Deposit (A. La Capra/ICA).

Six sites furnished the material for this volume (*Fig. II*; *Table I*). These go as far back as the 3rd millennium BC, beginning with the Late Neolithic site at Pantanello, a village overlooking the Ionian coastal plain and the Basento River (*Fig. III*). Twenty-six pits containing ceramics, fine lithic tools and obsidian, some evidence of copper metallurgy, and a significant faunal collection, were excavated in 1983 and will be the subject of a separate volume in this series.

Bökönyi was also able to examine the faunal collection from the Late Bronze Age site of Termitito (*Fig. IV*), thanks to the generosity of its excavator, the current Director of the Museo Nazionale di Metaponto, Antonio De Siena, who currently dates the deposit to the 13th–12th century BC. The animal bones were part of the fill of a large and deep pit, the substructure of a semi-interred residence and probable administrative center, which crowned a high plateau inland from the coast and immediately to the south of Cavone

Figure IV Aerial photograph of Termitito, with Late Bronze Age site in foreground (courtesy of A. De Siena).

River and the historic chora of Metaponto. Although some information is available in scholarly articles, a full publication of the site is eagerly awaited.

As will be shown in this study, major change in the chora was brought about by the arrival of Greek colonists, who were accompanied by some new as well as superior forms of livestock. This shift is uniquely documented at the site of Incoronata, an Iron Age indigenous village site located inland on a plateau, which had already experienced strong Greek influence in the 7th century and was subsequently occupied

Figure V Aerial photograph of the Iron Age site at Incoronata from the southeast, looking inland (Courtesy of P. Orlandini).

by a colonial sanctuary in the middle of the 6th century BC (*Fig. V*).

The bulk of the material analyzed in the present study was excavated over the course of a dozen campaigns between 1974 and 1991 at the site known as Pantanello (*Fig. III*). This area actually comprises a complex of partially overlapping sites from different periods. The first is the above mentioned Late Neolithic site, overlooking the Basento River to the south on the last and lowest marine terrace before the coastal plain. The second is the rural Greek Sanctuary, active from the 6th century through the 3rd century BC and located on the south slope of the terrace (*Fig. VI–VII*), which produced a wealth of botanical material as well as faunal remains around a spring. Con-

Figure VI Pantanello Sanctuary and spring, lower terrace (CW).

temporary with this was the third site, the Pantanello Necropoleis, located to the west (*Fig. VIII*). The Tile Factory and related Kiln Deposit, just to the west of the prehistoric site, constitute a fourth site. Dating to the 2nd century BC–1st century AD, this area produced the bulk of the animal remains. A fifth location, the Greek Pit, overlaid the Neolithic pits, but the mixed materials could not be dated to a specific period.

Also thanks to Antonio De Siena, Bökönyi was able to include in his study animal remains from the 4th century BC drain (*cloaca*) at the Metaponto Sanctuary (*Fig. IX*). More faunal remains from the period when Rome dominated the territory of the former colony were also collected at two other sites: the large late Republican, early Imperial farmhouse at Sant'Angelo Grieco (*Fig. X*) and the small Late Roman villa at San Biagio (*Fig. XI*), both excavated in the early 1980s (see Carter 2006 for summary discussion of these sites).

Figure VII Reconstruction of the farmhouse built on top of the earlier oikos at the Pantanello Sanctuary. A collecting basin that provided water for animals in the 6th century BC was restored to use in the second half of the 4th century BC (A. Patterson/ICA).

Archaeological investigation of the fauna from the chora of Metaponto has added a new dimension to our knowledge of the ancient countryside by opening up a window on the environment and the ancient economy. Nothing like the present study exists for any other area of southern Italy and for few other areas of the ancient Mediterranean. This is a pioneering effort, and it is indeed fortunate that it was first attempted by a scholar of Bökönyi's caliber. Up to this point, what was known of the animal species that inhabited this territory and most ancient territories was limited to the species mentioned by the ancient authors, and this was specialized knowledge contained in agricultural

Figure VIII The Pantanello Necropoleis (A. La Capra).

treatises, or the casual mention of animals in literary works (Douglas 1928; Thompson 1895). These writings are no substitute for a systematic, statistical, and diachronic study of the actual remains of a single area of the ancient world that covers all of the major periods from prehistory to the Middle Ages. We knew from Bacchylides (*Ode* XI.119–120) that the land beside the Basento was *hippotrophos* or “horse-nurturing.” Now we know, from Bökönyi, that the Metapontine not only raised horses but bred them for size and riding, and we know how these horses compared with horses from many other areas of the ancient world even beyond Greece and Rome.

The ancient countryside comes alive when we learn that it was populated by now rare and extinct

Figure X The site of Sant'Angelo Grieco (CW).

animals, such as ibex and the mighty aurochs. Black vultures, no longer found in Italy, soared in the sky over Metaponto, and their bones were perhaps used to create flutes (see Gál, Chapter 5). Such information satisfies a deep human curiosity to know about man's animal neighbors in the past. But this study also provides primary evidence for the environment, the physical context of human settlement and its changes over time, and for the major shifts in the agricultural pastoral economies of its human communities.

The area around Metaponto supported varied wild fauna, each with its own requirements for survival. It may be surprising to learn that deer were plentiful throughout the three millennia under study. They continued to be an occasional food source even dur-

Figure IX Aerial view of the Metaponto Sanctuary (courtesy of Dieter Mertens/Soprintendenza archeologica della Basilicata).

Figure XI The late Roman farmhouse at San Biagio. The natural terraces become larger closer to the shore (CW).

Figure XII The oldest known alfalfa seed in Italy, ca. 300 BC, Pantanello Sanctuary (L. Costantini).

ing the dense settlement of the chora and its intense cultivation by the Greeks. Hence there were forests in close proximity, and gallery forests probably along the streams. This finding supports that of the pollen record (Carter 2006, 28, Fig. 1.20). Forests of pine, maple, and oak existed throughout the colonial period, despite the demands for fuel to fire the kilns and metal working establishments that proliferated throughout the chora. The low-level of *macchia* (scrub) species (*Pistachia*, *Phillyrea*) in the Archaic period (until the 7th and 6th centuries BC), and their rise in the Classical period (5th and 4th centuries BC) makes sense when we learn that sheep and, especially, goats—browsers that thrived on these plants—were in the majority among domesticated animals in the early colonial period. These animals then lost ground to oxen, the “tractors” of the dominant plow-based agriculture that was the basis of Metapontine prosperity for three centuries or more from the second half of the 6th century onward. With the decline in the number of goats, the *macchia* was then able to make a temporary comeback.

It is interesting to learn that among “the firsts” in this detailed study of the fauna from a Greek site in southern Italy is the earliest known chicken on the peninsula. That these Greeks introduced this typical farmyard species in the west should not be a surprise. It might have happened anywhere along this coast or in Sicily, and perhaps, if similar studies should appear, we shall discover that it did.

Another historically significant find by Bökönyi is that the colonists were responsible for introducing a larger, superior breed of sheep (also identified at In-coronata in a 6th century BC context). These replaced the smaller sheep descended from Neolithic imports three or four millennia earlier. This opens possibilities for a wide range of reflections on the role animal species may have played in marginalizing the indigenous

animal populations and human inhabitants of the Metapontine chora and surrounding areas. “Biological imperialism” was a major aspect in the colonization of the New World (Crosby 1986; Mann 2007). Investigations of the early English settlement at Jamestown, to cite one striking example, show how introduced species can profoundly change a world, albeit the cultural and biological differences between colonizers and colonized in that case were far greater than in this Mediterranean situation. This type of concrete evidence offers a valid alternative source, beyond the few and much debated passages from ancient authors, on the relations between Greek colonists and indigenous populations in their early years of contact.

One of the most original and important contributions of this study, particularly as it regards the Greek and Roman periods, is the discussion of animal husbandry and the conscious breeding of livestock for size. In his analysis of cattle and horse remains, Bökönyi brought to bear a global knowledge of these and other species. He concluded that the Metapontines were raising the largest known cattle in the ancient world in the 2nd century BC, a period that saw, in the famous judgment of no less an historian than Arnold Toynbee, the former Greek colonial areas of southern Italy reduced to a desert occupied only by sheep and slaves (Toynbee 1965). He admitted that the archaeological evidence at the time, the mid-1960s, was slight. Toynbee relied almost exclusively on ancient texts by Roman authors writing two centuries or more after the fact. The faunal remains, through the prism of Bökönyi’s expert knowledge, tell another story.

In an equally unexpected way, the skeleton of a horse from a burial in the Pantanello Necropoleis illuminates another aspect of the history of Magna Graecia. As Bökönyi recognized, after measuring the bones, this was no ordinary equine specimen, a fact underscored by its careful burial in its entirety—much in contrast to the fate of other horses, whose remains, as attested by the Pantanello Kiln Deposit, show that they were exploited for raw materials. Much larger than the norm, this horse was not, in Bökönyi’s first-hand knowledge of these breeds, a Greek, or a Roman, or even a Scythian horse, but most probably a horse of Persian descent. How did it reach Metaponto in southern Italy?

The most likely explanation is that the horse was brought from Greece by one of the Greek mercenaries

(the so-called *condottieri*), many of whom, like Pyrrhus of Epirus, came from the west coast of Greece, called by the Italiote Greeks to help them in their struggles with Lucanians and then the Romans in the late 4th and early 3rd centuries BC. The probable date of the horse burial fits the time period, but what linked the horse and its “condottiero” was the horse’s bloodlines—and its diet.

It is a little commented upon but striking fact that the booty from Alexander’s conquest of the Persian Empire included the prized royal Nisean horses belonging to the Great King and his vassals further east, e.g., in the area of modern Turkmenistan (Arrian, *Anabasis* VIIa.13; Green 1991). The Nisean horses grew to their great size in part because they grazed on pastures of alfalfa—*medica* in Latin, from its Medean origin. This wonder crop was introduced to Greece from Persia, supposedly at the time of the Persian Wars in the early 5th century BC. Our earliest literary source for its use in Italy is the 1st century AD Roman agricultural writer, Columella, who singles this fodder out for praise: “*pabulorum optima sunt medica et faenum Graecum*” (*de Re Rustica* 2.7.2). The first identified physical evidence comes from a late 4th century BC deposit at the Pantanello Sanctuary, thanks to the paleobotanical investigation by Costantini (*Fig. XII*). It may, on the one hand, be pure coincidence that the Persian horse and its favorite food appear at the same site at the same time. On the other hand, it might reflect the undeveloped state of biological research in Classical Archaeology. The evidence may be there, but trained eyes are needed to see it.

And so there is good reason to think that the occupant of Tomb 316 at Pantanello was the descendant of one of these Persian horses. Historians have claimed that there is not a shred of documentary

evidence linking Pyrrhus and his troops with Metaponto, despite the fact that the Epiriote had fought a great battle with the Romans in 280 BC at Heraklea just 20 km to the south. Now we may say that there is at least a biological link between Metaponto and these momentous events. In sum, it becomes apparent how many previously invisible details archaeozoologists can show archaeologists and historians who seek to understand the canvas of ancient history.

Working with Sándor was always a learning experience. What impressed the younger members of the team especially was his deep seriousness and enthusiasm for his work, both reflected in his disciplined habits. His work day began at 9:00 a.m. and he maintained the same erect position at his desk, almost—except for the occasional ice cream break—without interruption until 6:00 p.m., day after day. There was the story that he told about examining 30,000 bones in one collection just to be sure that there was not one pig bone among them. It rang true, coming from him. There was no small talk, no wasted time in the laboratory—the “Banca”—during the sacred hours of work (*Fig. XIII*). But after six, around the dinner table and with a glass of wine, he was another man, a fount of stories reflecting a long experience of places—many far from the common experience of the group—and of people, often with a surprising humorous outcome. He had met and known many, yet in his congeniality the seriousness about science, intellectual honesty, and friends was only just below the surface, and always with warmth. I, for one, have met few whose company and companionship I have enjoyed as much.

Joseph Coleman Carter
Austin
April 21, 2008

II. Sándor Bökönyi and Archaeozoology

László Bartosiewicz

**“...a man of many devices,
who wandered full many ways...”¹**

Sándor Bökönyi (1926–1994), whose studies form the core of this book, was one of the founders of modern archaeozoology during its world-wide emergence after World War II. This volume is both a tribute to and a continuation of his work, a token of appreciation of his persona as well as his scholarly achievements. As his former student I owe him a great debt; therefore it is difficult—and perhaps not even imperative—to be objective in a short introduction. This concise but informal biography may provide this book with a personal perspective.

The interests of an archaeozoologist are defined along the dimensions of chronology, geography, and animal species. These three vary spontaneously in one’s work, but their combination is inevitably influenced by circumstances. A scholar’s affinity to a subject is shaped by tutors, personal/professional contacts within the research community, and physical access to animal bone assemblages. The interplay between these factors may be best understood against the backdrop of broader cultural, political, and even economic events that limit or aid the realization of one’s raw talent as well as conscious scholarly aspirations.

The list of publications by Sándor Bökönyi (see References), member of the prestigious Hungarian Academy of Sciences, shows that 10 percent of this rich scholarly heritage—21 out of 204—was conceived in cooperation with colleagues in Italy. His analysis of animal remains from the chora of Metaponto thus forms part of a long tradition. But how did a Hungarian researcher find his way to the shore of the Ionian Sea at the southern tip of the Apennine Peninsula?

First Came the Horses...

He was born in the village of Vállaj on the edge of the Ecsed Marshland in the Great Hungarian Plain, a settlement repeatedly forced into a marginal position during its history. In the 16th–17th century it lay on the frontier of the Ottoman Empire, while the 1920 Trianon Peace Treaty placed it on the present-day border

with Romania. Vállaj lay near the famous “puszta,” a rather desolate plain that has relied on extensive animal keeping for centuries. Environmental and historical factors thus both contributed to the perception of these rural backwaters as the “Wild East,” perpetuated since the 19th century by romantic writers. Sándor, the talented son of the local school teacher, went from this traditional milieu to the high school of the Catholic Piarist order in the regional center, Debrecen. It is perhaps not surprising that, following graduation in 1944, he attended the Veterinary Faculty of the Palatine Joseph University in Budapest.

He never pursued a veterinary practice, however. In 1949, while still a student, he started working as a volunteer in the Museum of Natural History and the National Center for Museums and Monuments in Budapest, where he encountered a series of horse skulls and skeletons in storage belonging to the Migration Period (aka “Barbarian Invasion”) ca. AD 300 to 700. These spectacular remains, with strong romantic and historical connotations, tended to be collected even before attention was paid to “ordinary” animal bones during excavations. The driving force behind the development of veterinary medicine since antiquity has been curing horses.² Horse finds, therefore, were most directly relevant to his skills as a graduate student, offering him an opportunity to put his veterinary expertise to the service of archaeology.

In reading about the horses, mules, and hinnies of the chora of Metaponto, the ancient compilation *Mulomedicina* by Vegetius Renatus (circa the 4th century AD) inevitably springs to mind. This synthesis of Greek veterinary treatises for Roman use offered a glimpse beyond Italy. Vegetius discussed horse keeping by “barbarians,” tackling issues of intercultural influence resulting from colonial contacts with non-Roman, indigeneous horsemanship. What could be more relevant to the horses of Magna Grecia than the find of a complete horse skeleton in Tomb 316 at the Pantanello necropolis (Carter 1998b, 135) or

¹ Homer, *Odyssey* 1.1

² This is evident in scientific treatises, such as Xenophon’s *Art of Horsemanship*, Aristotle’s *Historia Animalium*, the *De Agricultura* of Cato, and Varro’s *De Re Rustica* III.

Figure XIII Archaeozoological finds from an exhibition in Hungary, early 1960s.

the study of variability in Roman period horses from the Pantanello Kiln Deposit? His chapters reveal that Sándor relied extensively on his early, hands-on experience with Scythian horse remains (Bökönyi 1952; 1954) in evaluating these animals.

Diffusion and Local Domestication

Because his early research had proven important, Sándor was granted a position at the Department of Archaeology of the Hungarian National Museum in 1951, where he established the Archaeozoological Collections (*Fig. XIV*). The chronological scope of his research broadened to include an ever increasing number of prehistoric sites. This was not long after the realization by local archaeologists that food production must have arrived to the Carpathian Basin at the time of the Early Neolithic Körös culture. The bones of sheep and goat, not native to Europe, offered indubitable zoological evidence to support this hypothesis. Although the detailed roles played by diffusion, cultural transmission, and acculturation in the emergence of the Early Neolithic in Hungary are still being scrutinized (see Whittle 2007), Sándor contributed a key element to the discussion at its onset. As a result of his internationally acknowledged involvement in domestication research, he was invited to the Archaeological Institute of the Hungarian Academy of Sciences in 1973 to join a think-tank of prominent prehistorians of the time.

The area of modern-day Hungary, the Carpathian Basin, has served as an important geopolitical corridor between East and West since the early Neolithic. The resulting tumultuous history has made theories of diffusion and even invasion tangible and popular among Hungarian archaeologists. Having recognized

mobility as represented in the bones of sheep and goat, Sándor dialectically argued for local domestication, especially in the case of cattle and domestic pig, the wild forms of which lived in the area. This is a recurrent theme in the evaluation of the Metaponto finds as well. Recently, however, there has been an effort to distinguish between the origins of these two species: while cross-breeding between wild and domestic pig is well known from the ethnographic record, large scale local domestication of the fierce

aurochs seems to have been less likely than previously thought.

Window on the World

During the first third of his career, publications by Sándor dealt with archaeological sites in Hungary, reflecting only sporadic contacts in countries within the “East-Block” (Bökönyi and Kubasiewicz 1961; Bökönyi 1962a). With the slow political thawing in the wake of the Cold War in Hungary, his first work in Austria (Bökönyi 1965) was published within a decade after the 1956 popular uprising. His international activities, however, were really launched by a Ford Fellowship to the US in 1966–1967, followed by

Figure XIV Sándor Bökönyi in Oman, Jordan, 1976.

a six month study trip to Iraq in 1969, a year after the Arab Socialist Baath Party came to power and relations with Hungary improved. Studying important assemblages from southwest Asia during these visits spurred his interest in the region (*Fig. XV*).

In the Debrecen high school, Latin and German were mandatory studies. German was the foreign language of choice in the pre-war school system and until recently remained of fundamental importance across Central Europe. This was highly fortunate for Sándor, because classical 19th century archaeozoology had also emerged in countries where German was the lingua franca of scholarly communication, including Denmark and Switzerland (Forchhammer et al. 1851; Rüttimeyer 1861). A 1966 trip to the US also proved important for his career as it not only offered Sándor a new direction for research but also added the command of English to his foreign language skills. Equipped to read, write, and negotiate in both German and English, he was able to link two separate linguistic spheres in the academic world.

During the 1970s, the Great Hungarian Plain—the westernmost steppe region in Europe and the northwestern border zone of the distribution of prehistoric tell settlements—attracted increasing world interest, putting Sándor much in demand. His research linked the traditional “Germanic” school of archaeozoology to the Anglophonic prehistoric investigations in the Middle East that had started to rely more heavily on the use of natural sciences (Braidwood 1957).

Anglo-American archaeological projects in the former Yugoslavia were another intellectual market for his professional skills. Eventually, his systematic investigations into the emergence of animal husbandry covered an entire region between Iran (Bökönyi and Bartosiewicz 2000), relevant areas in the Near East, the Balkans, the Apennine Peninsula, and ultimately France (Bökönyi and Bartosiewicz 1999).

The Long Way to Italy

These creative years, spanning the last two thirds of Sándor’s career, yielded over 80% of his publications. Faunal reports from Italy began appearing in 1982. These research opportunities, however, largely originated in southwest Asia, where Sándor was employed as faunal analyst at Italian projects from Baluchistan to Anatolia and the Arab Peninsula, and where he met Lorenzo Costantini, already involved as a paleobotanist on the Metaponto project. The 1979 Iranian Revolution was of direct relevance to his career: although it forced Western expeditions out of that country, members maintained working contacts, which accounts for some of Sándor’s research in Italy. He also taught as a visiting professor in Rome during 1983. This, with Costantini’s introduction, led him to Metaponto.

The years highlighted by publications related to Italy (*Fig. XVI*) coincide with an important period in Sándor’s career. In 1981 he was appointed director to the Archaeological Institute of the Hungarian Acad-

Figure XV The diachronic distribution of Sándor Bökönyi’s publications relevant to Italian archaeology.

Figure XVI Sándor Bökönyi's former office in the Archaeological Institute, Budapest.

emy of Sciences and served 3 consecutive four year terms, supported by a democratic re-election in 1989 (*Fig. XVII*). Owing to his scientific training and research experience in the United States,³ he was seen as a representative of “New Archaeology.” This intellectual trend could be seamlessly combined with the Marxist/historical approach heralded by V. G. Childe which was influential in Hungary.

The appointment was also an acknowledgment of Sándor Bökönyi's international stature that included working contacts in southwest Asia with his colleagues from Italy. One of the ways he invested these valuable connections was that he helped set up the first-ever Hungarian archaeological expedition on Italian soil. Excavations began in 1983 at the late 1st–3rd century AD Imperial period villa in San Potito di Ovindoli (Bökönyi 1986). This cooperative project has run successfully for a quarter of a century.

Where is Metaponto?

Naturally, this question does not concern the geographical location, but the academic position of this

unique set of archaeological sites in Sándor Bökönyi's research. The answer is simple: it was the most complex assemblage he studied in Italy, rivalled in size only by the large Bronze Age settlement of Coppa Nevigata (Bökönyi and Siracusano 1987).

As an introduction to this volume, the size and zoological diversity of these sites is worth reviewing. When the number of animal taxa⁴ is plotted against the number of bone finds, basic characteristics of the material from the chora of Metaponto may be recognized (*Fig. XVIII*). They form a set of smaller and a set of larger assemblages respectively. The taxonomic richness—that is, the number of animals recognized—tends to increase with assemblage size. This trend is shown by a degressive curve in the graph drawn on the basis of all assemblages in the figure.⁵ Assemblages above this line are rich in species relative to their sizes. Those below are less diverse than would be expected on the basis of their sizes.

While the faunal samples from smaller sites (with fewer than 1000 identifiable bones) largely fall onto the trend line, the unusually rich, large sites from Pantanello (especially from the 7th–3rd c. BC Greek sanctuary) contained bones from a whole range of curious wild animals. The opposite holds true for the 7th–6th century BC settlement of Incoronata, where the large assemblage is characterized by a monotonous repertoire of a few animal species.

The sizes and richness of these faunal assemblages convincingly demonstrate that the work Sándor invested in this material, in a way, crowned his research in Italy. It was especially fortunate that he found reliable research partners and good company in the team headed by Joseph Coleman Carter, who also became an appreciated friend.

What is very special about this volume is that it is entirely devoted to animal remains from a complex range of sites in one geographical area. Sándor addressed Italian archaeologists in the Museo Pigorini of Rome on the 30th of May, 1983 (*Fig. XIX*). Referring to Forchhammer's Danish research team of a prehistorian, a geologist, and a zoologist who inadvertently founded archaeozoology in 1851, he exclaimed:

⁴ Although the remains of different animal classes, such as mammals, birds, and fish, behave differently in such comparisons (Bartosiewicz and Gál 2007), they were pooled for the sake of simplicity in Figure XVIII.

⁵ Mathematically, this can be described with the exponential equation: $y = 2.702 \times 0.248^x$ ($r = 0.796$, $df=14$, $P \leq 0.01$). These parameters are indicative of a close relationship between the size and diversity of these assemblages.

³ His numerous guest professorships included two semesters of teaching at the University of California Los Angeles in 1970–1971, at a time when “New Archaeology” came to fruition in the United States.

Figure XVII The size and taxonomic richness of faunal assemblages from South Italy published by Sándor Bökönyi.

“I just cannot believe that 140 years later the necessity of such cooperations should be stressed and stressed again” (Bökönyi 1992, 400).

A quarter of a century later, almost 160 years after that famous alliance, the director of a major ar-

chaeological project at Metaponto devoted resources, both material and intellectual, to the very same type of multidisciplinary inquiry. The posthumous publication of this work is likewise impressive. Rather than abandoning the manuscript after so many years, as often happens after someone passes away, Professor Carter involved a new generation of Hungarian archaeozoologists. They have digitalized, updated, and enhanced the research with special aspects of archaeozoology (taphonomy, bone manufacturing) that were less developed at the time Sándor worked at the site. The materials were illustrated by a trained bone expert, as he would have wished.

This book stands for continuity: not only the spectacular continuity of ancient civilizations along the picturesque shores lapped by the Ionian Sea, where the sight of grazing flocks, scent of strawberries, and the night call of little owls in pine trees made Sándor feel very much at home; but also the intrinsic continuity of scholarly thought and cooperation that has linked three generations of archaeozoologists in this pioneering study of the ancient countryside.

László Bartosiewicz
April, 2008

Figure XVIII Sándor Bökönyi lecturing in Rome, May 1983.