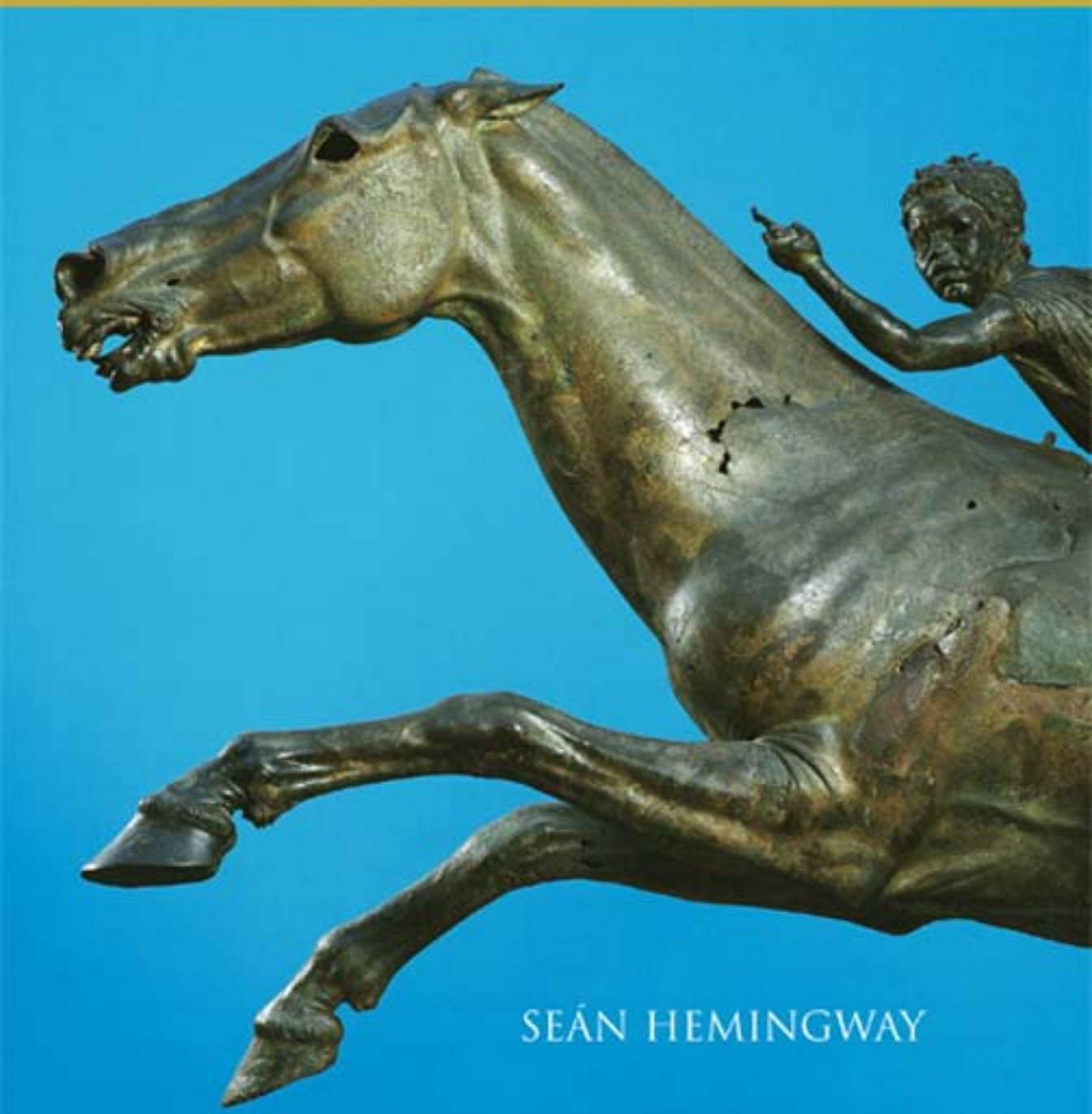
THE HORSE AND JOCKEY FROM ARTEMISION

A Bronze Equestrian Monument of the Hellenistic Period



SEÁN HEMINGWAY

THE HORSE AND JOCKEY FROM ARTEMISION

HELLENISTIC CULTURE AND SOCIETY

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All color photographs except for Plate 4 are by Craig and Marie Mauzy, mauzy@otenet.gr.

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PREFACE

The idea for this book first came out of a seminar I took on Greek bronze statuary held at Bryn Mawr College in 1992 under the joint instruction of Brunilde Sismondo Ridgway and Kim J. Hartswick. I only began work, however, in 1994, while I was a Fulbright Scholar at the American School of Classical Studies in Athens, when I received permission from the National Archaeological Museum in Athens to study the Artemision bronzes as the topic of my doctoral dissertation for Bryn Mawr College (completed in 1997). Preliminary results from this study were first presented at the Archaeological Institute of America's annual meetings in 1995 and 1998. Some of the technical results were presented in a paper at the Thirteenth International Bronze Congress held at Harvard University, Cambridge, Massachusetts, in 1996 and published in the first volume of the proceedings of the conference (Hemingway 2000). An earlier summary of the evidence for the Horse's lost bridle was published as an article by the author in *Stephanos: Studies in Honor of Brunilde Sismondo Ridgway* (Philadelphia, 1998). I am grateful to the University of Pennsylvania Press and the *Journal of Roman Archaeology* for allowing me to print revised versions of the above-mentioned texts here.

There are many people who have contributed to the realization of this book and to whom I owe my appreciation. Since this work is a direct adaptation of my doctoral dissertation, I must begin by thanking my Ph.D. advisor, Professor Brunilde S. Ridgway of Bryn Mawr College, for her untiring guidance and support from near and far. This study could not have been undertaken without the kind and enduring assistance of many people at the National Archaeological Museum in Athens. In particular, I wish to express my gratitude to Dr. Katie Demakopoulou, Dr. Helen Andreopoulou-Mangou, the late Dr. Artemis Onasoglou, Dr. Katerina Rhomaiopoulou, and Dr. Olga Tzachou-Alexandri. I am indebted to Carol C. Mattusch for many thoughtful conversations and for her insightful commentary on a preliminary draft. Special thanks go to Kate Toll, Rose Vekony, and Peter Dreyer, my editors at the University of California Press, Berkeley, and to Steven Lattimore and anonymous readers at Berkeley for their comments.

My work has profited from discussions and correspondence with numerous scholars, including Carmen Arnold-Biucchi, Willard Bascom, Judith Binder, John McK. Camp, Alice Donohue, Jasper Gaunt, Richard Hamilton, Caroline Houser, Donna Kurtz, Mabel Lang, Stephen Lattimore, Alexandros Mantis, Stephen Miller, Stella Miller-Collett, Olga Palagia, Anthony Raubitschek, R. R. R. Smith, Andrew Stewart, Ron Stroud, and James C. Wright, as well as with my colleagues at Bryn Mawr and the American School of Classical Studies, especially Tom Brogan, Kevin Daly, Ann-Marie Knoblauch, Angeliki Kosmopoulou, Geralyn Lederman, Marc Mancuso, Tom Milbank, Brian Shelburne, and Natalia Vogeikoff-Brogan.

I thank my colleagues at the Harvard University Art Museums for their unbending support of intellectual pursuits, especially David Mitten, Amy Brauer, and Aaron Paul. I wish to thank James Cuno, director of the Harvard University Art Museums, and Henry Lie, director of the Straus Center for Conservation, for permission to take the Fogg Art Museum's portable endoscope to the Athens National Archaeological Museum. I also thank Philippe de Montebello, director of the Metropolitan Museum of Art, New York, and my colleagues in the Department of Greek and Roman Art, especially Carlos A. Picón, Dietrich von Bothmer, Joan R. Mertens, Elizabeth Milleker, Christopher Lightfoot, and Patricia Gilkison. For assistance with the Kastriotis papers at the Gennadius Library of the American School of Classical Studies at Athens, I thank Maria Voltera. For technical discussions of a less academic nature, I thank the bronze sculptors Chris Solomis and Roger Geier and the horse veterinarian John Macilhatten. The opinions expressed within this book and any errors remain my own.

I owe a debt of gratitude to the staffs of the Blegen Library and the Gennadius Library of the American School of Classical Studies, the Art and Archaeology Library of Bryn Mawr College, the Fine Arts and Widener Libraries of Harvard University, and Brian Kenney and Mark Santangelo, librarians for the Onassis Library for Hellenic and Roman Art at the Metropolitan Museum of Art, for their assistance during the course of my work.

For assistance with photography or for providing photographs that accompany the text, I thank the American Numismatic Society of New York, the American School of Classical Studies, the Athens National Archaeological Museum, the Athens Epigraphical Museum, the Boston Museum of Fine Arts, the British Museum in London, the Deutsches Archäologisches Institut in Athens, the Deutsches Archäologisches Institut in Rome, David Finn, the J. Paul Getty Museum in Malibu, the Louvre, Stephen A. MacGillivray, Craig and Marie Mauzy, the Metropolitan Museum of Art in New York, and the Walters Art Gallery in Baltimore.

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manner: the Graduate School of Arts and Sciences of Bryn Mawr College, the United States Educational Foundation in Greece, the American School of Classical Studies, the 1984 Foundation, and the Giles Whiting Foundation. I especially thank the Metropolitan Museum of Art for a Theodore Rousseau Memorial Travel Grant to complete the final revisions of the text and a grant from the James Haller and Mary Hyde Ottaway Fund in support of the illustrations, most notably the color signature.

I thank my family for their love and support, and especially my wife, Colette, without whom this work could not have been completed.

NOTE: For reasons of clarity, the Horse and Jockey of the Horse and Jockey Group from Artemision are always spelled with initial capitals in the text. Whenever possible I have used the Greek form of names (e.g., Patroklos), unless their English form is so common that it might be confusing not to do so (e.g., Athens, Syracuse). In transliterating Greek words, primarily equestrian events, I have used ch for χ, e for η, and y for υ unless the latter occurs in a diphthong.

1

HELLENISTIC BRONZE STATUARY: AN INTRODUCTION

Hellenistic sculptures are powerful in their immediacy and vivid portrayals, be they of men, women, heroes, gods, or beasts. While Hellenistic bronzes may lack the pure idealism and restraint of the greatest sculptures of the Classical period, even the very fragmentary and minute selection that we have—the result of chance preservation—surprises us in its diversity and technical skill, high by the standards of any era. This book is an in-depth study of one of the few original bronze statue groups of the Hellenistic Age preserved today: the Horse and Jockey Group from Artemision, now a centerpiece of the National Archaeological Museum in Athens. Before turning to the Artemision Group itself (Fig. 1), which will be discussed in detail in the subsequent chapters, let us begin by focusing on primary issues involving the study of Hellenistic bronze statuary through an examination of original works. By no means does this purport to be an overview of the history of Hellenistic sculpture, for which there are a number of recent and more comprehensive studies;[1] rather, it is an introduction to this extraordinary corpus of bronzes, which has seldom been treated as a group. The following text underscores the complexity of issues surrounding our understanding of Hellenistic bronze statuary and the important place that the Artemision Horse and Jockey Group holds as one of the few original large-scale bronze works securely dated to this period.

THE HELLENISTIC PERIOD: HISTORICAL BACKGROUND

Alexander the Great (356–323 B.C.) changed the face of the ancient world. Following in the footsteps of his father, the Macedonian king Philip II (382–336

FIGURE 1. Detail of the Horse and Jockey Group from Artemision. Photo by David Finn, courtesy David Finn.

B.C.), who had conquered all of Greece in 348 at the battle of Chaeroneia, Alexander crossed the Hellespont into Asia with his army and hurled his spear into the continent, claiming it all as "spear-won." In a remarkable series of battles, beginning with the victory at Gaugamela in 331 B.C., he conquered lands as far east as the Indus River Valley, bringing Greeks into contact with most of the cultures of the known world. In the end, he was defeated only by his own troops, who insisted on returning home. In 323 B.C., he died of a fever in Babylon while making the journey home, and his body was embalmed and carried in a magnificent carriage all the way to Alexandria, where he was buried. The death of Alexander the Great marks the traditional beginning of the Hellenistic period. Alexander's generals, known as the Diodochoi, or Successors, divided the many lands of his empire into kingdoms of their own, from which several dynasties emerged: the Seleukids in the Near East, the Ptolemies in Egypt, and the Antigonids in Macedonia. In the first half of the third century B.C., smaller kingdoms broke off from the Seleukid empire and established their independence. Northern and central Anatolia were divided into Bithynia, Pontus, and Cappadocia, each ruled by a local dynasty left over from Achaemenid times but infused with Greek elements. The Attalid royal family of the great city-state of Pergamon came to rule much of western Asia Minor, and Bactria, to the far

east, was ruled by a rich and powerful dynasty of Greek and Macedonian descent. Hellenistic kingship remained the dominant political form in the Greek east for nearly three centuries following the rule of Alexander the Great. Royal families became prominent patrons of the arts, practiced in numerous artistic centers. It was out of this greatly expanded Greek world that Hellenistic art and culture arose. The traditional end of the Hellenistic period is 31 B.C., the date of the battle of Actium, where Octavian, later known as the emperor Augustus, defeated Mark Antony's fleet and ended the independent rule of the Ptolemies. The Ptolemaic dynasty, however, was the very last Hellenistic kingdom to fall to Rome. Roman intervention and conquest in the east was a long and slow process, which began as early as 229 B.C., when the first Roman army crossed the Adriatic. In 146 B.C., the Roman consul Mummius and his army sacked Corinth, and Macedonia and Illyria were annexed to the Roman Empire. Other city-states, such as Athens, and their outlying regions maintained at least nominal independence until the time of Augustus.[2]

MAKING HELLENISTIC BRONZE STATUARY: PRINCIPLES AND PRACTICES

At least since the early fifth century B.C., the Greeks had favored bronze for freestanding statuary, and most of the best sculptors in the Classical and Hellenistic periods worked in this medium. For Hellenistic sculpture, however, we have little in the way of an art historical framework. Unlike Classical Greek sculpture, it was not favored by Roman writers, and little contemporary commentary on art, in general, is preserved—although it surely existed.[3] From the titles of treatises of the Archaic and Classical periods, we know that Greek sculptors thought about their work and reflected on their practices. Literacy was widespread in the Greek world by the late fourth century B.C.,[4] and public libraries were a new and popular institution of the Hellenistic Age. Great libraries, such as those at Pergamon and Alexandria, amassed thousands of volumes, encouraging scholarly study and the pursuit of knowledge. These learned institutions, repositories of the first conscious European art histories, undoubtedly housed many literary works by contemporary artists lost to us today. The pronounced development of art patronage in the Hellenistic period by royalty and the growing upper and middle classes of educated individuals fostered art connoisseurship. Consequently, the increased demand for bronze sculpture led to new and innovative sculptural types.

Lost-wax Casting

By a process of trial and error, ancient foundry workers discovered that bronze—an alloy typically composed of 90 percent copper and 10 percent tin—

is particularly well suited to making statuary. Aside from its inherent tensile strength and lustrous beauty, it has a lower melting point than pure copper and remains liquid longer when filling a mold. It therefore produces a better casting than pure copper. While there were many sources for copper around the Mediterranean basin in antiquity, the island of Cyprus, whose Latin name was given by the Romans to the metal, which they called *Cyprium aes* (literally "metal of Cyprus"), was among the most important. Tin sources, on the other hand, were less common, and tin had to be imported from places as far away from mainland Greece as Cornwall in Britain, southwestern Turkey, and even Afghanistan. Variations of the tin bronze alloy were adopted, and the Roman writer Pliny (*HN* 34.8–10) tells us that the alloys invented on the islands of Delos and Aegina were particularly favored by the ancient Greeks, as was the bronze of Corinth, which contained small percentages of silver and gold.[5]

Greek sculptors and founders developed the techniques of bronze casting and joining to a level of technical achievement previously unmatched. Lost-wax casting was the general technique used by craftsmen to make bronze statuary in the Hellenistic period. There are three methods for casting by the lost-wax process: solid lost-wax casting, hollow lost-wax casting by the direct process, and hollow lost-wax casting by the indirect process. All three methods are closely related. The first and simplest method, solid lost-wax casting, was generally used for small-scale objects such as figurines.[6] Occasionally, locks of hair and other features of large-scale statues were solid cast and then attached to hollow castings. The direct method was clearly used in the Greek Archaic (ca. 600–480 B.C.) and Early Classical (ca. 480–450 B.C.) periods as a primary technique for making small statuary. By the Hellenistic period, it was usually used in conjunction with the indirect process. The indirect process was by far the most commonly used method for producing large-scale statues in classical antiquity. The steps involved in casting by the direct and indirect methods are each discussed in turn below.

The essential materials used by the Greeks for the lost-wax casting process, besides bronze itself, were fine beeswax, which was cultivated in antiquity, and clay for the model and mold. Plaster was also sometimes used for models and the cores of statues and statuettes in the Hellenistic period.

Hollow Lost-wax Casting: The Direct Method

Since the physical properties of bronze do not permit large solid castings, the use of solid wax models, that is, solid lost-wax casting, limited the founder to casting very small figures. For example, it is physically possible to carry only a limited amount of molten bronze—two men can lift and pour about 150 lbs. Furthermore, the founder can keep the bronze fluid for a short period of time

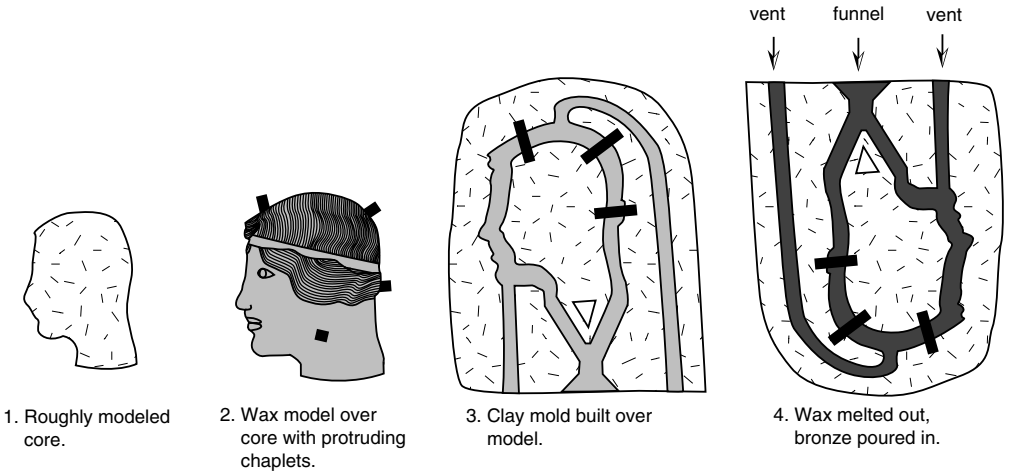


FIGURE 2.1–4. Hollow lost-wax casting: the direct method. Drawing by the author.

only. If bronze is not cast at a uniform or nearly uniform thickness, it is likely to crack and become deformed as it cools. To deal with these problems, the ancient Greeks adopted the process of hollow lost-wax casting. A small head of a youth (Fig. 2.1–4) illustrates this technique.

To cast a hollow bronze statue using the direct method, the sculptor first builds up a clay core of the approximate size and shape of the intended statue (see Fig. 2.1). In the case of a large statue, an armature, usually made of iron rods, is used to help stabilize the core. The core is then coated with wax, which is modeled into its finished form; any final details can be shaped or carved at this time. It is important to recognize that this is an additive process by which the sculptor can endlessly manipulate the object's form. Such a technique is in contrast to the subtractive process of stone sculpting, where the sculptor must think in terms of negative space, because once stone is removed, it cannot be replaced. When the wax model is finished, the statue is then inverted to facilitate the flow of the metal through all its parts. Wax tubes, or gates, are attached at key positions for pouring the molten metal. Additional tubes are fitted to the model and act as vents for hot gases that rise to the surface at the time of casting, ensuring a uniform casting. The wax model is linked to the inner clay core by iron dowels, known as chaplets (see Fig. 2.2), which protrude far enough to penetrate the outer layer of clay added in the next step.

The entire model is then coated with fine clay to ensure a good cast from the

FIGURE 3. Small bronze statue of a boy in eastern costume. Late Hellenistic or Roman. Second half of the first century B.C. The Metropolitan Museum of Art, New York, Edith Perry Chapman Fund, 1949 (49.11.3). Height 64 cm. Courtesy The Metropolitan Museum of Art.

mold. Fine clay will warp less than coarse clay when the mold dries and will render the details of the wax model faithfully. Finally, both the model and pouring channels are completely covered or invested in a coarse outer layer of clay (see Fig. 2.3). The invested model is then heated to remove all the wax, creating a hollow matrix, and reheated for a longer period of time in order to bake the clay and burn out any wax residue. The mold is then ready to receive bronze that has been melted in a crucible. The copper alloy is poured into the mold through the funnel until the entire matrix has been filled (see Fig. 2.4). When the bronze has cooled sufficiently, the mold is broken open and the bronze statue is ready for the finishing processes.

Hollow Lost-wax Casting: The Indirect Method

Indirect lost-wax casting is especially well suited to piece-casting large-scale statuary. While it is technically possible to cast an entire statue as a unit, there is no evidence that this was done in antiquity. So difficult is it that even during the height of bronze-making activity in the Renaissance, only a few master sculptors—such as Benvenuto Cellini—attempted it, largely in order to prove that it could be done.[7]

FIGURE 4. Small bronze statue of a boy, twin to the one in Fig. 3. Late Hellenistic or Roman. Second half of the first century B.C. The Walters Art Gallery, Baltimore (54.1330). Height 62 cm. Courtesy The Walters Art Gallery.

Typically, large-scale sculpture was cast in several pieces, such as the head, torso, arms, and legs. Fundamental to the indirect process is the use of a master model from which the molds are made. Pliny (*HN* 35.153) attributes the first use of master models, of both plaster and clay, in lost-wax casting to Lysistratos of Sikyon, the brother of the famous fourth-century B.C. sculptor Lysippos, although the tradition is undoubtedly more ancient.[8] Excavation of an early imperial sculptors' workshop at Baiae near Naples has yielded many fragmentary plaster casts of Greek statues, which may include a few recognizable fragments of early Hellenistic works used as models for bronze and marble statues.[9]

The great advantage of the indirect method is that the original model is not lost in the casting process. It is therefore possible to recast sections, if necessary, and to make a series of the same statue. Despite the great paucity of existing original bronze statues from antiquity, recent research has identified bronze statues made from the same original model.[10] Striking examples are two bronze statuettes of boys in eastern costume (Figs. 3–4); detailed measurements show that they were made from the same master model.[11] Popular statue types, such as the Sleeping Eros, were also made in a variety of scales. A large-scale bronze from Rhodes (Fig. 5) is a particularly fine example of a statue that was also

FIGURE 5. Bronze statue of sleeping Eros, said to be from Rhodes. Third or second century B.C. The Metropolitan Museum of Art, New York, Rogers Fund, 1943 (43.11.4). Length of figure 85.2 cm. Courtesy The Metropolitan Museum of Art.

FIGURE 6. Bronze statuette of sleeping Eros. Hellenistic or Roman. The Metropolitan Museum of Art, New York, Rogers Fund, 1913 (13.225.2). Length of figure 21 cm. Courtesy The Metropolitan Museum of Art.

produced at much smaller scales in bronze (Fig. 6) and in other media.[12] Variations could easily be created such as reversing the pose (compare Figs. 5–6) or other more subtle changes through the manipulation of the wax model. Because of these advantages, the majority of all large-scale Hellenistic bronze statues were made using the indirect method.

In the indirect casting process, here illustrated with an idealized statue of a youth, a model for the statue is made (Fig. 7.1) in the sculptor's preferred medium. A mold, known as a master mold, is then pressed around the model to replicate its form. This mold is made in as few sections as can be removed without damaging any undercut modeling. In the case of a simple form such as an open hand (Fig. 7.1–2), the mold could have been made in two parts. After drying, the individual pieces of the mold are reassembled and secured together. Each mold segment is lined with a layer of beeswax, which may be brushed on, applied in slabs, or poured in a molten state (Fig. 7.3), then slushed around the interior and poured out (Fig. 7.4), leaving a thin layer.

After the wax has cooled, the master mold is removed to reveal the wax working model. At this point, the bronze sculptor checks to see that the wax model is accurate. If any features were disfigured in the transfer from the master model, they can still easily be corrected in the wax before the statue is committed to bronze. The sculptor then renders additional details in the wax, such as fingernails (Fig. 7.5). The wax model is filled with a clay core, which may be applied in layers, each one dried before the next is added. Several auxiliary measures are taken to ensure that the core and clay investment do not slip when the wax is melted out. An armature, usually consisting of thick iron rods, might be inserted to stabilize and strengthen the core. As in the direct method, chaplets of iron or bronze are stuck into the core at several points through the wax model (Fig. 7.5). The chaplet heads are left exposed in order to create a bond between the core and the investment mold.

A wax gate system, which will be used for the funnel, channels, and vents, is attached to the model (Fig. 7.6). The entire ensemble is invested with one or more layers of clay (Fig. 7.7). The layer closest to the wax model consists of a fine clay, which may be brushed on, and the outer layer(s) are of coarser clay. As in the direct method, the mold is heated and the wax poured out (Fig. 7.7). It is then baked at a high temperature. Finally, the mold is reheated and molten metal is poured in. When this metal cools, the mold is broken open (Fig. 7.8) to reveal the cast bronze hand of the statue (Fig. 7.9).

Finishing and Joining Techniques

When a mold is broken open, the surface of the bronze, known as a casting skin, often has small imperfections that need to be removed in order to achieve

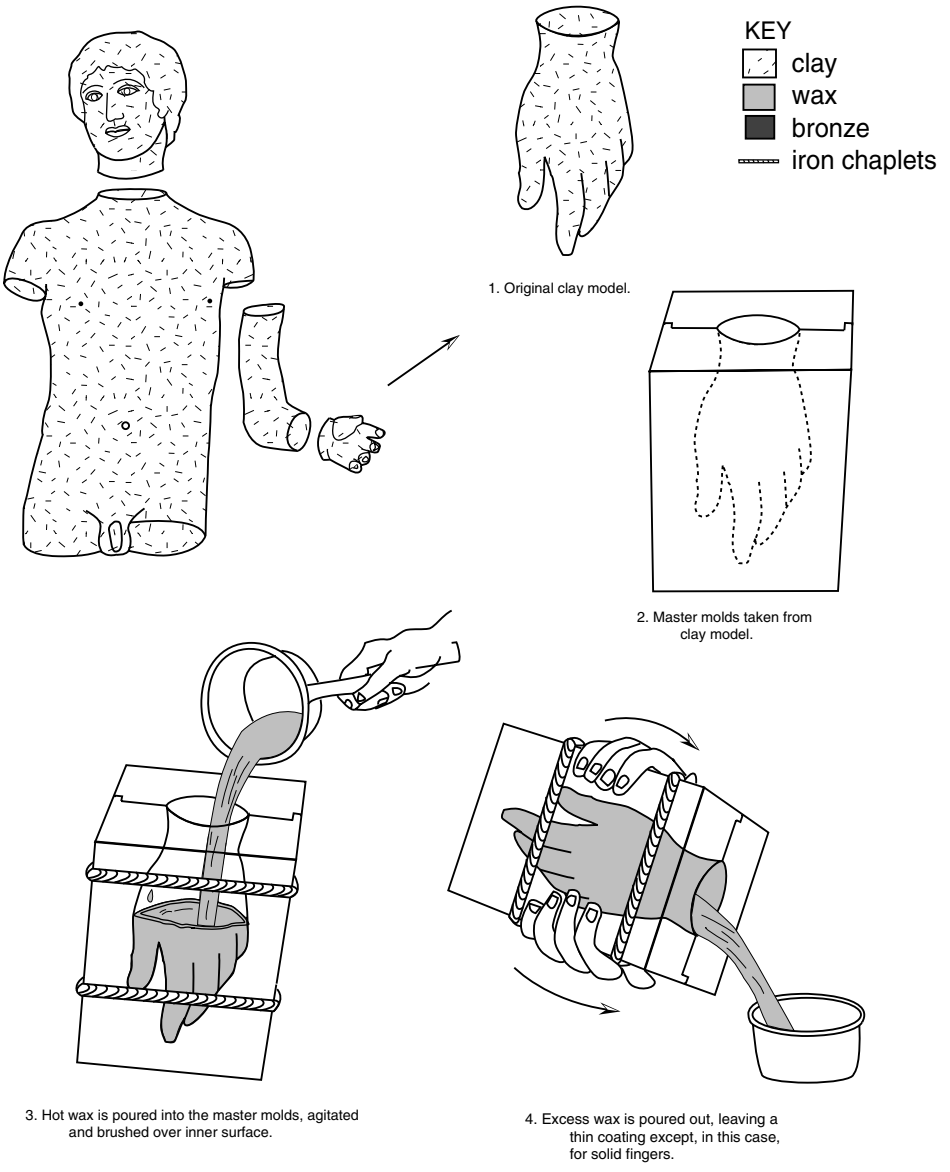
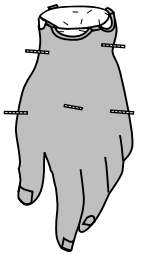
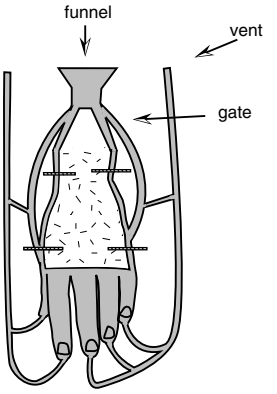


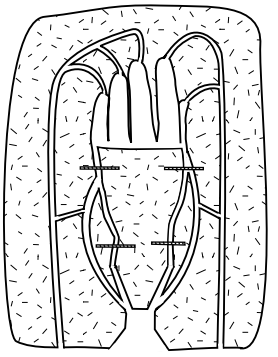
FIGURE 7.1–10. Hollow lost-wax casting: the indirect method. Drawing by the author.



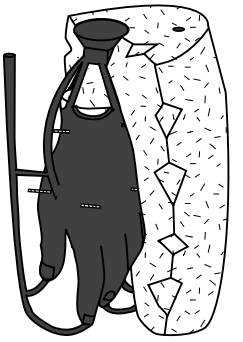
5. Finished wax working model with fingernails marked, clay core poured inside, and metal chaplets stuck through wax into core.



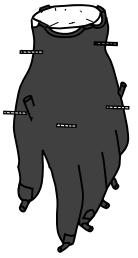
6. Cross section of wax working model with wax funnel, gates, and vents attached.



7. Cross section of investment mold inverted for baking, with hollow tubes where wax working model and gate system have been burned out.



8. Bronze has been poured, investment mold partially broken away.



9. Cast bronze hand with core, chaplets and clipped gate system.

10. Hand joined to arm by flow weld.

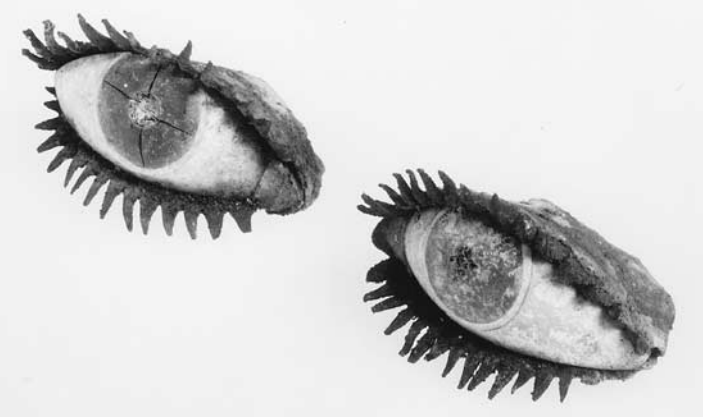


FIGURE 8. A pair of eyes made of marble, frit, quartz, and obsidian, with bronze lashes. Once inlaid in a statue about twice life-size. Greek. Fifth to first century B.C. The Metropolitan Museum of Art, New York, Purchase, Mr. and Mrs. Lewis B. Cullman Gift and Norbert Schimmel Bequest, 1991 (1991.11.3ab). Width of left eye 5.8 cm; width of right eye 6 cm. Courtesy The Metropolitan Museum of Art.

a desired finish. The surface is smoothed with abrasives, and any protrusions left by the pouring channels and chaplets are cut off while the statue is still in pieces. Once the sculptor has achieved this, the separately cast parts of the bronze are joined together by either metallurgical or mechanical means, or a combination of the two. The skill with which these joins were made is one of the great technical achievements of Greek bronzesmiths. One of the most common metallurgical techniques for joining is known as a flow weld. The hand is placed next to the arm and secured in some fashion, possibly with a brace or metal wire. Narrow gaps are left open between the joining edges of the two pieces to create a wider bonding area when the two pieces are joined. Molten bronze is poured onto the join, into the gaps, and on the edges, creating a metallurgical bond (Fig. 7.10). This is done in a series of pours, rotating the hand so as to complete the circumference. A temporary mold might have been fashioned around the join to ensure that the bronze flowed only on the correct area.

Final decorative details, such as hair, may be cold worked on the surface with a chisel. At this time, any significant blemishes on the surface or any holes left by the chaplets are patched mechanically with rectangular pieces of metal hammered into place. Additional features, such as glass, silver, or even pebbles for eyes, may be inserted. The eyes of the finest statues were typically sheathed in copper alloy sheet and composed of a variety of materials to achieve a very realistic effect (Fig. 8). Occasionally, other features are accentuated with differ-

ent metals, such as copper lips and nipples or silver teeth and fingernails. Likewise, garments may receive inlays, and, when appropriate, further decorative elements, such as necklaces and bracelets may be added in the final stages of preparation.

HELLENISTIC STYLES AND THE PROBLEM OF DATING GREEK BRONZE SCULPTURE

Much more so than any previous period in Greek art, Hellenistic sculptors borrowed freely from the styles of previous periods, reusing and modifying them to their own devices. The reuse of earlier styles and the fact that many new styles developed during this period at a multitude of artistic centers makes dating Hellenistic works without a secure provenance particularly risky. The situation is even more acute because of the ease with which bronze sculptors could replicate works by means of the indirect lost-wax process.

One extraordinary example is a small statue of Apollo found in the sea near Piombino, Italy, now in the Louvre.[13] The statue adheres so closely to the conventions of Archaic Greek sculpture that generations of modern scholars believed it to be from that period. Even the dedicatory inscription encrusted in silver on the left foot is written in an archaistic script. However, a lead tablet discovered inside the statue was the beginning of a new understanding of the piece. The tablet was signed by two Hellenistic sculptors who claimed to have made the statue. Careful stylistic analysis and comparison with archaistic works dating to the first century B.C. betray a date of manufacture well after the Archaic period and most likely in the Late Hellenistic period. Another example of the same type in bronze is now known from Pompeii; it is also an archaizing work produced in later times.[14]

We very seldom have any real evidence for the purpose or intent with which an extant bronze statue was made, since bronze statues are almost never found in their original or primary context. It appears, however, that the Piombino Apollo was made to replicate an Archaic statue with the intention of deceiving the viewer and likely buyer.[15] This may well be the best example known today of an ancient forgery of a bronze statue.

Another statue in the Archaic style, the so-called Piraeus Apollo (Fig. 9), remains controversial.[16] Although it is frequently cited as an Archaic bronze original, stylistic and technical features otherwise anomalous in the Archaic period argue for its being a later work, most likely of the Late Hellenistic period.[17] For all these reasons, the dates proposed for Hellenistic bronze statuary, including those in this book, are invariably open to debate unless the archaeological or historical context provides clear support.

FIGURE 9. Piraeus Apollo. Greek. Late sixth to early first century B.C. Piraeus Museum (4645). Height 1.91 m. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. NM 5568).

BRONZE STATUE WORKSHOPS AND CENTERS OF PRODUCTION

Artists of the Hellenistic period worked in many different media. In addition to bronze workshops, there were centers for the production of stone sculpture, such as at Pergamon on the west coast of Turkey, and of terra-cotta sculpture production, such as at Taras in southern Italy. Greek sculptors could also work in more than one medium. Archaeology provides physical evidence for Hellenis-

tic foundries and bronze-working centers on Rhodes and Corfu, as well as at Athens, Nemea, Olympia, Sardis, Demetrias, and Kassope.[18] Artists could also travel to different locations, depending on the commission. Even with our limited knowledge, it is clear that bronze sculpture was produced in many different workshops throughout the Hellenistic world.

FAMOUS WORKS

The most famous bronze statue of the Hellenistic period is undoubtedly the Colossus of Rhodes, one of the seven wonders of the ancient world.[19] This was a massive statue of the sun god Helios, created between 294 and 282 B.C. by a sculptor from Lindos named Chares, a pupil of Lysippos, and stood some 70 cubits high (ca. 110 feet). Philo of Byzantium claimed that the statue required so much bronze that all the mines of antiquity were in danger of depletion. Our knowledge of the statue comes primarily from a few ancient literary sources, since nothing remains of it today. We cannot even ascertain its exact original location. The statue, which was probably cast in situ in successive layers, has been the subject of many conjectural restorations and is an enduring reminder of the accomplishments of Greek bronze sculptors.[20]

Complex freestanding monumental statue groups of bronze were an innovation of the Hellenistic period.[21] Among the most famous statue groups of this type were several monuments conceived by Lysippos and set up in honor of Alexander the Great. Two of the most important were the Granikos monument in the Macedonian city of Dion, on the slopes of Mount Olympus, and the Krateros monument at Delphi.[22] The Granikos monument, as described in a number of ancient references, depicted Alexander and twenty-five of his companions on horseback. We do not have a definite grasp of the original composition of the Krateros monument, but it was a large-scale bronze group that depicted Alexander being saved by his friend Krateros while on a lion hunt. A fine large bronze statuette of a huntsman now in the British Museum may be a replica of the figure of Alexander shown on foot, also known in a few other representations (see, e.g., Fig. 58).[23]

A number of important bronze statues are thought to be known through large series of later Hellenistic and Roman copies, especially in marble. Given the nature of indirect lost-wax bronze casting, serial production may have been much more common than has traditionally been accepted, and the idea of a single Greek original can therefore even be called into question.[24] However, copies have been central to the study of Greek bronze sculpture since the very beginning of the modern study of ancient Greek art. Often the original is only presumed to have been made of bronze, judging from the composition or based

on the assumption that the finest works of freestanding sculpture were made in this medium.[25] The large series of slain Gauls belong to several important complex groups, originally of bronze, that were set up as victor monuments in the Hellenistic period.[26] Another type, known as the "Dying Seneca," which is preserved in some twenty-two copies or variants, portrays an elderly man slightly hunched over as he walks forward. The original statue likely served as a dedication in a Greek sanctuary.[27]

Needless to say, it is difficult fully to appreciate a bronze statue from later copies in another medium.[28] Nonetheless, copies, especially those studied as a series, can help us to appreciate major Hellenistic bronze commissions that would otherwise be lost.

CONTEXTS AND FUNCTIONS OF HELLENISTIC BRONZE STATUARY

As in the Classical period, Hellenistic bronze statuary served fundamentally public functions. Statues were set up in public spaces, such as sanctuaries and agoras, or erected in public buildings, such as temples and theatres.[29] However, the Hellenistic period witnessed an increase in the production of the luxury arts made available to a growing number of citizens and used in the private sphere. Bronze sculpture could also function in private contexts, but, as far as we can tell from the archaeological evidence, these private statues and, more commonly, statuettes served a largely religious function.[30]

Hellenistic bronze statues had four primary purposes: cultic, votive, commemorative, and honorific. It appears that monumental cult statues were generally not made of bronze in the Hellenistic period,[31] but there were exceptions. The few known examples include the cult statues of Serapis, Isis, and Anubis in *Naiskos* F of the Sarapeions on Delos, according to a temple inventory of bronze objects. There was also a bronze cult statue of Asklepios on Delos, although the precise meaning of its fragmentary inscription is problematic. The cult statue housed in the temple in the Agora at Priene was likewise made of bronze, judging from the cuttings in its statue base.[32] An over-life-size head of a goddess wearing a thick fillet, most likely Aphrodite, from Satala in central eastern Anatolia is one possible example of an existing fragmentary Hellenistic bronze cult statue.[33] Occasionally, bronze was used as a supplemental material for Hellenistic cult statues.[34] Colossal bronze portraits of rulers could also serve as cult statues.[35] Two rare examples of monumental royal bronze portraiture likely associated with ruler cults are a twice-life-size head of an early successor of Alexander now in the Prado Museum in Madrid and a colossal head of a Ptolemaic queen now in Mantua.[36]

Funerary statues were typically not made of bronze in the Hellenistic period.[37] Votive statues, which were dedicated to the gods in anticipation of or in return for divine favor, could take many forms, although the most common were representations of the donor or the god to whom the statue was dedicated. Athletes were allowed to erect statues of themselves as dedications to the gods in commemoration of victory. Likewise, commemorative statues were erected in recognition of an important event, such as a military victory.[38]

Honorific statues were portraits of prominent individuals awarded by the state or ruler in gratitude for significant benefactions; they were the highest honor that a city could offer. We have some sense of the costs involved in commissioning a bronze statue at this time, as Diogenes Laertius clearly implies that in the Early Hellenistic period, such a statue typically cost 3,000 drachmas, a tremendous sum.[39] Of course, the price would have varied according to the scale and composition of the statue or statue group.

The Romans were great lovers of Greek statuary and collected works for contemplation and display in their villas. They also plundered many statues from Greek sanctuaries and city centers. Livy (39.5.15) tells us that the sculptural booty of one Roman, Fulvius Nobilior, taken from Ambracia and Aetolia in 187 B.C., consisted of 230 marble and 785 bronze statues.[40] This cache surely included Hellenistic statues, as well as earlier Greek works. It is likely that the late first-century B.C. Mahdia shipwreck, discussed below, had picked up some of its Hellenistic bronze sculptural cargo in Greece and was on its way to the Roman art market when it went down off the coast of North Africa. Roman patricians bought Greek bronze statuary and large-scale copies of Greek works in stone and bronze.[41]

Since antiquity, bronze has been a valuable commodity. Although ancient literary sources refer to thousands of Greek bronze statues erected in sanctuaries and city-states, only a handful of these remain today. Over the centuries, Greek bronze statues were plundered and melted down, and the metal was reused for other works of art or, more commonly, for more utilitarian purposes.

Most of the existing Hellenistic bronze statues have come from the Mediterranean Sea, mainly from a number of Late Hellenistic and Roman shipwrecks with cargoes of Greek (and sometimes Roman) bronze statues. A shipwreck near the island of Antikythera, south of the Peloponnesos, was the first underwater excavation in Mediterranean waters. In 1900, the site yielded the remains of a Late Hellenistic ship with a large cargo of marble and bronze sculpture, among which were a Late Classical statue of a youth and fragments from several Hellenistic bronze statues, including the head of a bearded man, most likely an honorific portrait of a philosopher (Fig. 10.1–2). The ship is believed to have been heading east with its cargo when it went down at Antikythera. Another Late Hellenistic shipwreck was discovered in 1907 off the coast of

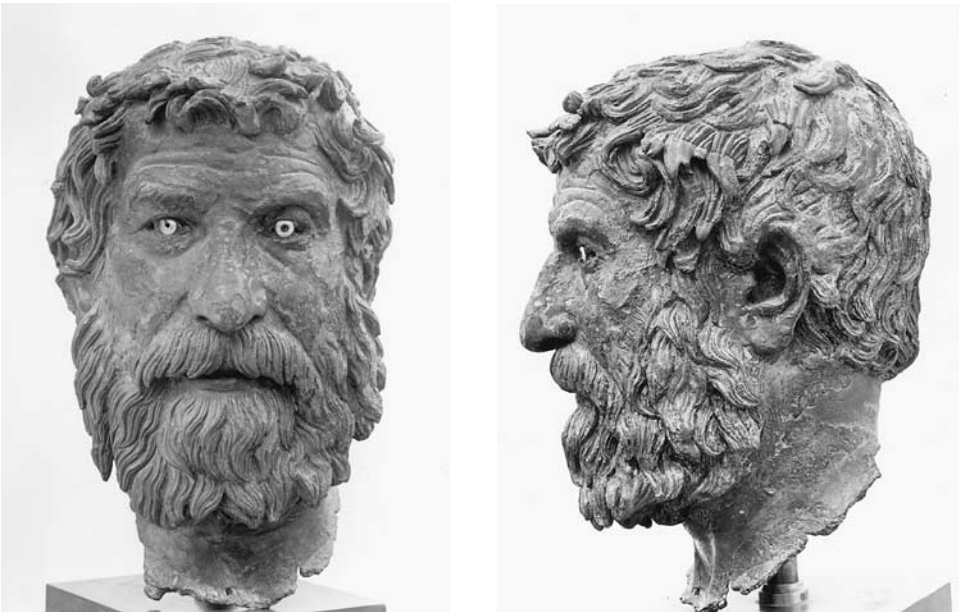


FIGURE 10.1–2. Life-size head of an older man, recovered from the Antikythera shipwreck (ca. 80–50 B.C.) in 1900. National Archaeological Museum, Athens (13.400). Height 0.29 m. Photo courtesy Deutsches Archäologisches Institut Athen (neg. nos. 6065, 6068).

Tunisia near Mahdia. It also contained a large cargo of statuary, as well as many other items that may have been gathered at various ports of call in Greece and intended for the art market in Rome, or elsewhere in Italy. The Hellenistic bronze statues aboard included a winged youth, a herm of Dionysos, and several smaller pieces. The Artemision shipwreck, explored in 1928 and 1929, is discussed in detail in the following chapter. Finally, in 1992, a large number of bronzes were discovered off the Italian coast near Brindisi. The ship's cargo appears to have been primarily scrap bronze from as many as a hundred statues that had been smashed before loading. Among statue fragments that could not date from earlier than the second and third centuries A.D. was the head and upper body from a statue known as the Hellenistic prince and recently identified as Aemilius Paullus, victor of the battle of Pydna in 168 B.C.[42]

Individual statues have also been found, frequently by chance, in fishermen's nets. Such was the case with a statue of an African boy that appeared in a fisherman's net off the coast of Turkey near Bodrum (ancient Halikarnassos) in 1963.[43] Likewise, the upper part of a large veiled female figure was discovered by sponge divers near the peninsula of Knidos.[44] The figure, evidently a goddess, was first identified as the mourning Demeter because it bears a strong re-

semblance to the marble statue of Demeter from Knidos now in the British Museum. However, its identity remains uncertain; it could even represent a deified Hellenistic queen. In Greek waters, the bay of Marathon yielded a statue of a youthful male figure in 1925,[45] and, as recently as 1998, another draped female figure, the head of a Macedonian equestrian figure, and other bronze fragments were found near the island of Kalimnos in the Dodecanese. Individual statues have also come to light at sites along the Italian coast, such as Piombino, and far out to sea from Fano, where a bronze statue of a victorious athlete now in the Getty Museum was found (see Fig. 20.1–2).[46] Finally, a statue recovered by a fisherman in 1997 off the coast of Sicily awaits conservation and study so that its identity and date (Hellenistic or Roman) can be determined; it is thought to depict a young satyr.[47]

It is noteworthy that all of the above wrecks were in waters less than 180 feet deep. The earliest discoveries were made by sponge divers or with the aid of a diving bell suit, which made detailed recording of the wreck sites impossible. After World War II, the invention of a self-contained underwater breathing apparatus (SCUBA) that could be worn by individual divers revolutionized underwater archaeology. In recent years, new deepwater technology has been developed that allows underwater archaeologists to explore wreck sites at greater depths. This technology, applied with spectacular success to the exploration of the modern *Titanic* wreck, has valuable applications for the remote recovery and documentation of ancient shipwrecks. It will no doubt be an exciting area of research, which may yield many more Hellenistic bronze statues in the future.

Statues occasionally also come to light in the ground. The cache of bronze statues found in Piraeus, the port city adjacent to Athens, in 1959 is a spectacular instance where bronze statues seem to have been packed and to have been awaiting shipment when they were unexpectedly buried. The cache included large-scale bronze statues of Apollo (see Fig. 9), Athena, Artemis, and a smaller Artemis (Fig. 11), as well as assorted marble sculptures.[48] More frequently, however, statues unearthed during excavations are fragmentary or damaged. It is always important to keep in mind when viewing an ancient bronze statue that it may have suffered damage (great or small) during its long deposition in the sea or earth. An extreme example is the Late Hellenistic head of a child from Olympia illustrated here (Fig. 12.1).[49] In its current state of preservation, the viewer has a difficult time imagining the original appearance. A careful reconstruction of the head, cast in bronze, reveals how much the features have been distorted (Fig. 12.2). As often, minor dents, compressed features, surface corrosion and losses of inlays or other prominent features affect our initial impression of an extant bronze. Such accidents of preservation need to be recognized and compensated for in the mind's eye.[50]

FIGURE 11. Smaller bronze statue of Artemis (prior to conservation), from a warehouse destroyed in the first century B.C. Discovered in Piraeus in 1959. Piraeus Museum (4648). Height 1.55 m. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. NM 5099).

FIGURE 12.1–2. Bronze head of a child from Olympia and modern restored replica. Greek. Late Hellenistic. Olympia Archaeological Museum (B 2001). Height 0.235 m. Photo courtesy Deutsches Archäologisches Institut Athen (neg. nos. 74/1125, 72/2896).

TYPES OF HELLENISTIC BRONZE STATUARY

A wide variety of sculptural types were made in bronze during the Hellenistic period. As in the Classical period, statues of the gods were popular commissions, esteemed especially for dedicatory images. Although a variety of types are known, only a few large-scale examples are preserved in bronze. The Piombino Apollo and the Piraeus bronzes (see Figs. 9, 11) are examples of deities represented in conservative earlier styles during the Hellenistic period. A small, finely made statue of Artemis with a stag on a tall rectangular bronze base, in the collection of the Albright Knox Gallery, illustrates another type.[51] Herakles, famous even from birth for his strength, was represented as a child in Greek sculpture, and a statue of a child god or hero now in the Saint Louis Art Museum is often identified as the baby Herakles.[52] Deities might also be represented in varying postures, such as the Sleeping Eros in the Metropolitan Museum (see Fig. 5). One especially popular type was that of the nude standing Aphrodite that was made in a variety of sizes in bronze (Fig. 13.1–2), marble, and terra-cotta.[53] Personifications and allegorical figures were also sometimes represented in bronze. The winged youth from the Mahdia shipwreck

FIGURE 13.1–2. Large bronze statuette of standing Aphrodite. Greek. Ca. third to first century B.C. The Metropolitan Museum of Art, New York, Gift of Mr. and Mrs. Francis Neilson, 1935 (35.122). Height 45.7 cm. Courtesy The Metropolitan Museum of Art.

has sometimes been interpreted as a representation of Agon, or competition, but it is more likely an image of Eros with his bow.[54] The Mahdia herm of Dionysos illustrates another type, which served traditionally as roadside markers but came also to be used as statuary for private devotion in the late Hellenistic period.[55]

Mythical figures such as heroes were also represented in bronze. The monument of the Eponymous Heroes, erected in the Athenian Agora first in the fifth century B.C. and renovated around 330 B.C. and again during the Hellenistic period, consisted of ten bronze statues standing on a tall podium, each representing an eponymous hero for one of the ten Athenian tribes.[56] Two new statues were added in the early Hellenistic period, when the number of Athenian tribes was increased to twelve.[57] Only the base with the markings where the bronze statues were attached is preserved today. A large and finely detailed bronze statuette of an artisan imbued with great psychological power, now in the Metropolitan Museum of Art (Fig. 14), may well represent a mythological figure, such as the master craftsman Daedalos.[58] Mythical creatures were also executed in bronze. A fragmentary large statuette of a satyr from Industria, Italy, in the Turin Museum is considered to be a work of the mid second century B.C., executed in a high baroque style. It exhibits a fine patina, and its copper lips and silver teeth are well preserved.[59]

Bronze (and marble) statues were the most important vehicles for the images of the Hellenistic kings and their families. Royal portraits were an excellent means of defining and expressing the character of a ruler in a time before mass media. Ruler portraiture conveyed ideas of kingship to the people and helped maintain a recognizable image, whether real or not. The iconography of Hellenistic ruler portraiture grew out of Alexander the Great's own official images and the iconography of young gods and heroes.[60] Rulers were typically portrayed in the prime of life regardless of their age. They were often represented wearing a diadem and occasionally other attributes (see Fig. 16), typically with heroic or divine associations.[61] Kings and princes could be portrayed with idealized bodies standing in heroic nudity.[62] Among the finest statues of this type is the so-called Terme Ruler (Fig. 15), excavated in Rome near the baths of Diocletian in 1885.[63] Since the statue lacks the characteristic diadem, alternate theories about the figure's identity have been proposed. It may be a portrait commissioned by a Roman general from a Greek sculptor, or even the work of a Roman sculptor influenced by Hellenistic portraiture. Or it may portray a Hellenistic dynast and have been taken to Rome as booty. At present, there is no way to decide with certainty among these divergent interpretations. However, the statue, which is of a very high quality, nonetheless illustrates an important Hellenistic type that stems back to a statue of Alexander and the Lance by Lysippos.[64] A monumental bronze statue of the same type, now in the collection of

FIGURE 14. Large bronze statuette of an artisan. The eyes are inlaid with silver. Greek. Late Hellenistic. Ca. first century B.C. The Metropolitan Museum of Art, New York, Rogers Fund, 1972 (1972.11.1). Height 40.3 cm. Courtesy The Metropolitan Museum of Art.

Shelby White and Leon Levy in New York, has also variously been identified as a Roman general or a Hellenistic ruler.[65] Another bronze statue, known as the Ephebe from Agde, discovered in 1964 in France, represents a related type. The Ephebe's features are idealized, and he is shown standing nude, except for a diadem and a *chlamys* (cloak) draped over his left arm and shoulder. Most likely, the figure represents a Late Hellenistic prince; less probably, it may be a portrait of Alexander the Great himself.[66] We are also fortunate to have a few additional fragmentary Hellenistic royal portraits in bronze. A fragmentary head from Shami in southern Iran, now in the Teheran Museum, represents a second-century B.C. royal personage from the Hellenistic east, perhaps Antiochos IV Epiphanes of Syria or Antiochos VII Sidetes.[67] Another head from a portrait of

FIGURE 15. Bronze statue of a ruler. Found in Rome (via Quattro Novembre) in 1885. Museo Nazionale Romano (1049). Height to top of head 2.09 m. Photo by Koppermann, courtesy Deutsches Archäologisches Institut, Rome (neg. no. 66.1686).

FIGURE 16. Bronze statuette of an equestrian Hellenistic ruler. Greek. Early Hellenistic. The Metropolitan Museum of Art, New York, Edith Perry Chapman Fund, 1955 (55.11.1). Height 24.77 cm. Courtesy The Metropolitan Museum of Art.

a ruler or prince, now in the J. Paul Getty Museum, is probably of the Late Hellenistic period.[68]

Equestrian statues were also popular. Hundreds of stone bases for bronze equestrian statues are known from all over the Hellenistic world. Practically none of the statues themselves, however, have survived. Fragments of a gilded bronze equestrian statue, excavated in the Athenian agora, probably date to the late fourth or early third century B.C.[69] The figure once held a sword and wore a helmet, and he may have worn armor as well. Another type that may have been produced in large-scale bronze statuary in the Early Hellenistic period is illustrated by a small statuette of an equestrian king wearing only an elephant-skin cap and cloak, as well as sandals (Fig. 16).[70] Additionally, bronze equestrian statues could represent generals and commemorate victories in battle.[71]

Royal female portraits, many of which are known only from coins, were also

cast in bronze. A colossal head in the archaeological museum in Mantua has been identified as a portrait of the Ptolemaic queen Arsinoë III of the late third century B.C.[72] Another fine bronze head of a young woman wearing a fillet from Egypt and now in the collection of the Museum of Fine Arts, Boston, likely represents a Hellenistic princess or queen.[73] A life-size bronze head of a veiled woman wearing a diadem, now in the Ackland Art Museum at Chapel Hill, North Carolina, is likely a royal portrait, although we cannot be certain of her identity.[74] This head could, however, also be that of a nonroyal personage, or even a goddess, given the tendency toward idealized representations of women in the Hellenistic period.[75]

Other famous personalities were also depicted in bronze in the Hellenistic period.[76] These included both legendary figures such as the bard Homer and historical personages such as Sophokles.[77] Likewise, politicians and statesmen could be honored with bronze statues. In 280 B.C., a posthumous bronze portrait of the orator Demosthenes was erected in the Athenian Agora, not far from the altar of the Twelve Gods, the work of the sculptor Polyeuktos.[78] Honorific portraits of philosophers were also commissioned and set up in academies and gymnasia, as well as in public places.[79] Diogenes Laertius wrote of the Cynic philosopher Diogenes, who died in 323 B.C.: "Subsequently his fellow citizens honored him with bronze statues, on which these verses were inscribed: 'Time makes even bronze grow old, but thy glory, Diogenes, all eternity will never destroy. Since thou alone didst point out to mortals the lesson of self-sufficiency and the easiest path of life'" (6.78). An early Hellenistic head (see Fig. 10.1–2) and associated body and drapery fragments from the Antikythera wreck are likely the remains of a philosopher portrait and may have formed part of a group with other fragments from the same wreck. Even in its very worn state, the psychological power of the portrait is not lost on the viewer. Small-scale bronze statuettes can sometimes give a good impression of large-scale statues.[80] A particularly fine example is a statuette of a philosopher in the Metropolitan Museum of Art, which was evidently inspired by a bronze portrait of the third century B.C. The figure's lack of concern with his physical appearance, coupled with the intensity of his expression, as if deep in thought, are features characteristic of Greek portraits of philosophers from this period, especially those depicting the Cynics and individuals belonging to the Epikourian school of philosophy, with whom this figure is usually associated (Fig. 17).[81]

Portraits of prominent individuals, both male and female, were commissioned in bronze. Unfortunately, few large-scale female figures are preserved.[82] The well-known "Baker Dancer" (Fig. 18.1–2), a small statuette of the early Hellenistic period, surely echoes innovations of contemporary Hellenistic bronze statuary.[83] It evinces exquisite detail with its complicated overlays of

FIGURE 17. Bronze statuette of a philosopher. Greek. Ca. third to first century B.C. The Metropolitan Museum of Art, New York, Rogers Fund, 1910 (10.231.1). Height of figure 25.6 cm. Courtesy The Metropolitan Museum of Art.

material and accurate representation of the body in a complex active pose. One poignant example of male portraiture is the head of a man from Delos now in the National Museum of Athens (Fig. 19.1–2), whose vividly naturalistic expression of concern is often seen as reflecting the conditions of his time in the late second or first half of the first centuries B.C. Another statue recovered from the sea, dated to the middle of the first century B.C., depicts a bearded standing man draped in a himation.[84] A third work, the so-called Ierapetra youth, illustrates another type.[85] It is a standing draped youth assuming the pose of an orator.[86] Although all three works come from parts of the Greek world that

FIGURE 18.1–2. Bronze statuette of a veiled and masked dancer, said to be from Alexandria. Greek. Late third to early second century B.C. The Metropolitan Museum of Art, New York, Bequest of Walter C. Baker, 1971 (1972.118.95). Height 20.5 cm. Courtesy The Metropolitan Museum of Art.

had fallen to Roman domination by the second and first centuries B.C., they attest to the continuing traditions of Greek sculpture throughout the Hellenistic period.[87]

Athletic types comprise another important class of bronze statuary. A heavily restored statue of a youth from Ephesos, excavated in 1896, represents an athlete cleaning his strigil.[88] The so-called praying youth from Rhodes, known since 1500 and now in Berlin, has recently been argued to be an athletic type that has been incorrectly restored.[89] The original figure may well have been an athlete tying a fillet around his head, or possibly a runner represented at the start of a competition, or even a jumper. Although athletes may also have been shown in the midst of a competition, the evidence is ambiguous. A bronze runner found in the sea near Kyme, now in the Izmir Archaeological Museum, is probably Roman, and various marble copies of wrestlers competing may also

FIGURE 19.1–2. Bronze portrait head of a man from Delos. Greek. Late Hellenistic. National Archaeological Museum, Athens (14.612). Height 0.325 m. Photo courtesy Deutsches Archäologisches Institut Athen (neg. nos. NM 6045, NM 6048).

be.[90] However, the Horse and Jockey Group from Artemision clearly illustrates that dynamic athletic compositions were created in the Hellenistic period, although it is most likely, as is argued below, that the moment represented is one of victory and is not in the midst of the race. Hellenistic athletes could be represented crowning themselves, as in the case of the Getty Youth (Fig. 20.1–2).[91] Other statues depict athletes at rest after competing, as in the remarkable Terme Boxer (see Fig. 56).[92] Given the evident conservatism of Greek athletic statuary, it is difficult to know whether the head of a boxer from Olympia is a Late Classical work, as its style suggests, or an Early Hellenistic one.[93] A very fine bronze head of a North African man, now in the British Museum, was discovered together with horse fragments in the sanctuary of Apollo at Cyrene and is likely from an equestrian victor monument, either a chariot group or a horse and rider.[94]

Finally, animal sculptures were also cast in bronze. These could be individual works, which typically served as dedications at sanctuaries, or animals that were part of more complex groups, as we see in the Horse and Jockey Group from Artemision. A large-scale ram from ancient Syracuse now in the Palermo

FIGURE 20.1–2. Bronze statue of a victorious athlete. Greek. Late fourth to early second century B.C. The J. Paul Getty Museum, Los Angeles (77.AB.30). Height 1.515 m. Courtesy The J. Paul Getty Museum.

Archaeological Museum was once one of a pair considered to be Hellenistic in date, but it is more likely Roman.[95] Another bronze in this ambiguous category is a large statuette of a horse made by the direct method of lost-wax casting, now in the Metropolitan Museum of Art (Fig. 21), which serves as a cautionary reminder that dating by technique can be as hazardous as dating by style alone in the Hellenistic period.[96] When it was first published, it was considered to be a work of the Early Classical period, but its authenticity was

FIGURE 21. Large bronze statuette of a horse. Late Hellenistic or Roman. Ca. first century B.C. to first century A.D. The Metropolitan Museum of Art, New York, Fletcher Fund, 1923 (23.69). Height 40.2 cm. Courtesy The Metropolitan Museum of Art.

then called into question.[97] It is now regarded as a classicizing Late Hellenistic work, executed in a style that may well have catered to the tastes of a Roman clientele.[98]

FROM GENERAL TO SPECIFIC: THE HORSE AND JOCKEY GROUP FROM ARTEMISION

The bronzes that are the subject of this book are known as the Horse and Jockey Group from Artemision (Pls. 1–2). They are currently on display in the National

Archaeological Museum in Athens, of whose collection they have been a long-time feature. This approximately life-size group consists of a horse in mid-gallop, on which is seated a youthful jockey, who looks back over his shoulder as he encourages the horse forward. While these famous bronzes have been known to scholars since their discovery in 1928, prior to this work, no definitive study of them has been made. The value of the present approach is that it combines a technical, stylistic, and iconographic examination of the bronzes with a careful assessment of the archaeological, epigraphic, literary, and iconographic evidence for horse racing in order to understand this large-scale bronze monument better.

The research has been divided into four essential and interrelated parts, each of which forms a chapter of the book. Basic documentation is provided for this figural group in Chapter 2. A detailed account of the find-spot and original "excavation" from the sea, as well as subsequent investigation of the Artemision wreck site, is followed by the conservation history of the statues, their cleaning and restoration, and a description of the preserved fragments.

In Chapter 3, the technique of manufacture of the pieces is discussed, insofar as this can be determined from visual examination. Much can be learned about the method of casting and later cold working from careful visual inspection of the interior and the exterior surfaces of the bronzes. A review of what is known about manufacturing techniques from other large-scale bronze equestrian statues, especially in the Hellenistic period, provides parallels for the identifiable techniques used to make the Horse and Jockey. Here it is necessary to examine different types of equestrian statues, such as the more common marching "cavalry type," since no exact parallels for the Artemision Horse and Jockey Group are known.

In Chapter 4, the style, chronology, and iconography of both Horse and Jockey are discussed. This chapter takes into consideration the previous scholarship, which includes a range of interpretations and dates for the pieces. Just as important, the examination of comparable works, both in terms of style and iconography, provides a more knowledgeable background against which to view the Horse and Jockey from Artemision.

Finally, the Artemision Horse and Jockey Group is one of the very few monumental representations of a horse race from Greek antiquity. Chapter 5 discusses what we know of the history of the single-horse race, known to the Greeks as the *keles,* from its origins (at least) in the Orientalizing period (seventh century B.C.) to the end of the Hellenistic period (31 B.C.). As early as the Geometric period, the evidence for horsemanship is overwhelming, whereas the evidence for the *keles,* which was a feature of the games at the panhellenic sanctuaries and elsewhere, is much more limited. Archaeological evidence, which includes sculpture, vase painting, and the evidence for hippodromes; epigraphic

evidence, such as dedications and victor lists; and literary evidence are considered and a diachronic synthesis of the material is presented. Such an overview helps to determine possible ancient contexts for this large-scale bronze group. The results of the study are synthesized in the concluding Chapter 6, and an interpretation of the statue group is offered.

2

AN EARLY UNDERWATER RESCUE EXCAVATION

DISCOVERY

The Horse and Jockey Group from Artemision comes from an ancient shipwreck off the coast of northern Euboia near a promontory known as Cape Artemision (Map 1).[1] Among the earliest underwater archaeological expeditions in Mediterranean waters, the Artemision project differed from other early ventures, notably the Antikythera expedition of 1900, in that it was undertaken under adverse conditions, at the wrong time of year, and for a short period of time as a rescue or salvage operation.[2] Despite the primitive techniques of recording and recovering information from deep shipwrecks available at that time and the very limited area explored because of time constraints, the divers were extremely successful. It is clear that the Horse, the Jockey, and the large-scale bronze statue of a striding god, known as the "god from Artemision," were only part of the cargo of an ancient shipwreck, other remains of which still probably lie at the wreck site near Cape Artemision.

In 1926, the left forearm of a large-scale bronze statue appeared in a fisherman's net while he was dragging the seabed for fish at Cape Artemision near the village of Zerochorion in northwestern Euboia. The find was reported to the Department of Antiquities and presented to the mayor of the village of Zerochorion. Soon afterwards, the bronze arm was brought to the National Archaeological Museum in Athens. Since it was considered a chance find, no further investigation for the rest of the statue was undertaken.

Two years later, on Thursday, September 23, 1928, a boat suspected of conducting illicit underwater salvage operations for several weeks in the region of Cape Artemision was reported to the mayor of the neighboring village of Isti-

MAP 1. Location of the Artemision shipwreck. Map by the author.

aias. The next day, the mayor of Istiaias, Antonios Skouropoulos, assembled various officials in a boat, and went out to see the crew of this ship, which was moored approximately 600 meters from the shore near a place called Pefki. When they approached the vessel, a type commonly used for fishing, it was clear that the report was well founded. A second sleek powerboat was hitched to the fisherman's boat, and a diving suit and other diving equipment were evident. A heavy cable, stretching down into the sea, was attached to something that the divers and crew were in the process of trying to pull up. After some discussion between Skouropoulos and the captain and crew, the captain produced the right arm of a statue, which they admitted had broken off while they were attempting to hoist the sculpture from the seabed. The entire crew was brought ashore and held for further questioning. A guard was established to mark the location of the sunken ship and protect it from any further illegal salvage. However, the following day, rough seas made it impossible to return to work on site. It was

not until Sunday, September 26, 1928, that the authorities relocated the site. Since much of the work of loosening the statue from the mud of the seabed had already been accomplished by the suspects, the authorities were able simply to fit a cable around the statue and, by suspending it in the water, tow it ashore at Pefki. Early photographs (Fig. 22) show the armless, but otherwise remarkably intact, statue as it first appeared.[3]

Under the 1899 law that declares all antiquities found in Greek rivers, lakes, seabeds, and public and private lands to be the patrimony of the Greek people as a whole, and hence state property, the statue belonged to the Greek government, so it was taken to the National Archaeological Museum in Athens. The fact that the suspects had been working for a prolonged period of time without permission or the supervision of an employee of the state and that they had not reported their recovery of the right arm of the statue to the local harbor authorities indicated that they were antiquities thieves who intended to smuggle the statue out of the country and sell it abroad. In an interview with the press on September 26, 1928, Mayor Skouropoulos stated that "had their mission of interference gone slowly and had they arrived as little as two hours later, the suspects would have completed their task and the statue would have been smuggled out of the country."[4] At the time, the incident was a national embarrassment to the authorities, who were reprimanded in several Greek newspapers for not taking any action after the initial discovery of the left arm in 1926.[5]

The need for a more thorough investigation of the site at Artemision was immediately recognized, and there was some sense of urgency, since it was believed that there might be more statues. The longer the authorities waited, the greater the risk was that the site would be plundered again. Consequently, the prime minister of Greece stepped in and placed 180,000 drachmas and the assistance of the steamship *Pleias* at the disposal of the Ministry of Education for an expedition to explore the site.

The Archaeological Service chose the ephor Nikos Bertos to undertake the supervision of the expedition. Bertos officially recorded the salvage operation in an exemplary article of 1929, which remains the primary source of information regarding the Artemision shipwreck.[6] On November 7, 1928, the team set off for the site, and they continued work until they were forced to return, on account of bad weather, on the 27th of that same month. During the twenty-one days of the expedition, rough seas prevented them from working more than nine full days. The following account of their efforts is based largely on Bertos's article, as well as other press statements and the logbook of the *Pleias*.[7]

With a team of five divers, including Demetrios Delekonstantis, who had helped to pull up the striding statue of a god in September, the *Pleias* went directly to the site, located approximately 600 meters from shore opposite Pefki, on the northeast coast of Euboia. The water was between 42 and 48 meters deep, only slightly less than the depth of the Antikythera shipwreck. The sea floor is de-

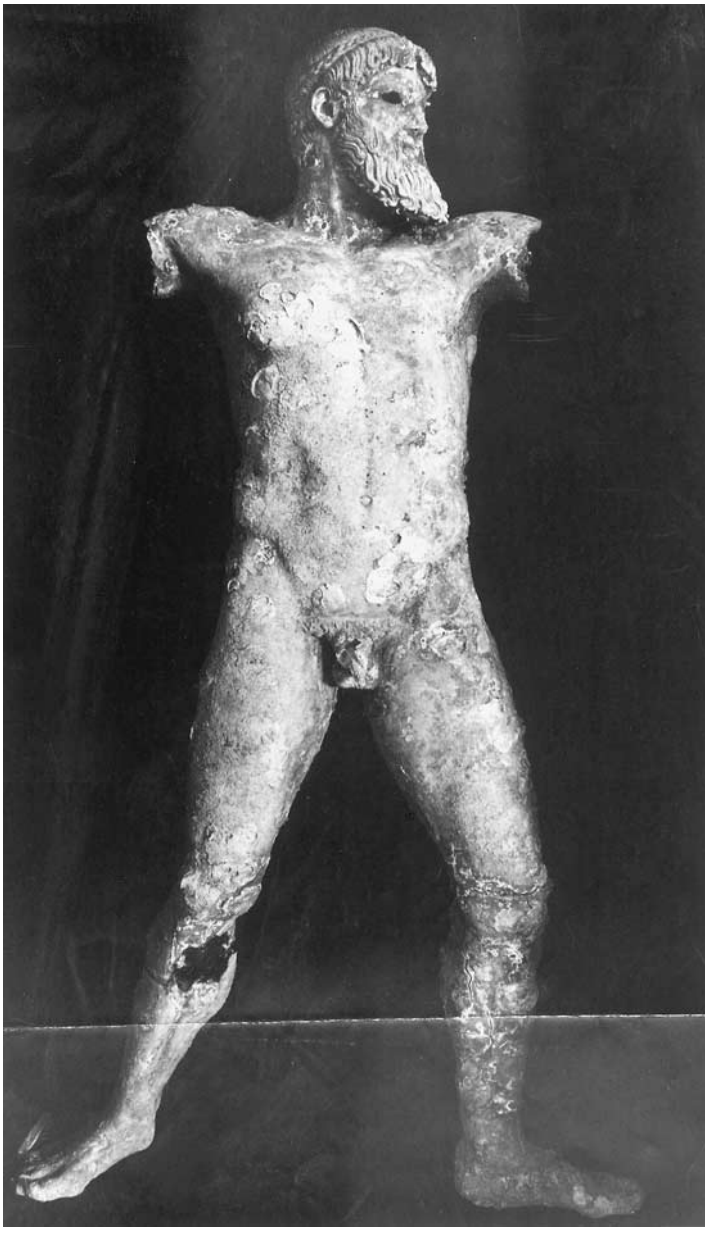


FIGURE 22. The god from Artemision at time of recovery. National Archaeological Museum, Athens (15161). Height 2.09 m. Photo courtesy American School of Classical Studies at Athens.

scribed as consisting largely of mud. Divers went down one at a time in diving suits. Each dive lasted between ten and twenty minutes. Since the divers worked with only natural light, visibility was already poor at 42 meters. Often mud was stirred up at the bottom, further decreasing visibility.

Work at the site began on Friday, November 9. The first task was to relocate the place where the statue of a god had been recovered. Despite the poor weather conditions, Bertos stressed that it was important to return to the site now before too much mud, displaced by powerful currents in this area, had accumulated over the spot, effectively causing the location to disappear. Although a marker had been left to identify the site, the divers were not able to locate it after two days of searching. Finally, on the third dive, on November 11, they rediscovered and marked the place where the statue of a god had been pulled out of the mud. That same day, in the immediate vicinity, they recovered a grindstone and a fragment from another hollow bronze statue. At the time, however, it was not possible to identify what type of statue the fragment came from.[8]

Much of the next day's dives were spent cleaning around this statue so that it could be brought up to the ship. On Tuesday, November 13, at approximately 12:15 P.M., they pulled up the statue and discovered that it was the forepart of the body of a horse with its head and left front leg (Fig. 23). It was found very near the place where the statue of the god had lain. In fact, for centuries, the feet of the statue of the god had overlain the hollow chest of the Horse. Bertos recorded the orientation and deposition of the Horse. It lay on its right side with its head, only partially exposed, sunken in the mud. The head was pointing due north, the neck to the west, and the front leg to the east. Only the left front leg was completely exposed. The rest of the body of the Horse was covered by a multitude of small stones. These stones, hundreds of which were discovered all over this area, were not indigenous to the seabed. Bertos plausibly explained that they were ballast for the ancient ship, as such stones were so used for Greek sailing ships even in his day. He also suggested that pressure from the feet of the bronze statue of the god and from all of these small stones had caused the collapse of the Horse's hollow midsection when the ship sank and hit the sea floor.[9] After the recovery of the forepart of the Horse, work was interrupted for three days by a violent storm.

Work resumed on Saturday, November 17, with the intention of recovering the rest of the Horse, which Bertos believed to be buried in the mud. On the first dive, the diver, searching in the immediate vicinity of the spot where the forepart of the Horse was recovered, identified another long piece of bronze, which he mistook for the other front leg of the Horse. A second diver cleaned around and secured this object with a rope. When this bronze was hoisted up, it was instead the statue of a small boy, from which only the right leg and right arm were missing.[10] The statue was so encrusted with a thick layer of sea shells

FIGURE 23. Forepart of the Artemision Horse at time of recovery. Photo courtesy American School of Classical Studies at Athens.

that it was only after his right arm was recovered and the statue was given a preliminary cleaning that it became apparent that he was a jockey (Fig. 24). During the remaining days of the expedition, the team continued to investigate the same small area. Their efforts were, however, fraught with interruptions caused by inclement weather.

As they cleared the immediate area, it became apparent that this was the site of an ancient shipwreck. Many more small stones were observed, and some pieces of wood and many flattened fragments of lead, which Bertos convincingly suggested had been used to line the lower hold of the ship, were recovered.[11] Excavations of Hellenistic and early Roman shipwrecks where such lead linings have been found suggest that this was a usual way of protecting the hull of the ship from wood-eating shipworm.[12] A large piece of lead pipe, 1.00 by 0.10 m, another grindstone, an intact terra-cotta pot, and shards from drinking vessels were also recovered.[13] All the material was found within a surface area of 9 m^2 around the location of the statues. The weather was such that during the dives made in these last days, the divers could not see anything and had to grope about with their hands. Finally, on November 24, conditions became too dangerous, and they

FIGURE 24. The Artemision Jockey at time of recovery. Photo courtesy American School of Classical Studies at Athens.

had to call off their investigation. In fact, as the ship proceeded north off the northeast coast of Euboia, the weather became so rough that they nearly did not make it to shore. Before the *Pleias* left the site at Artemision, however, the crew measured the depth and sank a permanent buoy to enable the site to be relocated. The Archaeological Service also appointed a guard on the coast opposite the spot to survey the area and forbade commercial fishing in the general vicinity.

Bertos resumed his investigation in the spring of 1929. In a report on ar-

chaeology in Greece for 1929 to 1930, Humphrey Payne of the British School at Athens wrote: "Further investigations off Cape Artemisium, directed by Dr. N. Bertos, have brought to light, in addition to various minor remains from the sunken ship which had on board the bronze Zeus, horse, and rider found in 1928, the right fore-hoof and part of one hind leg of the horse, as well as parts of the rider's right leg which can now be completely restored."[14] These fragments are not mentioned in Bertos's detailed report of the 1928 expedition, but they certainly do appear in the restorations of the statues, lending credence to Payne's statement.

A statement in *Archäologisches Anzeiger* that year describes the same new fragments from the statues, in addition to the recovery of "shards, nails, and other such things."[15] It mentions that, after further investigation, Bertos believed that the rear half of the Horse had washed away into the deep channel. It also states that the survey of the Artemision wreck site had halted for lack of adequate diving apparatus.[16]

Another brief summary by Reinhard Herbig in *Gnomon* confirmed the above reports and also mentioned that a lead anchor, nails of iron and bronze, a piece of wood, and a large quantity of pottery, including amphorae and late Hellenistic *sigillata* (mold-made red slip ware), had been recovered. Herbig believed that the pottery helped fix the period of the shipwreck to the first century B.C.[17] Since no other official report of the 1929 investigation was published, nothing else is known about the "various minor remains from the ship" that were recovered.[18]

Some of the pottery from Bertos's investigations of the Artemision wreck was finally published in 1979. The material includes a nearly complete skyphos, with painted decoration, and another fragmentary example of the same type, as well as a terra-cotta lamp and a few other fragments of wheel-made pottery. The skyphoi and lamp date between the second century and early first century B.C. and the clay, slip, and decoration of the skyphoi can be classified as from western Asia Minor, perhaps from Pergamon.[19]

There is no record of anyone returning to the site to renew investigations in the following years. It was only in 1936 that the hindquarters and part of the body of a bronze horse were discovered by fishermen dragging the seabed with nets in the same vicinity off Cape Artemision.[20] An archaeological report in the *Bulletin de correspondance hellénique* illustrates this large fragment of the statue as it looked after it was recovered.[21] Although it was presumed to belong to the same wreck at Artemision, the find spot was several kilometers west of the 1928 wreck site, near to the town of Oreoi.[22] No new investigations of the area were undertaken at that time.

In September 1982, with the assistance of the famous underwater explorer Jacques Cousteau, the Underwater Ephoreia of the Greek Archaeological Ser-

vice conducted a new search for the shipwreck, to no avail.[23] Most recently, in October 1993, as a test project to familiarize members of the Ephoreia of Underwater Archaeology with new remote sensing sonar and navigation equipment, a three-week survey in the Trikeri channel at Cape Artemision was conducted in conjunction with Dr. Willard Bascom in search of the ancient shipwreck.[24] However, this survey also failed to relocate the site.

RESTORATION

When first recovered, the statues were encrusted in seashells and layers of accretion from their long submersion in the sea. These accretions actually helped to preserve the statues.[25] During the days of inclement weather, the pieces were first cleaned mechanically by Bertos himself on board the *Pleias*.[26] Early photographs document their physical condition at this stage (see Figs. 23–24). Upon the return of the expedition, all the fragments were brought to the National Archaeological Museum in Athens, where they were subjected to further conservation under the direction of Dr. C. Zenghelis, professor of chemistry at Athens University. In order to leach salt out of the statues, they were soaked in distilled water, which was frequently changed during the course of several months. Following this procedure, the encrustations and corrosive deposits were removed from the surface of the statues mechanically by means of a brush. As a final measure, to remove very stubborn deposits, Zenghelis applied steam at very high pressure, a technique first used successfully on the bronze boy from the bay at Marathon and one that had proved effective in cleaning the god from Artemision.[27]

Following its conservation, the Jockey was fully restored, essentially as we see him today, but affixed to a metal stand for display purposes (Fig. 25). In keeping with current standards of restoration, pieces of metal with a dark patina were molded to fill the missing gaps between the thigh and lower right leg, giving the appearance of an intact statue. By 1930, the Jockey and the statue of a god (Fig. 26) were placed on display in the National Museum as centerpieces of the permanent collection. This event was commemorated in an article by the then director of the National Museum, Alexandros Philadelpheus.[28]

The forepart of the Horse, still under restoration at this time, was not put on display. With less than half the statue extant, it was destined to remain in the storerooms.[29] However, the chance recovery of the hindquarters in 1936 gave cause to undertake a restoration of the complete figure anew. The artist George Kastriotis made several preliminary drawings of the fragments and studies of the anatomy of the horse. His drawings (Figs. 27–28), never before published, reveal an extraordinary dichotomy in the statue. On the one hand, the sensitivity with which the artist has rendered the anatomy of a horse is clear

FIGURE 25. The Artemision Jockey as displayed in the National Archaeological Museum, Athens, prior to its 1972 restoration. Photo by Alison Frantz, courtesy Alison Frantz Collection, American School of Classical Studies at Athens.

from the legs and other parts of the body, as we shall see in the description below. Every structural feature is accounted for in the sculpture, as shown by Kastriotis's drawing of the underlying skeleton. At the same time, Kastriotis's drawings reveal a remarkable discrepancy in scale between the hind- and forequarters of the Horse. Kastriotis's drawings clearly illustrate that the forelegs are extremely foreshortened, approximately 30 centimeters shorter than they would be in real life. In fact, if the Horse were to stand upright today, its forelegs would be terribly hobbled!

Over the succeeding decades, another artist, A. Panayiotakis, who was well known for his representations of horses, undertook the final restoration, taking great care to produce the best possible restoration.[30] Molds taken from the fragments were used to create a plaster cast of the entire figure.[31] Since the front and back parts of the Horse do not join, there is a range of possible lengths for the complete figure. Furthermore, it is no longer attached to its base, and the

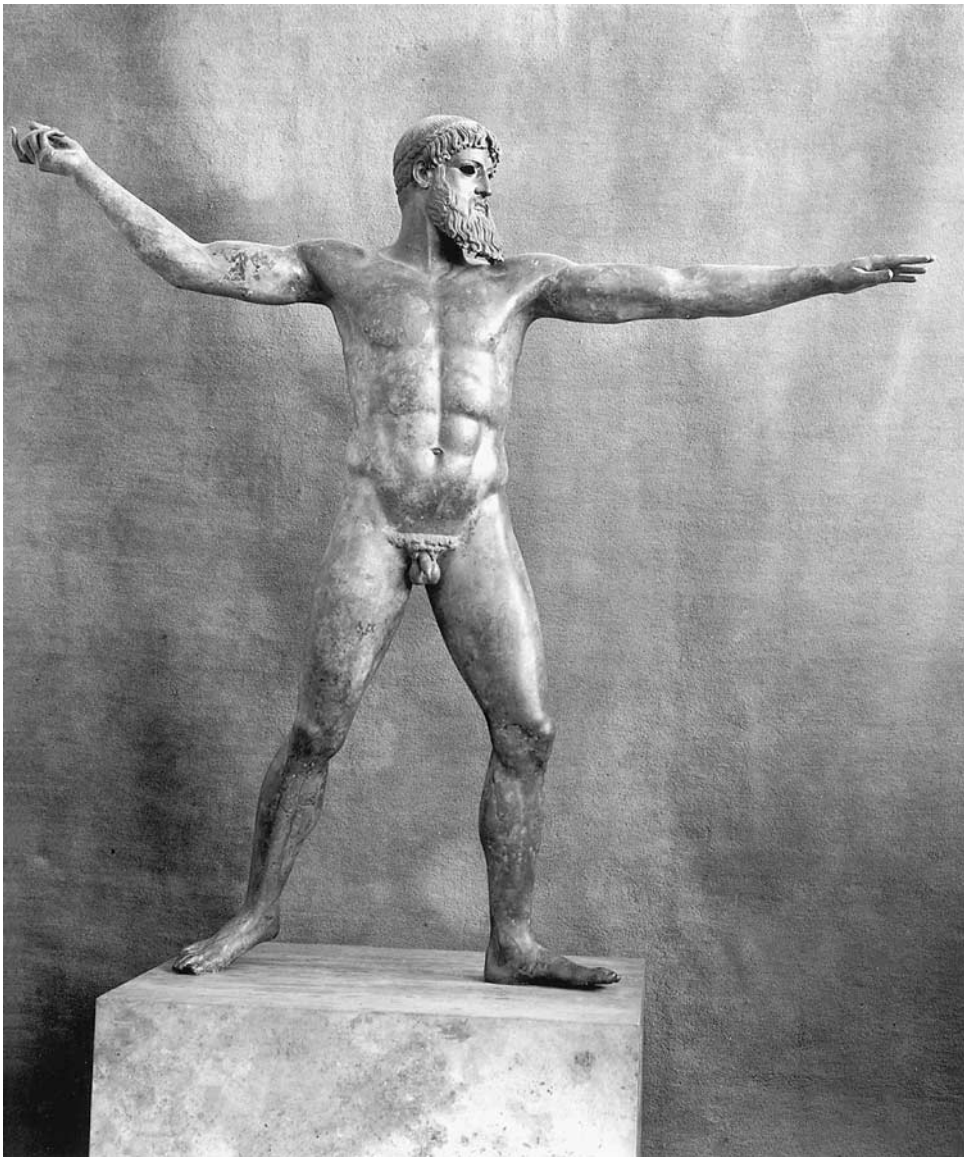


FIGURE 26. The god from Artemision as displayed in the National Archaeological Museum, Athens. National Archaeological Museum, Athens (15161). Height 2.09 m. Photo by Alison Frantz, courtesy Alison Frantz Collection, American School of Classical Studies at Athens.

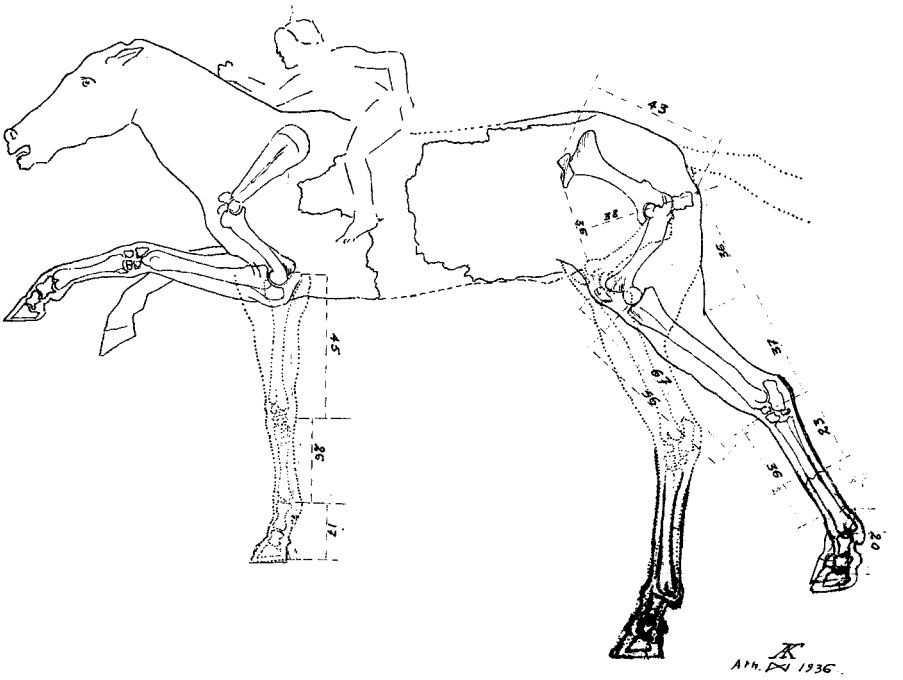


FIGURE 27. Drawing of the Artemision Horse fragments and Jockey by the sculptor George Kastriotis made in 1936. Courtesy George Kastriotis Papers, Gennadius Library, American School of Classical Studies at Athens.

metal itself has been bent slightly during deposition, such that the exact angle of inclination of the body cannot be determined precisely from the existing fragments. The plaster cast enabled the restorers to envision the correct proportions and position of the Horse prior to undertaking the actual restoration. A cast of the Jockey was placed upon it to determine the best positioning of the Jockey on his mount (Fig. 29).

In fact, the cast of the Horse is quite different from the final restoration in terms of proportions and position. It is several centimeters longer and represents the Horse in an elevated posture, as if jumping. Indeed, the plaster cast demonstrates the degree to which the fragments can be manipulated and reminds the viewer that the existing restoration is only one of many possible restorations. The cast of the Horse was given to the University of Athens and is currently on display in the cast gallery there (see Fig. 57).[32]

All the existing fragments of the front of the Horse, the head with neck and chest, two legs, and six other joining fragments from the right front shoulder and withers, were joined together. Given the clear discrepancy in scale between

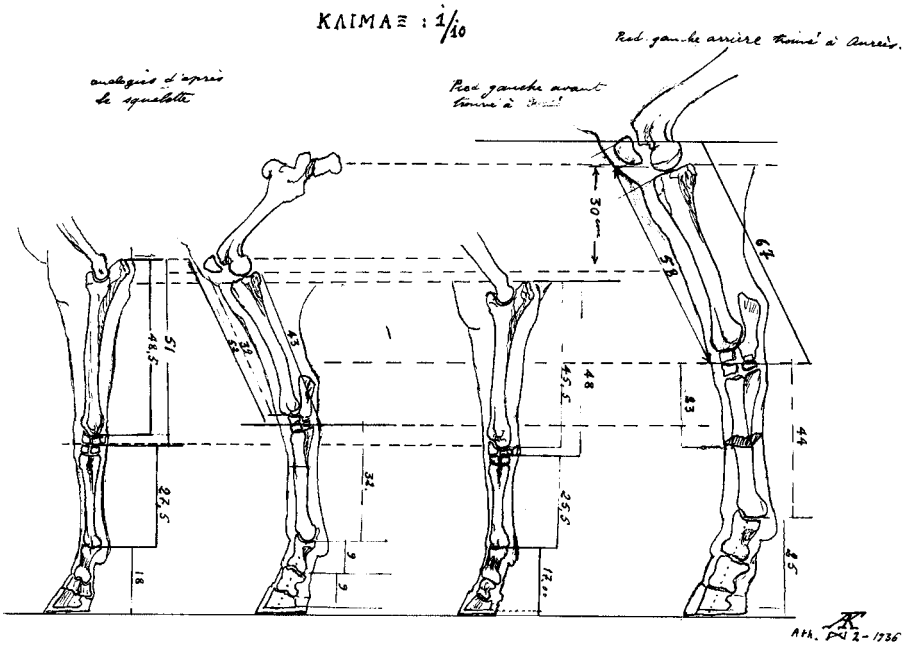


FIGURE 28. Detail drawing showing difference in scale between left hind leg and left front leg of the Artemision horse by the sculptor George Kastriotis made in 1936. Courtesy George Kastriotis Papers, Gennadius Library, American School of Classical Studies at Athens.

the forepart and hindquarters of the Horse, it is fair to ask whether the two fragments belong to the same statue. Since the fragments do not join, there will always be some question. However, I believe that a strong circumstantial argument can be made that the fragments do belong to the same statue. The posterior of the Horse, discovered in 1936, was found to join to the lower right hind leg and hoof discovered during the 1929 investigation, confirming that front and back fragments come from the Artemision shipwreck. There is no positive evidence that there was more than one bronze horse on the Artemision ship. All of the fragments fit well into the restoration of a single horse. The style and technique also support the association of front and back halves. The extreme foreshortening of the front legs and the enlargement of the hind legs was sometimes employed in antiquity for horses rendered in this flying gallop pose and can be explained as artistic license; the scale of the Jockey has been manipulated by the artist in the same way.

With donations from an anonymous American donor and the Stathatou family, the restoration was finally completed in 1972 under the supervision of the

FIGURE 29. Plaster cast of the Artemision Horse and Jockey made prior to 1972 restoration. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/518).

Museum conservator C. Chatzilios and the Museum artist N. Perantinos.[33] After determining that the body of the plaster cast was too long, a length of 1.38 m between the front shoulders to the loins was decided upon, approximately 0.15 m shorter than the cast. The conservators constructed an elaborate skeletal system to support the joined fragments and attached the pieces to this support network by a series of brass screws. The locations of the screws are indicated in my drawings of the statue (see Figs. 38–40).[34] The tail, the left hind foot and the midsection of the Horse, all made of a plastic material and tinted brown to imitate the color of bronze, were fashioned over the frame and between the existing bronze fragments. The finished restoration depicts a horse positioned in mid-gallop with both forelegs extended into the air.

In some places, the bronze had been bent, and it was impossible to bend it back without causing damage. Consequently, the width of the foreparts of the

Horse does not closely correspond to the width of its rear parts. This discrepancy is particularly noticeable on the Horse's left side, where the restoration of the body and the bronze forepart join only approximately. Vassilis Kallipolitis observed that the right front leg has been compressed and is therefore not rendered in its original position. It may well have been raised higher, like the left front leg. A modern metal pole aligned directly beneath the rider gives the front half of the statue added support and is the means by which the Jockey is secured in place (see Figs. 30–33). He is positioned at a more upright angle than when he was displayed on his own pedestal in the 1930 restoration (see Fig. 25), and he sits with his weight unevenly distributed, leaning to the right side (see Figs. 30–31). Both statues were coated with a layer of polyester resin, called Araldite Ciba, for protection.[35] Most recently, in 1993–94, the supports in the hind legs of the Horse were replaced and a low Plexiglas railing was installed around the statues, which are on permanent display in one of the main galleries of the museum.

DESCRIPTION

The statues, which share the inventory number B15377, are here described as they exist today in their current restoration (Figs. 30–33, Pls. 1–2) at the National Archaeological Museum in Athens. I have reserved any technical commentary for the following chapter on technical analysis.

The Horse

Height to the top of the head: 2.05 m. Length without modern tail 2.50 m. Length of head 0.50 m. Greatest width of body 0.53 m. Thickness of bronze: 2–3 mm.

The Horse is preserved in two large nonjoining sections, corresponding in essence to the front and back halves of the figure. The front section consists of ten joining fragments: left foreleg; right foreleg; a large fragment including head, neck, and forebody; six small, irregularly shaped body fragments from the right shoulder, and one fragment from the left shoulder (see Figs. 38–40). The rear section consists of five joining fragments: left half of the abdomen, buttocks and upper left leg; right half of the abdomen, buttocks, penis, testicles, and upper right leg; lower right hind leg and hoof; a fragment of the right thigh, including much of the brand; and another slightly larger fragment of the right thigh. The lower left hind leg, midsection of the body, and entire tail

FIGURE 30. The Artemision Horse and Jockey, front view. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/74).

FIGURE 31. The Artemision Horse and Jockey, back view. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/75).

are all modern restorations. Much less of the right side of the body is preserved than the left side. Front and back sections do not join. The Horse appears to be somewhat under life-size, but slightly larger in scale than the Jockey. The forelegs are very foreshortened in comparison to the hind legs, which have been elongated. The surface of the front half of the Horse, particularly the head and neck, is well preserved. The surface of the back half is in much worse condition.

The Horse stands on its two hind legs, lunging forward, with both forelegs

in the air. The left hind hoof (as it is restored) is placed slightly in front of the right. Great attention is paid to details. The hair on the coronet of the right hind hoof is carefully rendered, with two series of tufts, each hair of which is meticulously incised, which meet at the center of the hoof. Another larger tuft with carefully incised hairs hangs from the back of the right hind fetlock. Both hind legs are lean and muscular. Suspensory ligaments of the fetlock, the lines of the metatarsus, and other muscular and skeletal structures such as the lateral extensor of phalanges and kneecap are indicated. On the right rear thigh there is the recessed outline of a slender winged Nike holding a wreath in front of her (see Fig. 59). This elaborate brand would have been inlaid with another material, probably copper, silver, or gold. The sheath of the penis consists of six deep folds of skin that extend toward the scrotum. The scrotum is wrapped tightly around the testicles, folds of skin rendered by broad, arching incisions. On its left side, where more of the body is preserved, the great oblique delineation of the abdomen and the demarcation of the last ribs are visible. The farthest point forward, however, is on the underside of the abdomen.

There is only a ca. 8 cm gap (as now restored) between the front half and the closest points of the back half. If the statue originally had a support, as it does now, it must have been positioned in the area of the present gap, since there is no evidence of it elsewhere. Two features of the forepart of the Horse allude to its mount. A fragment of drapery adheres to the left withers close to the end of the mane. This small piece of drapery is similar to the Jockey's garment and its location corresponds to one of the few places where the Jockey's garment is incomplete. A fragment of a rein, identical in character to the double-layered reins in the Jockey's left hand, is attached to the right withers almost at the base of the neck.

Despite the elongated hind legs and the foreshortened front legs, the scale of the forepart and the hind section of the body are identical. Details and stylistic features of both sections closely resemble each other where they can be compared. The front legs have the same treatment of the coronet hair and display careful attention to the musculature and skeletal structure. Small, roughly oval calluses known as "chestnuts" are rendered on the interior of each foreleg, one of many realistic touches. The underside of the unshod hooves is visible, revealing a v-shape characteristic of a horse's sole. However, the artist did not render the so-called frog at the base of the feet. Deep folds of skin where the forelegs meet the shoulder add to the expression of movement.

The shoulders are broad and muscular. The neck is stretched forward, emphasizing the forward motion of the composition. The mane, cut very short, is rendered by a series of incised lines alternating with a deeper line and bordered by a narrow strip of shaved hair, except at the base of the neck, where the hair was left long (see Fig. 54). The shaved hair consists of many fine, closely grouped

FIGURE 32. The Artemision Horse and Jockey, proper left side view. Photo by David Finn, courtesy David Finn.

circular indentations. There is a large hole at the top of the Horse's head, just in front of the termination of the shaved mane, from which more hair, or a hair knot, must have protruded.

The head is very expressive. The Horse's mouth is open; the barrel of the cannon of the bridle sits at the back of it. Other indications of the bridle include the remains of a pin, underneath the chin just behind the muzzle, that was used to secure the nose band (see Fig. 61), and the ghost impression of two raised discs visible on the nose above the nostrils (see Fig. 62). The animal's ears are pressed back, a sign of its focus on galloping. The nostrils are flared to the point of exaggeration and veins bulge from both sides of the head between the cheeks and the muzzle. The lips are raised, exposing the gums and teeth. The teeth are anatomically correct and are those of a young horse in the prime of life (three to eight years of age). The tip of its tongue is turned up. Fine hairs are incised along the edge of the throat and chin and the edges of the ears. The eyes, now missing, were inset separately and would have added even more vitality to the figure.

FIGURE 33. The Artemision Horse and Jockey, proper right side view. Photo by David Finn, courtesy David Finn.

The Jockey

Height 0.84 m. Thickness of bronze 2.5–3.5 mm.

The statue is nearly intact except for part of the right thigh and the lower front edge of the garment. The right arm is reattached and the right leg is restored from four fragments, which join to one another but do not actually join to the figure.[36] Because of the careful restoration, it is possible to determine which fragments are original and which are restoration only through close visual examination of the right leg (see Fig. 46). The scale of the figure appears to be under life-size and slightly smaller than that of the Horse. Poor preservation of the surface of the bronze impairs ability to assess its original surface detail.

The Jockey sits astride his bareback mount with his legs spread apart to accommodate the girth of the Horse. In a dynamic pose, he leans forward, his lower body frontal and his upper torso twisted in two directions: his left shoulder is pulled forward by his outstretched left arm, and his right shoulder is pulled

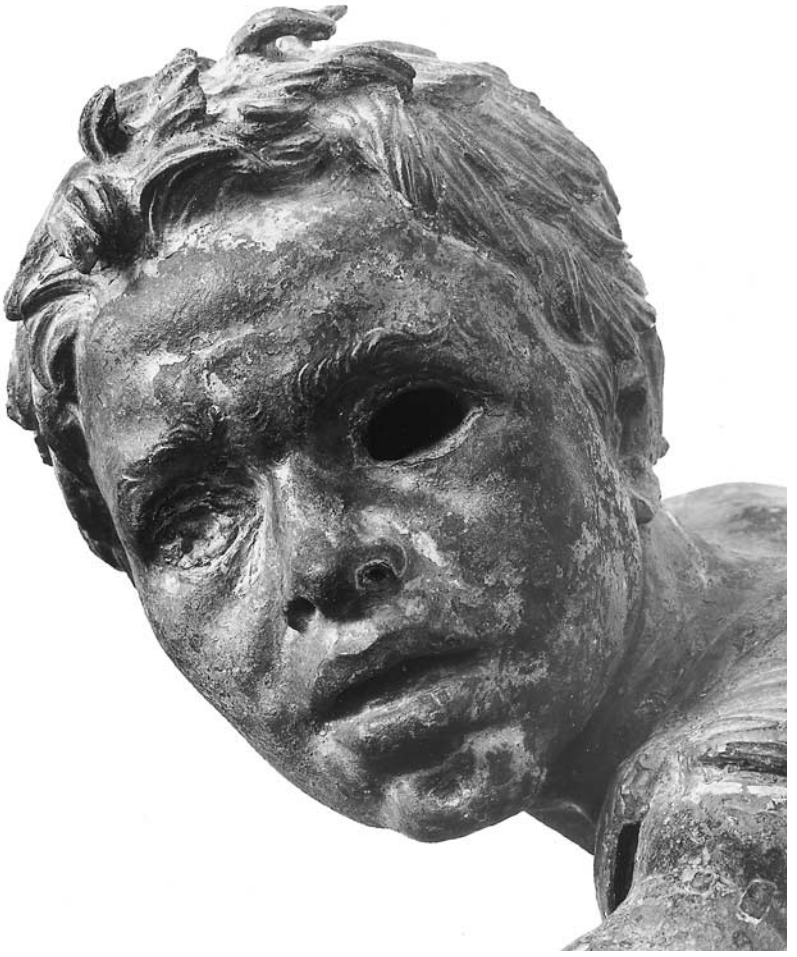


FIGURE 34. Frontal view of the Artemision Jockey's face. His right eye socket is still filled with remains of the separately inserted eye. Photo by Alison Frantz, courtesy Alison Frantz Collection, American School of Classical Studies at Athens.

back by the position of his right arm. The composition is further complicated by his head, which turns to the left. The head is held erect. He appears to be looking forward but conscious of the space to his left and perhaps behind; however, without the eyes in place, it is difficult to be certain.

The boy's hair is short, a layered cut consisting of concentric rings of curls that start at the top of the head from a raised whirligig. Bunches of hair are upswept in the front, giving a dynamic wind-blown effect, suggestive of the great speed at which he is riding. Turned-up tufts at the front and the plastic render-

ing of the hair at the back, over the nape, give the head a disheveled appearance. The boy has a tall brow, furrowed in concentration, broad cheeks, and a small, sharp, angular chin. The deep-set eyes were inserted separately. Material that fills the cavity of the left eye probably does belong to the original inset eye (Fig. 34). Thick eyebrows are rendered with individual hairs incised in irregular wavy patterns. His broad nose is rounded at the tip. It is not continuous with the brow but begins slightly lower and angles sharply out from it. The mouth is slightly open, and he has full, protruding lips. Both the full lips and distinctive rendering of the nose are characteristic of the way in which Greek sculptors portrayed Ethiopians, or black Africans. The edge of his tongue appears just inside his lower lip. His ears, the tops of which are covered by hair, have large lobes attached to the cheeks. Two tendons protrude on his neck beginning just above his right clavicle, which is clearly delineated. The combination of Ethiopian facial features and a Greek hairstyle seems to indicate that the boy is of mixed heritage.

The boy wears a short tunic, called an *exomis,* which is draped only over his left shoulder, leaving the right pectoral and shoulder blade exposed. Excess drapery hangs freely on the right side, enough that the garment could also have been pinned at the right shoulder. The strong arc of the drapery, which begins at his left shoulder and swoops down across the chest and up the back, is reiterated in the front by a deep fold just below it. The garment is gathered loosely at the waist, as if over a belt, forming a *kolpos*. The folds stream down in a series of deep swaths that alternate with material, which presses closely to his body. The impression is given of a loose-fitting garment of a single, lightweight material that is being windswept by his great forward motion. The folds at the back extend vertically away from his body with a vitality also suggestive of forward motion. A plain narrow border, 1.5–2 cm wide, defines the edge of the unpinned drapery over his back and the edges of the garment clinging to his left thigh and hanging over his buttocks.

The boy is not overly muscular and is of a moderate build. The lower contour of his right pectoral is indicated, as is the line of his right shoulder blade. The right nipple, which is exposed, does not appear to have been inlaid. Where muscles are in use, they are boldly modeled, as if flexed, emphasizing the energy of the moment. This is apparent despite the poor preservation of the surface of the bronze on both his arms and in the calf muscles.

The boy leans forward, with his left arm stretched out. In his left hand, he clutches a pair of reins, fragments of which are preserved. Each bronze rein consists of a strap of double thickness, apparently imitating a double-stitched leather rein. His right arm is bent back at his side. In the right hand, he held something parallel to his body. His fingers curl completely around this object, of which only a broken, short, rounded shaft remains. The position of his arm suggests

that it was a goad, which he is clearly actively using. Fingers and fingernails are sensitively rendered.

The Jockey's knees are spread apart, and a space is left open beneath the tunic and along the buttocks and inner thighs for attachment to his mount (see Figs. 49–50).[37] The original cast edge of this open area beneath him is clearly visible at the back along the buttocks. The genitals, which would have been covered by the tunic, were never rendered. The intact left leg is turned out slightly and the left foot even more so and down at the side. The right leg is restored as purely frontal, although the right foot is clearly in the same out-turned and downward position. Bound to each foot with a series of thin straps (like a sandal without a sole) is a spike that would have served as a spur. These spurs were cast together with the foot. The outward turn of the feet and the corresponding tension apparent in his calf muscles suggest that the Jockey is in the process of using the spurs. The feet are carefully modeled, with each toe and toenail indicated. There is a large gap between the big toe and the others, which lie tightly together, slightly curled. The undersides of his feet are fully modeled, not left open as on statues that are mounted to a base through their feet.

3

TECHNICAL ANALYSIS

No definitive study of a Greek bronze statuary group today would be complete without consideration of how the statues were made. This information is just as significant as style, iconography, chronology, identification, or the products of other traditional art historical and archaeological avenues of inquiry. It is particularly appropriate in the case of Greek bronze statuary, since the few existing statues are the legacy of a highly developed craft tradition that holds a significant place in the history of ancient technology. In recent years, several studies have been devoted to this subject, making plain many fundamental manufacturing techniques.[1] The corpus of extant bronze statuary is small, however, and practically every statue represents a different type; they come from nearly as many workshops. Only a few in-depth technical studies of individual bronze statues have been made, and these identify a variety of techniques used to produce them.[2] Consequently, it is important to examine each statue individually before generalizing about its method of manufacture.

As one might imagine, finished objects are not always forthcoming about their manufacturing techniques, and bronze statues are no exception. However, it has been demonstrated that systematic visual examination of the interior and the exterior of the bronze can provide much significant technical information.[3] This chapter considers the precedents for the Horse and Jockey Group from Artemision, focusing on what is known about how earlier Greek bronze equestrian statues were made. The Horse and Jockey are then examined in detail. Finally, their technique of manufacture is discussed in light of the technical analysis and a hypothetical description of the casting, joining, and finishing procedures used to create them is presented.

Large-scale equestrian statues, statues consisting of a horse and rider, were manufactured in Greece as early as the Archaic period. All of the existing Archaic statues are of stone and have a limited distribution, occurring only in Attica and on Delos.[4] The types consist primarily of static poses: mounted standing horses with all four feet on the ground or with one forefoot raised. A running or rearing type may also have been produced.[5] Bronze examples are first attested in the Early Classical period, when bronze appears to have become a preferred medium for large-scale statuary.[6] Very little is known, however, about the exact appearance of Classical bronze equestrian statues, since practically none have survived.[7] A fragmentary, over-life-size Classical Greek bronze equestrian statue in the British Museum does provide evidence for techniques that were employed in at least one workshop of the period.

The statue was acquired by the British Museum in 1886 from Eugène Piot and is believed to come from Taranto, in southern Italy.[8] For many years, only the leg with its attached greave (Fig. 35) was known, and the original type of the statue was debated.[9] The recent publication of this leg with other fragments of drapery and a probable horse's foreleg make it clear that the fragments are all part of the same equestrian group.[10] Dyfri Williams dates the group on a stylistic basis to 480–460 B.C.[11] In a careful technical analysis of the leg, Denys Haynes acknowledged the possibility that it might be a Roman overcast of a Greek statue, but he argued against this, noting the total lack of cast impressions of patches.[12] Movement portrayed in the drapery suggests that the rider is twisting to the left and may have been seated on a standing or rearing horse.[13]

It is clear from drip marks and brush strokes preserved on the interior surface of the fragments that the statue group was made using the indirect lost-wax process.[14] A particularly well preserved drip mark runs most of the way down the length of the calf (Fig. 36). The technique of lost-wax casting by the indirect method can be documented on several other Classical Greek bronzes.[15] The leg was cast in three pieces and joined together by welds. Excess metal from the welds is clearly visible on the interior of the leg.[16] The join at the base of the foot is invisible on the exterior, a clear example of the fact that joins are not always noticeable from the outside surface of a bronze.

Casting a statue in sections and then joining them together was common practice by the Classical period. Indeed, the process of piecing together a bronze statue is a focal scene on the only detailed ancient illustration of a Classical Greek foundry, the well-known name vase of the Foundry Painter in Berlin (Fig. 37), dated around 470–460 B.C.[17] On the vase, workmen are tending to a furnace for melting metal that is to be used to join the cast sections of a statue together; another workman is hammering a statue of an athlete, whose hand has just been

FIGURE 35. Piot bronze leg from a monumental equestrian statue of the Classical period. The British Museum, London (GR 1886.3–24.1). Height 0.82 m. Photo © The British Museum, courtesy Trustees of The British Museum.

FIGURE 36. Plaster cast of part of the interior of Piot leg, showing dripmarks. Photo © The British Museum, courtesy Trustees of The British Museum.

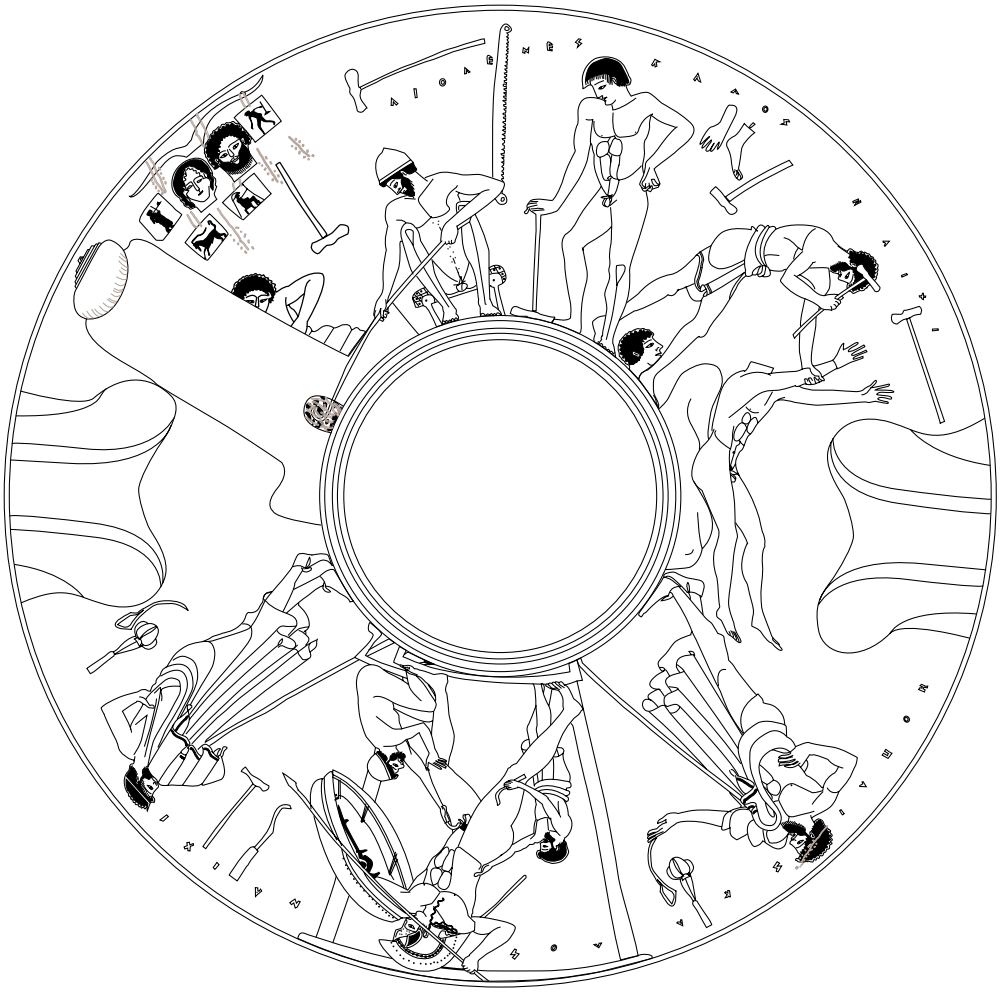


FIGURE 37. The Berlin Foundry Cup. Berlin, Staatliche Museen zu Berlin–Preußischer Kulturbesitz Antikensammlung (F 2294). Diameter 30.5 cm. Drawing by the author.

joined to the arm, judging from the line across the wrist. Little more can be extrapolated from the Piot fragments about their manufacturing techniques. However, even in their fragmentary state, they provide an important, documented precedent for piece-casting an equestrian statue by means of the indirect lost-wax process in the Classical period.[18]

Extant Hellenistic bronze equestrian statuary is equally rare.[19] The only statue that can be securely dated before the Horse and Jockey Group from Artemision is a group of associated fragments recovered from a late third-century B.C. well

deposit in the Athenian Agora.[20] The group is dated stylistically to the late fourth century B.C. and is tentatively identified as belonging to a statue of Demetrios Poliorketes.[21] It is clear from the relaxed position of the leg that the rider's horse was standing still and not in an elevated posture such as galloping, rearing, or lunging. The figure is draped and was equipped with a sword, as well as a helmet. This statue type, the mounted warrior or soldier, is distinct from that of the Artemision group and is one that was much more common in the Hellenistic period, to judge from the large number of bases that have been recovered throughout the Greek world.[22] Despite its fragmentary nature, the Athenian group will provide significant technical information when it has been fully published. At present, one can only say that the leg is a very regular casting, with few hammered patches, and was gilded, an indication of the importance of the figure being represented.[23]

ANALYSIS

An extensive visual examination of the exterior of the Artemision bronzes was undertaken in 1994 with the permission of the Greek Ephoreia and the National Archaeological Museum in Athens.[24] Work was carried out with the assistance of Dr. Artemis Onasoglou, curator of bronzes, and the conservation staff at the National Museum, in particular, Mr. Iannis Damigos and Mr. Petros Bouras. Visual examination of the exterior was supplemented with an examination of the interior of both statues, undertaken in late February and early March of 1997 with the assistance of Dr. Panayiotopoulou, curator of bronzes, and Dr. Helen Andreopoulou-Mangou, head of the Chemical Laboratory at the National Museum.[25] The interior examination was carried out by means of a fiber-optic probe with videotaping capability, called an endoscope. The video probe measured 0.008 m in diameter and had a camera at its tip that could be pointed by remote control. It was possible to enter through holes in the statues of 1 cm or greater diameter. This allowed access to many parts of the interior. Several of the photographs that accompany this chapter (Figs. 48–49, 51, Pl. 4) were captured from video footage of the interior.

Four technical drawings (Figs. 38–40, 46) of each statue accompany the following analysis. They are based on systematic measurements of the statues themselves and were completed in large part at the National Museum in Athens.[26] Accurate rendering of breaks and restored areas was greatly assisted by a series of early photographs taken prior to the restoration of the Horse (Figs. 41–42). In addition to identifying technical features such as patches and joins, these drawings, for the first time, clearly outline the original fragments, distinguishing between restored and preserved sections. This differentiation is not often easy to

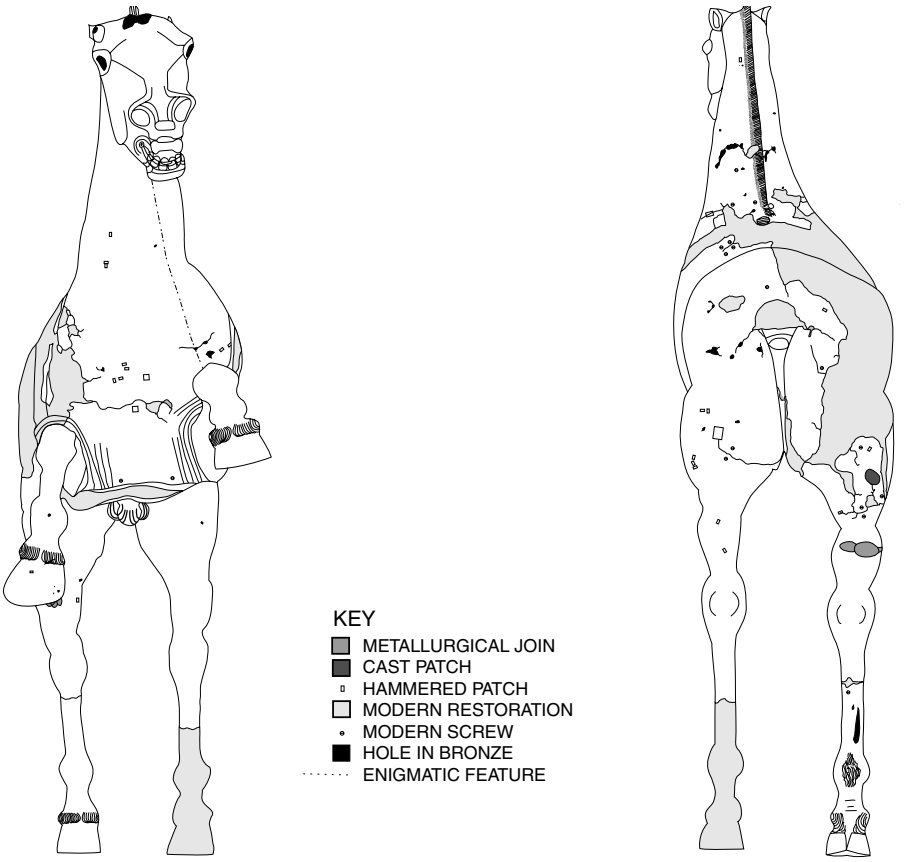


FIGURE 38. The Horse from Artemision, front and back views. Drawing by the author.

make today from photographs or even in front of the statues without proper light, due to the careful attempts of the restorers not to draw attention to their work. The drawings are intentionally schematic, however, and are in no way meant to substitute for the statues themselves. They are meant only to draw attention to technical features described in the text. Features of particular importance are also documented by photographs whenever possible.

The Horse

PATINA. The head and neck of the Horse have a patina of a deep brown color with tinges of green in places. This area is better preserved than any other on either statue and may be close to the original tinge of the bronze, suggesting a chestnut color for the Horse. The left forehoof has a deep black color (Pl. 3).[27]

FIGURE 39. The Horse from Artemision, right side view. Drawing by the author.

A sample from this hoof was analyzed by Dr. C. Zenghelis at the University of Athens.[28] On the basis of his analysis, he believed that the hooves had been subjected to fire in the presence of hydrosulphuric vapors, giving them their rich black color.[29] More recent work on other Hellenistic bronzes, most notably those of the Mahdia shipwreck, seem to indicate that a black patina was sometimes applied intentionally in antiquity and is not just a coincidental result of corrosion during deposition.[30] However, the exact method of application, such as the one Zenghelis suggests, has not been determined. Presumably, the black color imitated the natural black of a horse's hoof, adding to the realistic effect of the statue. In contrast, the surface of the hindquarters of the Horse is poorly preserved. It is a mottled, deep green and dark brown color. Little or no trace of the original surface of the bronze is visible.

THICKNESS AND CORE. The thickness of the bronze, where it can be measured, is between 2 and 3 mm.[31] Measurements were taken from unrestored holes in the bronze: at the top of the forehead, just below the outer corner of

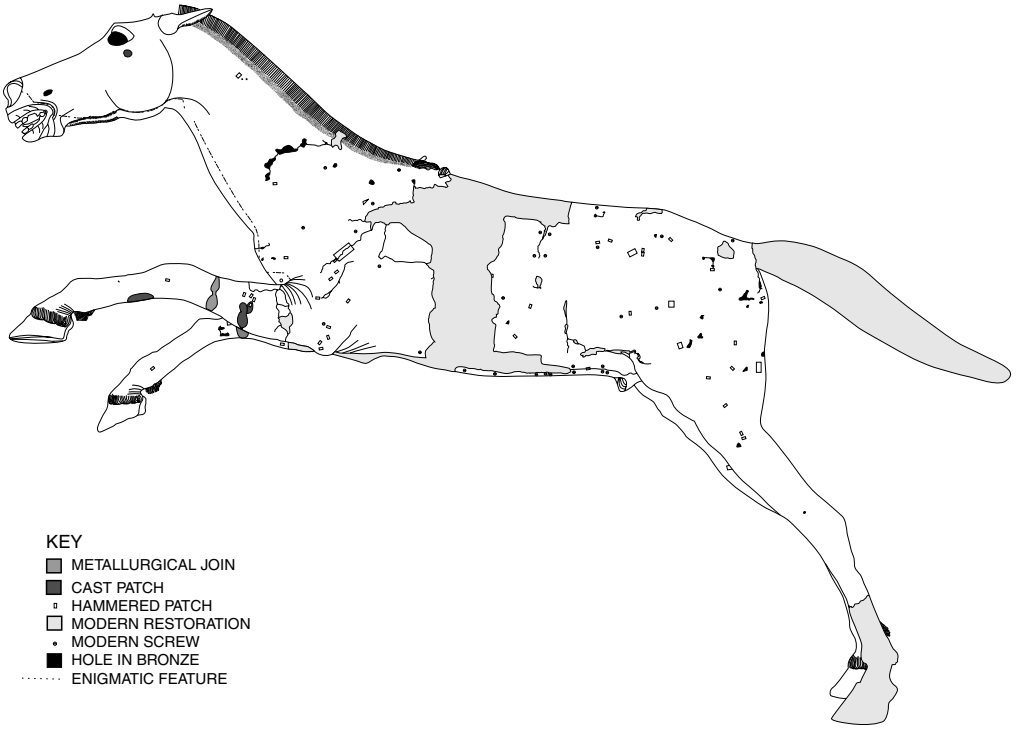


FIGURE 40. The Horse from Artemision, left side view. Drawing by the author.

the right eye, in the lower left and right sides of the neck, in the center of the outer side of the right hind lower leg, and on the left buttock. All of these holes are clearly indicated in black in the drawings. The uniform thickness of the bronze can, likewise, be seen in early photographs (Figs. 41–42) taken prior to the restoration. Features such as the eye sockets, ears, teeth, tongue, and the base of the right hind leg, which was an important area of support for the statue, are visibly thicker.[32] However, it is difficult to measure the thickness of these areas accurately. Where it can be seen through the holes described above, the interior surface appears to adhere closely to the exterior contours. Close correlation between interior and exterior contours was confirmed by the analysis of the interior with the video probe.

In the original report of the 1928 expedition, Bertos mentions that he found fragments of clay inside the forepart of the Horse while he was undertaking the initial cleaning of the statue.[33] He plausibly identified these fragments as remains of the original clay core.[34] Material adhering to the interiors of the ears may also be residual evidence of the core. The regularity and thinness of the casting

FIGURE 41. Forepart of the Horse from Artemision prior to restoration, right profile. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. NM 5474).

as well as the remains of a clay core are strong indications that the statue was cast using the lost-wax process.

JOINS. Metallurgical joins are clearly visible on the exterior surfaces of both front legs. In both cases, the join is located in the middle of the forearm between the elbow and the knee (see Figs. 38–40). The clearest example is on the left foreleg (Fig. 43). The joins are characterized by a series of connected ovals that go all the way around each forearm. This kind of join, known as a flow weld, involved pouring molten bronze onto the two separately cast pieces at the point of juncture (see Fig. 7.10).[35] This was done in a series of pours, rotating the leg each time. The visual result of this procedure on the exterior surface of the bronze is a series of ovals, each of which represents one pour.[36] The degree of metallurgical fusion and, hence, the strength of the bond between the two pieces, depended on the heat achieved. The actual line of the join has been obscured by these ovals, implying a high degree of metallurgical fusion. Another indication of the joins' strength is the fact that both front legs broke at places other than

FIGURE 42. Rear part of the Artemision Horse prior to restoration, right profile. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. NM 5477).

FIGURE 43. Detail of outer left foreleg of the Artemision Horse. Arrows point to ovals of flow weld. Photo by the author.

the joins. A similar metallurgical join is clearly visible on the right hind leg just below the thigh (see Fig. 39). No join is visible on the exterior surface of the left hind leg. Due to the modern armature that fills these spaces, it is not possible to see these areas on the interior.[37]

The Horse's teeth, palate, and gums are a separately cast section that was attached to the lips. The tongue was also cast separately and attached to the gums. The upper half of the teeth and palate is only joined at the front of the mouth and in one spot on each side directly above the canine teeth where excess metal is visible. Elsewhere there is open space between it and the lips. A mass of flow-weld metal is visible inside the mouth above the palate. Casson believed that the teeth, palate, and tongue were made of pure copper, which would explain why they were cast separately.[38] This is an attractive hypothesis. However, to my knowledge, the metal has not been analyzed, and there is no clear color differentiation today between these features and the rest of the mouth.

A narrow sleeve is visible through a crack in the bronze on the left side of

the scrotum where the testicles meet the groin. It is apparent from this feature that the scrotum and perhaps also the penis sheath formed a separately cast piece, which was then joined to the rest of the statue. A jointed break along the left side of the penis sheath may be the continuation of this join.[39] The rest of the join is not apparent on the exterior surface, however, and could not be observed on the interior. A similar mechanical device was used in the joining of two sections at the waist of the Charioteer from Delphi.[40] The technique can also be paralleled in the Hellenistic period, as, for example, on the sleeve joints used to attach the arms of a bronze statuette of Aphrodite now in the Toledo Museum of Art.[41]

ENIGMATIC FEATURES. Other markings on the exterior surface of the bronze are more enigmatic and open to a number of interpretations. Most noticeable is a thin line along the Horse's lower left shoulder (see Figs. 38, 40, 44), which becomes visible at the folds of skin on the left foreleg and continues in a straight line just above the foreleg, where it makes a near forty-five degree jog to become horizontal. After several centimeters, this line, which is now principally distinguished by its much lighter color, continues up the front of the neck.[42] This feature could be a metallurgical join.[43] However, such a long and nearly seamless metallurgical join would have been a remarkable and difficult task, which seems unwarranted when simpler casting solutions could have been effected. Perhaps it is a repair performed after the original casting. For example, there might have been a major casting flaw in the bronze, and the founder may have decided to repair it rather than recast the entire section; or it might be a repair to the statue at some later date.[44]

A fourth possibility is that it is the trace of a join in the wax model that has been preserved in the bronze. Although wax joins are frequently visible on the interior surfaces of statues, it is unusual to find any evidence of them on the exterior surface.[45] Since the line is primarily identified by its color differentiation, it might be a result of corrosion products that reacted differently with the bronze due to an inadvertent residue from a substance used to join the wax sections. However, there was no clear indication of this line on the interior of the bronze, which decreases the likelihood that it is a wax join.

The best explanation may be that the feature is not directly related to the manufacturing process at all. Modern plaster casts were made from the statue (see Fig. 29), and the sections, which correspond closely to the lines on the bronze statue, were then joined into one plaster cast, now in the Cast Gallery of the University of Athens (see Fig. 57).[46] The maker of the plaster cast may have left these marks on the statue, and they may have been preserved by the coating of polyester resin applied during the restoration in the early 1970s.[47] These markings may even reflect ancient copying of the statue, a practice for which abundant evidence exists.[48]

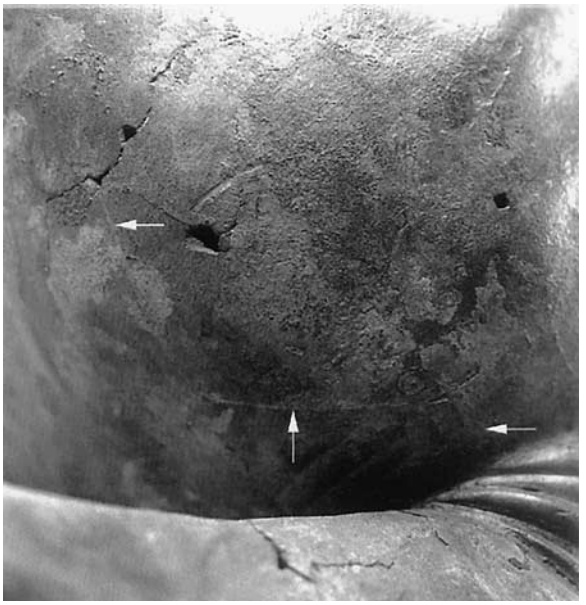


FIGURE 44. Enigmatic feature (indicated by arrows) visible on left shoulder of the Artemision Horse. Photo by the author.

Other unusual markings on the surface of the bronze include a slightly raised S-shaped mark in the center of the right side of the neck. The mark is not distinguished by any color differentiation and there is nothing to indicate that it represents a repair or join. The pattern may simply be the result, now preserved in bronze, of a shift in the envelope clay of the mold prior to or at the time of the casting of the neck. An area halfway up the left side of the neck is characterized by bits of black material in the bronze, apparently impurities in the casting.

PATCHES. Both hammered and cast patches are identifiable on the Horse (see Figs. 38–40). The hammered patches can be divided into three size groups. Most of them are small and rectangular in shape, measuring approximately 0.8 × 2 cm. At least forty-nine patches are clearly identifiable on the forepart of the Horse (see Figs. 38–40): five on the outer left foreleg, one on the inner left foreleg, four on the outer left elbow, five on the lower left shoulder, one on the lower left neck, one on the upper left neck, one on the inner right foreleg, four on the outer right foreleg, nine on the right shoulder, five on the right neck, four on the right cheek, five on the front chest, three on the front neck, one on the right front hoof. Another thirty-five patches are clearly identifiable on the rear part of the Horse, occurring most frequently on the upper body: three on the left buttock, two on the right buttock, one on the right croup, two on the left croup, five on the left thigh, eleven on the right thigh, four on the upper right leg, one on the right flank, two on the left ribs, two on the left loins, two on the left haunch.

FIGURE 45. Detail of the Artemision Horse's left side where the outline of a lost large hammered patch can be seen. Photo by the author.

Most of the other rectangular patches on the Horse are approximately twice as wide and occur less frequently. On the forepart of the Horse, there are two on the front of the chest, one on the upper right withers, and one on the outer right foreleg. On the rear part of the Horse there are three: two on the left thigh and one on the left haunch. Small rectangular patches (both sizes discussed above) are a common feature of Greek bronzes and have been documented on most of the statues that have been examined.[49] These patches were used to cover imperfections in the surface of the bronze, such as porosity, chaplet holes, or other features related to the casting process. The remains of a corroded iron chaplet, still in situ, are preserved on the interior surface of the Horse's neck. This chaplet corresponds to one of the small rectangular hammered patches on the exterior.

The rectangular patches of the third group are considerably larger and may represent repairs to the statue. The largest measures 5 × 2.5 cm and is located on the left withers. The patch itself has fallen out, leaving only its outline. It appears that this large patch was used to repair a long crack that had formed in the bronze (Fig. 45). The outline of nearly half of another large patch is visible on the upper right withers. These large hammered patches are not as strong as the smaller patches and are more likely to come out, as occurred here. A third large patch in situ is visible in the middle of the left buttock. This patch may also be the repair of a crack in the bronze, since a long crack terminates there.

Cast patches appear to have been used as well to cover larger imperfections created during the manufacturing process.[50] These patches are oval in shape and similar in character to the ovals of the flow welds described above. They occur singly or occasionally in a series of joined ovals. At least ten examples are clearly visible on the forepart of the Horse: one on the outer right foreleg, one on the lower left foreleg, one on the upper left cheek, one on the upper right cheek below the eye, three joined ovals on the left foreleg, two joined ovals on the right withers, and a third next to them. There are four individual, oval-shaped patches on the rear part of the Horse: one on the lower right buttock, two on the lower right thigh, and a partial one on the right flank. All of the cast patches are considerably larger than the largest patch of the second group of rectangular patches.

INLAYS. Some of the final detail work can be deduced from vestigial evidence. The eye sockets were cast hollow in order to receive the eyes, which were made separately and inset after all of the pieces of the statue had been joined together. A narrow shelf inside each eyelid would have helped to secure the eyes in place.[51] Further evidence for inlays can be seen on the right thigh, where the remains of a narrow recessed channel in the form of a winged Nike bearing a wreath are easily discerned (see Fig. 59). The channel itself may have been cast together with the thigh, but only afterwards would it have been filled with another metal such as copper, silver, or gold.[52] Perhaps copper or blackened silver is most likely, inasmuch as it would have given a very realistic impression of the seared flesh of a horse's brand. The use of inlaid detail to heighten the realism of a sculpture can be seen in other Hellenistic bronzes, such as the Terme Boxer (see Fig. 56).[53]

ATTACHMENTS. An elaborate bridle, which can be reconstructed from wear marks on the bronze, was, for the most part, fashioned separately and then attached to the Horse. Only the cannon of the bit was cast together with the head and is still in place (see Fig. 60). This practice is different from that used in casting the large-scale bronze horse from Trastevere now in the Palazzo Conservatori Museum in Rome, whose entire bridle, including the mouthpiece, was made separately.[54] A lead (?) pin in situ under the chin was used to secure the nose band in place (see Fig. 61).[55] Wear marks indicate the thickness of the nose band and the location of two or three discs *(phalerae),* possibly with relief decoration that adorned the muzzle and brow of the Horse (see Fig. 62). A fragment of one of the reins, with a characteristic double thickness, is still attached to the nape of the neck of the Horse and may have been cast together with it (see Fig. 54).[56] Fashioning the bridle separately, as opposed to casting it together with the head, would have made it easy to incorporate other materials, such as copper, silver, or gold. It also would have given a more realistic impression that the Horse was wearing a bridle. At the same time, casting the cannon of the bit with

the Horse's head and the discrete pin beneath the chin ensured that the bridle was securely fixed to the statue.

COLD WORKING. In its present state of preservation, it is difficult to determine how much cold working was done to the statue. However, finely incised hairs on the fetlock of the left foreleg (Pl. 3) appear to be cold-worked (the metal appears to have been worked in addition to the wax model) and should be an indication of the degree of detail that was achieved, even if only traces of that detail are preserved elsewhere. Hairs on the underside of the Horse's cheek, at the base of the mane, and on the other hooves may have been cold-worked with a chisel; the shaved hair of the mane may have been cold-worked with a punch.

The Jockey

PATINA. A deep brown with a greenish tinge in places characterizes the color of most of the bronze. In contrast to the forepart of the Horse, the roughened and mottled state of most of this surface is an unfortunate result of corrosion products that were removed when the statue was first conserved and gives little indication of the original patina.[57] Dark patches on the Jockey's face (Pls. 5, 9–10) that underlie and are adjacent to layers of auburn-colored corrosion material appear to preserve some of the original dark patina of his skin. It is conceivable and likely that a black patina was applied to the Jockey's skin in the same way that the Horse's hooves were blackened.

THICKNESS AND CORE. The thickness of the bronze, where it can be measured, is between 2.5 and 3.5 mm.[58] Measurements were taken from unrestored holes in the bronze: in the back of the head, on his right breast, at the back of his tunic just below the overfold, and in a large hole in the drapery over his right thigh. The exact location and character of these holes are indicated in black in the drawings (Fig. 46). Certain features such as the eye sockets, ears, and nose are thicker but are difficult to measure. Other features such as the toes and fingers are also thicker and seem to have been solid cast. This is clear in the case of his right thumb, which has a break straight through it revealing a solid bronze interior. The interior surfaces of the left leg, buttocks, and drapery closely follow the exterior contours. The correlation between the interior and exterior surfaces of the head was made more difficult to determine by corrosive material adhering to the surface of the bronze. The left leg, which is intact, is filled with material to just above the knee. This material appears to be the original clay core (see Fig. 48).

FIGURE 46. The Jockey from Artemision, front, back, and profile views. Drawing by the author.

FIGURE 47. Detail of the Artemision Jockey's head showing the edges of a metallurgical join on his neck. Photo by the author.

JOINS. Metallurgical joins are not easily detected on this statue by visual examination of the exterior surface alone. Given the statue's relatively small size, there may have been very few joins. Only two joins are readily apparent: one on the neck and one on the left thigh. Both joins were confirmed on the interior of the statue. The exact nature of the join on the neck and its construction could not be determined with certainty. Two parallel lines, approximately one and a half centimeters apart, are clearly visible on the right side of his neck (Fig. 47, Pl. 4). This "collar" occurs only on the front of the neck, from just behind the left ear to approximately the same place behind the right ear. At the back of the head, the hair overlies the neck leaving a narrow gap visible to the naked eye. These features could delineate a partial ring of bronze used to attach the head to the neck. A similar construction was used in the over-life-size Hellenistic bronze statue of a veiled woman, found in the sea near Arap Adasi (in modern Turkey).[59] On the other hand, it may be a kind of weld. A ring of metal is clearly visible inside the neck at the area of the join. Its smoothness and slight differentiation in color suggest that it may be a lead collar used to reinforce the

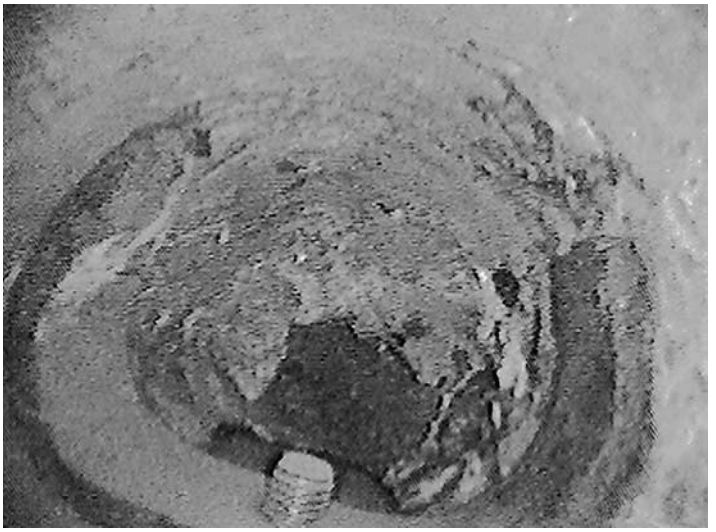


FIGURE 48. Video probe image of metallurgical join in the Artemision Jockey's left leg. View down inside of the Jockey's left leg. Iron clamp from 1929 restoration visible in foreground. Excess weld metal from metallurgical join at thigh visible just behind clamp. Core (?) material fills leg behind join. Edge of open space beneath leg extends up to and just beyond join. Photo by the author.

join on the interior. A rough segment of metal in this same area, however, appears to be bronze and looks more like excess material from a flow weld. A large clay shard lodged in the Jockey's throat obscures part of the join (Pl. 4).[60] Nonetheless, the neck is a logical place for a join, since it allows the head to be cast separately.

A second join is clearly identifiable on the interior and exterior of the left thigh. Ovals from a flow weld are visible on the exterior surface. A large quantity of excess weld metal is visible on the interior of the thigh, all the way around the leg (Fig. 48). It is possible that the arms and right leg, or some combination thereof, were also cast separately and joined inconspicuously where they meet the drapery. However, there are no visible signs of this on the exterior surface of the bronze.[61]

From the interior, a finished cast edge is visible on the underside of the Jockey's buttocks (Fig. 49), well beneath the place where the Jockey originally sat on the Horse's back (now restored). There is no indication that the two pieces of sculpture were physically joined here; the backs of the Jockey's buttocks and thighs appear to have simply rested on the Horse. The Jockey must have been joined in the front to the Horse, although this part is now poorly preserved. The piece of drapery attached to the left withers of the Horse supports this hypothesis (Figs. 40, 50). This drapery fragment corresponds to one of the few areas of missing drapery on the Jockey. Since the two statues were separated, it is logical that the area of separation will be less well preserved. This is true of both the Horse and the Jockey. The underside of the Jockey's buttocks and his upper inner thighs were left open (see Fig. 49), apparently since these areas would

FIGURE 49. Video probe image. Open space beneath the Artemision Jockey from the interior. Arrows point to finished cast edges. Restoration material of the Artemision Horse between arrows. Photo by the author.

FIGURE 50. Detail of drapery on the Artemision Horse and gap in drapery on the Artemision Jockey. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/63).

not have been seen. Furthermore, this technique would require less bronze and would facilitate the joining of his left leg.[62] The practice of not rendering features on sections of sculpture not meant to be seen is observable on other large-scale Hellenistic bronzes, such as the Sleeping Eros in the Metropolitan Museum of Art, New York (see Fig. 5).[63]

PATCHES. There are considerably fewer patches on the Jockey than on the Horse; however, the patches that do exist are similar in character. Both hammered and cast patches are visible on the exterior. Hammered rectangular patches occur in two different sizes. There are eleven small patches, ca. 0.8 × 2 cm: one on the top of his left foot, one on the inner face of the upper left thigh, two on the inside of his left arm, four on his outer left forearm near the wrist, one on his outer left elbow, one on his left arm to the shoulder, and one on his lower lip. Such small rectangular patches are a typical feature of large-scale Greek bronzes and were used to cover a variety of blemishes from the original casting, such as pockmarks caused by porosity and rectangular chaplet holes. A larger rectangular patch, now lost, was located on the Jockey's right pectoral. Another large patch in situ occurs on his inner left thigh.

There are five oval cast patches visible on the exterior surface: one on the right side of his chin, one below his right ear, one in the middle of his outer right forearm, and two connected patches on the upper left arm.[64] The cast patches are all significantly bigger than the small hammered patches and were most likely used to cover larger blemishes in the casting.

INLAYS AND ATTACHMENTS. The eyes of the Jockey were inlaid in a similar manner to those of the Horse. One eye socket preserves part of the original eye (see Fig. 34); the other is hollow. Each eye socket was cast open, and they originally held lifelike irises and pupils of stone or glass, encapsulated in bronze or copper eyelashes (see Fig. 8).[65] A deep shelf visible inside the lower left eyelid helped to support the eye once it was fixed and provided a place for the fixative that would have secured it. The teeth, which may have been added in another material, are not preserved.[66] The lips were cast together with the head, as is also the case with several other Hellenistic bronzes, such as the Getty victor (see Fig. 20.1–2), a portrait head of a man from Delos (see Fig. 19.1–2), and a portrait of a child from Olympia (see Fig. 12.1–2).[67] It appears that the one visible nipple was cast together with the body.

Remains of a bronze rod broken at both ends are firmly lodged in the tight grasp of the Jockey's right hand (see Fig. 64). This rod was cast separately and then attached to the figure. It could be a connector for an attachment of a very different character or it may be a section of a narrow whip. Fragments of two reins adhere to the palm of the left hand and may have been cast to-

gether with the arm (see Fig. 65). Otherwise, the reins would have been cast separately.

COLD WORKING. In its present state of preservation, it is difficult to assess how much cold working was done to the statue. Given the careful cold working that is detectable on the Horse, it is conceivable that portions of the hair and eyebrows were embellished with a chisel after casting.

TECHNIQUE

Our knowledge of ancient bronze sculptural techniques is based on various sources. Ancient illustrations of metalworking (see Fig. 37), literary *testimonia,* finds from excavations of ancient foundries, including actual mold fragments and metallurgical tools, and modern ethnographic parallels for metalworking contribute to our understanding of how ancient statues were made.[68] As important is the wealth of objective information derived from scientific analysis and physical examination of extant Greek bronzes. At present, the corpus of extant bronze statuary that can be firmly assigned to the Hellenistic period is very small, and only a few pieces have been examined in any detail from a technical perspective. The following utilizes that information in conjunction with the above technical analysis in order to determine which casting methods were used and to present a hypothetical description of how the Artemision Horse and Jockey were made.

There are five casting techniques that could have been used to make the Horse and Jockey Group from Artemision: solid lost-wax casting, direct hollow lost-wax casting, indirect hollow lost-wax casting, casting with a combustible model, and casting in a refractory piece mold.[69] A combination of two or more of these techniques is conceivable and even probable.

In the early part of this century, a case was made for the Greek use of casting in a refractory piece mold, a technique known to and practiced by the Chinese since the third millennium B.C. to make large-scale bronze statuary.[70] This theory was most extensively argued by the scholar and sculptor Kurt Kluge. In a monumental three-volume work on ancient bronzes, Kluge argues that both refractory piece molds and lost-wax casting techniques were used to cast large-scale hollow bronze statues in antiquity.[71] Although his theory prevailed for many years, it has since been discredited for lack of evidence.[72] However, there is abundant evidence on the interior of Greek bronze statues of wax manipulation.[73] No substantive argument can be made that the refractory mold technique was used in the manufacture of the Horse and Jockey Group.

When casting with a combustible model, the material being imitated is used

PLATE 1. The Artemision Horse and Jockey, proper left profile view. Photo by Craig and Marie Mauzy.

PLATE 2. The Artemision Horse and Jockey, proper right profile view. Photo by Craig and Marie Mauzy.

PLATE 3. The Artemision Horse's proper left forehoof (instep), with original black patina preserved. Photo by Craig and Marie Mauzy.

PLATE 4. Video probe image of interior of join in Fig. 47. Metallurgical join in the Jockey's neck. Excess flow weld metal visible in center. The shard on the right is lodged in throat. Photo by the author.

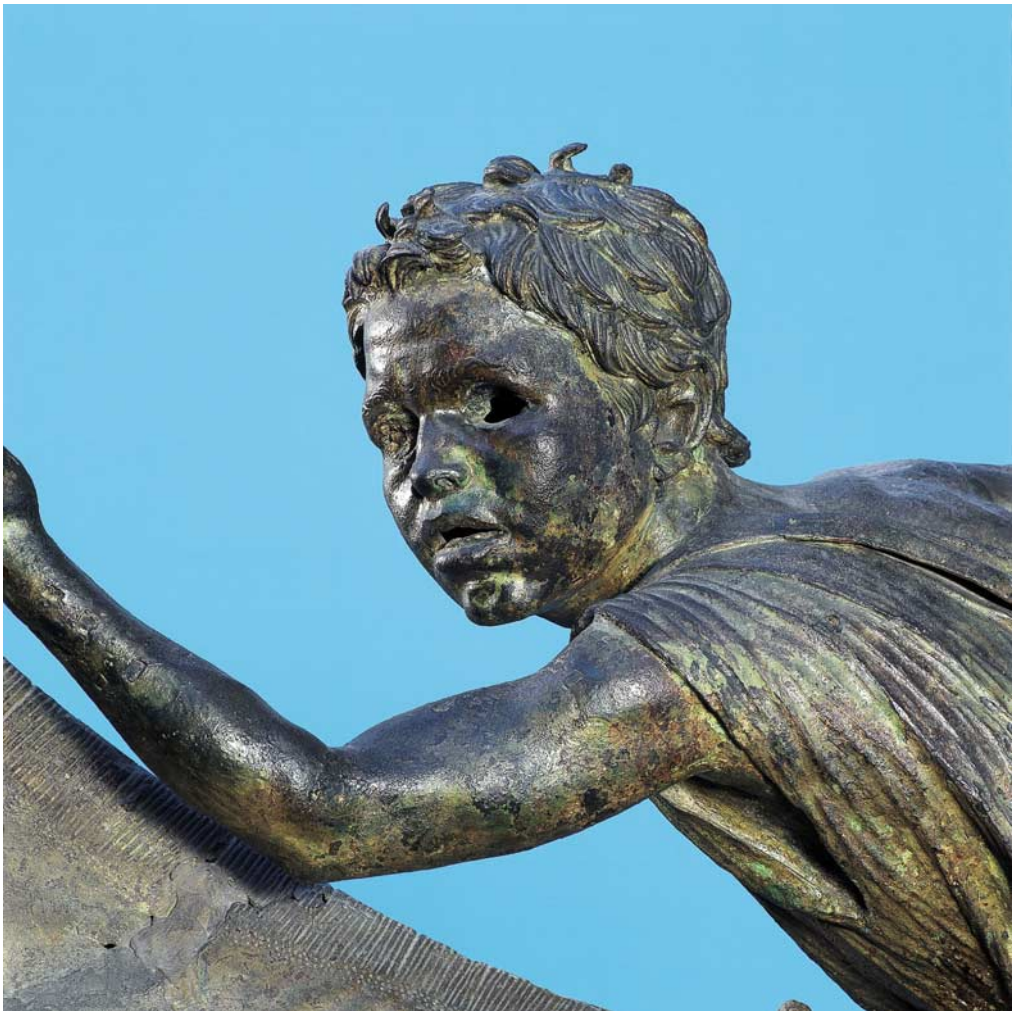


PLATE 5. Detail of the Artemision Jockey's face with original (?) black patina preserved in places. Photo by Craig and Marie Mauzy.

PLATE 6. Detail of the Artemision Horse and Jockey, proper left profile. Photo by Craig and Marie Mauzy.

PLATE 7. Detail of the Artemision Horse and Jockey, proper right profile. Photo by Craig and Marie Mauzy.

PLATE 8. Detail of the Artemision Horse and Jockey. Photo by Craig and Marie Mauzy.

PLATE 9. The Artemision Jockey, front view of face. Photo by Craig and Marie Mauzy.

PLATE 10. The Artemision Jockey, proper right profile of face. Photo by Craig and Marie Mauzy.

for the model around which the mold is formed. The material is then burned out of the mold before the molten metal is poured in. This technique, known to have been practiced in conjunction with lost-wax casting in antiquity,[74] could have been employed to cast the Jockey's tunic. However, the cloth and drapery, in their present state of preservation, cannot support this conclusion.

The remaining three methods are all variants of the lost-wax process, the fundamental techniques for which are discussed in Chapter 1. Parts of the Jockey appear to be solid castings, notably the thumb of his right hand and probably the other fingers, as well as his toes. These areas may have been separately cast, then metallurgically joined. Solid cast sections of extremities, including hair and toes, have been clearly identified on a number of Greek statues, such as the Riace warriors and some of the Porticello bronzes.[75] The toes and even the fingers of the Jockey, however, are small enough to have been cast together with a hollow cast foot or hand. Cast sections of the Horse, such as the teeth, palate, and tongue, as well as the scrotum and possibly the penis sheath, would have been cast solid as well, that is, without a core.

The direct process of hollow lost-wax casting (see Fig. 2.1–4) was long considered by scholars to be the primary technique used by the Greeks to cast large-scale statuary, since it requires the original model to be destroyed in the process, making each statue unique. The sole use of this method has been seriously questioned in recent years, and systematic visual examination of bronze statues has provided much more concrete evidence for the use of the indirect process.[76] It is, in fact, difficult to identify direct lost-wax casts with certainty, since many diagnostic features could also be the result of indirect lost-wax casting.

The two processes are conceptually quite different. In the direct process, the sculptor first builds up a clay core of the approximate size and shape of the intended statue or statue section. This clay core could have been executed in great detail, as Brunilde Ridgway argues for a hand from the Porticello shipwreck, or it may only have been roughly worked, as has been argued by Carol Mattusch for several smaller-scale Archaic and Early Classical statues.[77] In either case, the original model is lost during the casting process. It has been shown that as a primary means of piece casting a large-scale statue, the direct method of lost-wax casting is by far inferior to the indirect method.[78] While it is possible that the direct method may have been used for some sections of the Horse and Jockey, there is no evidence proving that this was the primary technique involved.

With the indirect process of lost-wax casting (see Fig. 7.1–10), the sculptor works from an original model that is not destroyed. This allows the sculptor to recast sections or entire statues from the original model. It is possible to identify an indirect casting by recognizing features on the interior of the bronze that could only have resulted from the indirect process. These features include im-

FIGURE 51. Video probe image. Wax brush strokes preserved in bronze on inside of right side of the Artemision Horse's lower neck. Photo by the author.

pressions in the bronze of wax drip marks and brush strokes, as well as tiny nodules indicating that the core was in a semi-liquid state when it was formed. Such brush marks are clearly visible on the interior of the left cheek and lower right neck (Fig. 51) of the Horse and on the interior of the back of the Jockey's garment. In each case, these strokes underlie corrosion material, a clear indication of their antiquity. They are strong and deep, as though the wax was applied in a relatively thick layer.[79] Indirect lost-wax casting was, therefore, the primary technique used in making the Horse and Jockey.[80]

In light of the above analysis, it is possible to offer a reconstruction of the steps that were involved in the manufacture of the Horse and Jockey, based on our current understanding of how statues were cast by the indirect process in antiquity. First, a model of each statue would have been made in the sculptor's preferred medium, most likely clay.[81] To replicate its form, a mold known as a master mold would have been made around the model. Many different mold sections would have been necessary for each statue so that no undercut features were damaged. In the case of the Horse's left foreleg, the mold could have been made in two parts. Upon drying, the individual pieces of the mold would have been reassembled into manageable sections. The Horse was cast in at least eight sections: left foreleg, right foreleg, forebody and head, mouth, tongue, testicles, rear body, and right hind leg. The Jockey was cast in at least five sections: head, torso, left leg, and drapery. At least two sections of drapery are detectable, the

flap at his back and the rest of the garment, which was most likely cast in more than one piece.

Each group of master molds was lined with a layer of beeswax, brushed into the mold in a semi-liquid state. After the wax was in place, the master molds would have been removed to reveal the wax working models. At this point, the bronze sculptor would have pieced together all of the wax sections of each figure to see that the wax models were accurate. Any features that did not reproduce the master model faithfully could still be easily corrected in the wax before the statue was committed to bronze. The sculptor would then have rendered additional details in the wax, such as the hairs of the fetlocks of the Horse. Then the statues would have been separated again into manageable sections in order to make molds for casting.

Several measures would have been taken to prepare the wax models for the introduction of a clay core. For larger sections, such as the hindquarters of the Horse, an armature, consisting of thick iron rods, could have been inserted to stabilize and strengthen the core. Chaplets of iron (and possibly bronze) would have been stuck through the wax models at several points in order to create a bond between the clay investment and the core when the wax was melted out.

Next a wax gate system, complete with funnel, channels, and vents, would have been attached to each wax model section. Each section would then have been invested in one or more layers of clay. The layer closest to the wax model would have consisted of a fine clay and may have been brushed on. The outer layer(s) would have consisted of coarser clay, creating the outer shell of the mold. Each mold would then have been filled with a clay core, which was poured in a semi-liquid state.[82] This core could have been applied in layers, so that one layer could dry before the next was added. When the hollow area within the wax model was completely filled with the core and the pour hole had been covered up with investment clay, the mold would have been dried/heated and the wax poured/burned out. The mold would then have been baked at a high temperature. Finally, the mold would have been heated again and molten metal poured in. When the metal cooled, each mold would have been broken open to reveal the cast bronze sections of the statues.

While the pieces were still in sections, the casting skin would have been removed with abrasives, as well as any protrusions left by the pouring channels, and the chaplets would have been cut off. The separately cast sections of the bronze would then have been joined together. In the case of the forelegs and right hind leg of the Horse and the left leg of the Jockey, it is clear that metallurgical joins called flow welds were used. Narrow gaps were left between the joining edges to create a wider bonding area when two pieces were joined. Molten bronze was poured onto the join, into the gaps, and onto the edges, creating a metallurgical bond. This appears to have been done in a series of pours,

rotating the section each time so as to complete the circumference. A temporary mold may have been fashioned around the join to ensure that the bronze flowed only to the correct area. A similar technique is likely to have been used to join the head and left leg of the Jockey.

A few final procedures would have been performed before the statue group was complete. Blemishes on the surface of the bronze and holes created by the chaplets would have been patched. Smaller blemishes were patched with small hammered rectangular patches all over the Horse and Jockey (see Figs. 38–40, 46). In each case, a rectangular area was chiseled out around the imperfection, undercutting the surface edges. Next, a piece of bronze approximately the size of the area to be patched was hammered into the hollow space. The force of the hammer would cause the metal patch to expand into the undercut areas, creating a bond between the patch and the statue. Larger blemishes were refinished with cast patches. Artificial patination of the Horse's hooves and probably the Jockey's skin is likely to have been done at this time. The eyes and the brand would then have been inlaid and the bridle and whip attached to the figures. Finally, any cold working, such as is detectable on the Horse's fetlocks, would have been performed on the pieces. The group would then have been ready for mounting to its base. A series of large hammered patches on the Horse are likely the result of later repairs to the statue group, possibly after it had been set up.

4

QUESTIONS OF STYLE AND IDENTIFICATION

HISTORY OF SCHOLARSHIP

A chronological presentation of the previous scholarship is especially valuable because of the long-standing controversy over the date of the Horse and whether or not the Jockey belongs on the Horse, questions that have lingered until the present. Although there has been no in-depth study of the Artemision Group prior to this one, the statues have been discussed in passing by many authors and are regularly included in surveys of Greek art. A systematic review of the scholarship reveals a wide range of proposed dates for the statues and interpretations of the group, and, equally significant, the premises upon which these arguments are based. The scholarship can be broadly classified into two groups, which hinge on the formal reunification of the statues in 1972. With just cause, nearly all scholars who have taken into account all of the evidence available, that is, after the 1972 restoration, agree that the two figures belong together.

In 1929, Nikos Bertos published the first account of the 1928 recovery of the forepart of the Horse and most of the Jockey from Artemision. While his report focused on the means by which the statues had been brought to light and a description of the various objects recovered from the shipwreck (see Chapter 2, Discovery), Bertos also ventured to offer some preliminary remarks on the identification of the statues and their date. He immediately saw in the Horse, of which one must remember that there was then only the forepart, an exceptionally fine statue of the Classical period (dated to the middle of the fifth century B.C.), exhibiting stylistic features similar to the horses of the Parthenon frieze (Fig. 52). In the Jockey, however, he saw an "inferior" work of the Hellenistic period.[1] Despite their having been found next to each other, Bertos be-

FIGURE 52. North frieze of the Parthenon, Athens, detail of horses. The British Museum, London. Photo © The British Museum, courtesy Trustees of The British Museum.

lieved that the Jockey and forepart of the Horse were not part of the same group, based on their stylistic differences, and he argued that most likely another horse and jockey remained at the site.[2] His subsequent examination of the site of the Artemision wreck in 1929, however, only yielded more fragments of the same two statues. Regrettably, no formal publication of Bertos's second expedition or any of his revised conclusions ever appeared.

Shortly after Bertos's report, Antonios Arvanitopoulos published an extensive article on the Horse and Jockey based solely on the finds from the 1928 expedition. In this work, Arvanitopoulos undertook a detailed analysis of the statues and attempted a comprehensive interpretation of their style, attribution, function, and original location. As he was an early authority on the Horse and Jockey Group, his work deserves a thorough review. However, despite his careful observations and an erudite command of his topic, much of Arvanitopoulos's methodology is unsound and, consequently, many of his conclusions regarding attribution and original location are not supported by any real evidence.

Noting the neck stretching forward, the mouth open with bared teeth and raised lips, and the suspended legs, Arvanitopoulos argued convincingly that

the Horse must be running at a gallop, and that the exerted effort points to a racehorse, within a few meters of the finish.[3] He argued that while there are many similarities between the Horse from Artemision and the horses of the Parthenon frieze (see Fig. 52), certain stylistic features of the Horse, specifically its mane and the rendering of its veins, are clearly not as "evolved" or even as "natural." He concluded, therefore, that the Horse should be dated earlier than Bertos believed, between 470 and 460 B.C.[4] Arvanitopoulos compared the "life" and "breath" of the Horse to that of the horses of the chariot of Selene on the east pediment of the Parthenon and saw in the rigidity of their pose a skillful coldness that relates better to stone than to bronze.[5] Since the Horse from Artemision is clearly a work of great skill, he argued that it must be a lost work of one of the great sculptors of the Early Classical period. He suggested it was a very early work of the famous sculptor Kalamis of Athens, one of the few known sculptors of the period, who, according to Pliny, was famous for his bronze horses.[6] To support his theory, he compared features of the Horse with those of works attributed to Kalamis by the ancient authors.[7]

Arvanitopoulos carefully examined the Jockey. Noting his seated position, reins in his left hand, the remains of a stick or a whip in his right, and the spurs strapped to his feet, he convincingly argued that the boy must be a jockey. Furthermore, he observed that the placement of his arms, the left outstretched with the reins and the right down at his side ready to goad his horse, indicates that the boy is going at great speed. Perhaps less easy to justify, he saw a triumphant expression on the Jockey's face. Given the close thematic relationship between Horse and Jockey and the fact that they were found next to each other, he argued that to disassociate the two figures would be forced and arbitrary. However, he believed that the Jockey could not be dated before the second half of the fourth century B.C., even though he dated the Horse to ca. 465 B.C. He disagreed with Bertos's opinion that the Jockey is poorly executed and therefore Hellenistic. Noting instead the careful details of the hair and drapery, and the naturalness and accurate rendering of anatomical details, as well as the singular racial physiognomy, he argued for a late fourth-century B.C. date, attributing it to the workshop of Lysippos. He described the Jockey as a boy of pure Ethiopian descent and not a mixture of Greek and Ethiopian as Bertos suggested, arguing that the mulatto is not a statue type that the Greeks are known to have produced.[8]

To reconcile his proposed stylistic differences between the two statues, Arvanitopoulos suggested that they were an ancient pastiche.[9] According to his hypothesis, the first jockey was somehow lost or destroyed during the course of 135 years before the second Jockey was made. Out of piety toward the god to whom it was dedicated or on account of its having been commissioned by a descendant of the victor in honor of his ancestors, or because the Horse was

reused from another commission, the Jockey from Artemision was made and affixed to it. Arvanitopoulos postulated that the pastiche might even have been commissioned by Alexander the Great in honor of a victory of his in the single-horse race. He conjectured that the monument had been set up in a Macedonian city, such as Aigai, that the statues had been part of the Macedonian booty of Aemilius Paullus, and that this booty was being transported to Rome by one of Gnaeus Octavius's ships in 167 B.C. when it went down near Cape Artemision because of a storm or some other cause.[10]

Shortly after Arvanitopoulos's article, Salomon Reinach offered another suggestion for the original context of the Horse and Jockey. Emphasizing the location of the shipwreck at Cape Artemision, near the sanctuary of Artemis *Προσηώς*, he argued that the statue group might have stood in this sanctuary in honor of a victory at races that commemorated the fortuitous events of 480 B.C. in which the Persian fleet's attack on the Greeks was thwarted by bad weather.[11] In support of his argument, he referred to two Late Hellenistic inscriptions from the sanctuary of Artemis.[12] The first lists subscribers who contributed to the restoration of the temple in the second century B.C. The other describes the Greeks setting up inscriptions in the same sanctuary in lieu of a battle trophy to commemorate the events of 480 B.C. at Cape Artemision. He seems to have agreed with Arvanitopoulos's dating of the Jockey to the time of Alexander the Great, but tentatively suggested that the Horse might be of the same date. While he acknowledged that it is not possible to say if the statue of a god from Artemision came from the same site as the Horse and Jockey, he suggested that it too might have been erected near the coast at Cape Artemision around 460 B.C. in commemoration of the naval victory there twenty years earlier.[13]

In 1930, H. G. Beyen published his monograph on the god from Artemision.[14] In it, he attempted to construct an original provenance of the statue and in so doing considered the possibility that the Horse and Jockey come from the same region, and even the same sanctuary. He argued inconclusively that the statue of a god had to be identified as Poseidon, and that northern Greece, where there are many centers of the cult of Poseidon, was the most likely place of origin. He believed that the Horse and Jockey belonged together and that they were both Hellenistic.[15] In support of a northern Greek origin, he offered a striking analogy in an early Hellenistic tomb painting, the so-called Kinch tomb painting (now lost), discovered near Niausta in Macedonia,[16] that depicted a horse of similar build, with outstretched neck and large, open nostrils.[17] The scene in the painting at Niausta was very different, inasmuch as it depicted a Macedonian warrior on horseback lunging at a barbarian on foot, but Beyen noted several similarities between the Jockey and the barbarian.[18] He suggested that the Horse and Jockey might have been set up as a dedication to Poseidon, patron god of horses, to commemorate a victory in a horse race, perhaps in the same sanctu-

ary as the god from Artemision. In particular, Beyen suggested that the statues had been set up at Demetrias, a city founded by Demetrios Poliorketes in 290 B.C., which became the preferred residence of the Antigonids. He speculated that the statues might have been removed by the Romans when they set up a military camp at Demetrias during the war against Mithridates VI.[19] There is, however, no evidence to support his conclusions.

The eminent scholar of Greek sculpture Ernst Buschor was the first to include the Horse and Jockey from Artemision in a general book on Greek sculpture.[20] In his influential 1936 work *Plastik der Griechen* (reprinted in 1958), Buschor linked the god from Artemision and the forepart of the Horse stylistically, considering them both characteristic examples of the Early Classical period. He attributed them to the Athenian sculptor Kalamis and saw the Horse as an important predecessor to the horses of the Parthenon (see Fig. 52).[21] He did not necessarily believe that the Horse belonged with the Jockey, which he dated to the last quarter of the second century B.C.[22]

In 1936, the hindquarters of a horse were brought up in a fisherman's net from the same general area of Cape Artemision.[23] Since no formal publication of this fragment appeared until the 1972 restoration, there continued to be considerable controversy over whether or not it belonged to the forepart of the Horse discovered in 1928.[24] At this early date, however, scholars began to realize that the Horse might belong to the Hellenistic period, where it was generally dated to the third or second centuries B.C.[25] Walter-Herwig Schuchhardt argued for a date in the Hellenistic period, for example, pointing to details such as the tufts of hair on the hooves, the rendering of musculature, and the folds of skin. Schuchhardt asserted that the Jockey belonged with the Horse and dated the group to around 140 B.C. He emphasized the apparent Hellenistic features, such as the axial direction of the composition, the torsion of the boy's upper body, and the way the drapery adheres with an unfeeling wildness of form.[26]

In a comprehensive art-historical survey of the horse in Greek art, Sidney Markman subsequently found cause to date the forepart of the Horse to the Hellenistic period on stylistic grounds. Disagreeing with Buschor's opinion that the Horse should be dated between the Olympia pediments (470–457 B.C.) and the Parthenon frieze (447–432 B.C.) (see Fig. 52),[27] he focuses on later stylistic features, such as the connection of the lower and upper jaw, the way the head strains forward, how the neck stretches out (rather than arches) and how it tapers, the manner in which the shoulder muscles are clearly defined, and how the shoulder blade can be seen working beneath the flesh. In Markman's opinion, the Horse from Artemision should be placed stylistically after the Alexander Sarcophagus (320–310 B.C.) and before the Pergamon Altar (180–150 B.C.). He dates it to the middle of the third century B.C. and, in any case, considers it definitely to be a work of the Hellenistic period.[28]

In her monumental study of Hellenistic sculpture, first published in 1955, Margarete Bieber included the Horse and Jockey as a group that she considers typical of her first main phase of Hellenistic sculpture.[29] She dates the group to the early third century B.C., under the influence of Lysippos. Discussing the Horse and Jockey in a section entitled "Rococo Trends in Hellenistic Art," she observes that the group has little depth and is essentially one-sided, comparing well with horses on pictorial reliefs. She believes that such one-sided groups are early and notes that the Horse and Jockey exhibit the balance, symmetry, and harmony of Classical art, which is typical of the Early Hellenistic period as she has defined it.

Ludger Alscher in his 1957 work on Hellenistic art was the first to point out the strong similarities in style between the Jockey and the "Borghese Warrior" in the Louvre (see Fig. 55).[30] He dates the Jockey to the same period as that work, the last quarter of the second century B.C., which is his so-called second evolutionary phase of the Late Hellenistic period.[31] Besides stylistic affinities of pose and hairstyle, he stresses the similarity of composition, in which a very transitory, narrow moment in time is captured. While he acknowledges similarities between the Artemision Horse and Classical sculptures, such as the horses of the east pediment of the temple of Zeus at Olympia and on the Parthenon at Athens (see Fig. 52), he also draws attention to recognizable Hellenistic features that seem strange or unparalleled in Classical works, as Markman had noted previously.[32] Alscher is comfortable placing the Horse stylistically in the same period as the Jockey and suggests that it too evokes a transitory moment, very similar to the "Borghese Warrior." However, he does not commit to placing the Horse and Jockey together as a group, since their scale is slightly different.[33]

A few years later, John Anderson published his important work on Greek horsemanship, in which he offers a very different interpretation of the classicizing features of the Horse. Anderson argues that the Artemision Horse is represented as an animal of pure descent from the horses of fifth-century Greece, finely bred, almost to the point of weediness. This difference in breeding, he argues, accounts for the classicizing features that distinguish it from typical Hellenistic horses, which show the effects of crossing with Asiatic blood.[34]

In his study of the Ethiopian in Hellenistic art, Ulrich Hausmann included the Jockey from Cape Artemision, considering him to be a full-blooded black African. He dates the young rider to the second quarter of the second century B.C. on the basis of the statue's centrifugal composition. However, he also suggests that it might be considered a "neo-Baroque" work of the end of the second century B.C., similar to the bronze portrait head of a man from Delos in the National Archaeological Museum in Athens (see Fig. 19.1–2).[35] Frank Snowden, a noted authority on blacks in antiquity, finds parallels for the hairstyle in other Ethiopian-like figures and, in light of the evidence for Ethiopians in the

ancient world as charioteers and grooms, he suggests that the Jockey was a mulatto who adopted the occupation of his father.[36]

In 1972, the restoration of the Horse and Jockey Group from Artemision was completed, and the statues were placed on permanent display together in the Greek National Archaeological Museum.[37] The restoration (see Chapter 2) was documented in an excellent article by Vassilis Kallipolitis, then director of the National Museum. Kallipolitis sees the head of the Horse as primarily resembling reliefs of the Classical period. Details of the musculature and the shape of the folds of skin on the back of the legs, the articulation of the legs, and the intense delineation of the veins can be recognized as sculptural traits of the Late Hellenistic period, seen in works such as the second-century marble equestrian statue from Melos in the National Archaeological Museum. He suggests that the Nike brand (see Fig. 59) is Hellenistic in style and not Classical. Noting the piece of drapery that adheres to the nape of the Horse's neck, he argues persuasively that the Horse and Jockey belong together, and sees the group as a closed composition characteristic of classicizing works of the Late Hellenistic period, datable to ca. 150 B.C.[38]

Accepting the Horse and Jockey as a group, Kallipolitis therefore sees the difference in scale between the Horse and Jockey as an intentional element of the sculptor's composition. He argues that the juxtaposition of large and small in Greek sculpture goes back to the fourth century B.C., as is visible in such sculptural groups as the Eirene and Ploutos by Kephisodotos and the Hermes and infant Dionysos by Praxiteles.[39] However, he believes that this phenomenon is more appropriate to the spirit of the Late Hellenistic period, as evident in such works as the marble group of Aphrodite, Pan, and Eros from Delos in the National Archaeological Museum.[40] According to his interpretation, the diminution of the Jockey emphasizes the Horse as the focal point of a composition that is closely linked to horse racing. He argues that the monument was set up at an important sanctuary, although it is not possible to determine which one on the basis of the existing evidence.[41]

In 1978, Schuchhardt published a lengthy article on the Attic Horse and Groom relief in the National Archaeological Museum, in which he reaffirms his mid-second-century date for the Horse and Jockey from Artemision. Although he observes several similarities between the Ethiopian groom (Fig. 53) and the Artemision Jockey (Fig. 34, Pls. 9–10), most notably the high cheekbones, full lips, and short, broad noses, he suggests that the Jockey might be a *vulgär,* or common, type and not specifically an Ethiopian. He notes stylistic similarities between the Horse from Artemision and the horse in the Attic relief despite the apparent differences in their builds. In conclusion, he dates the relief to less than a quarter century after the Horse and Jockey.[42]

In 1979, Raimund Wünsche published the pottery from the Artemision ship-

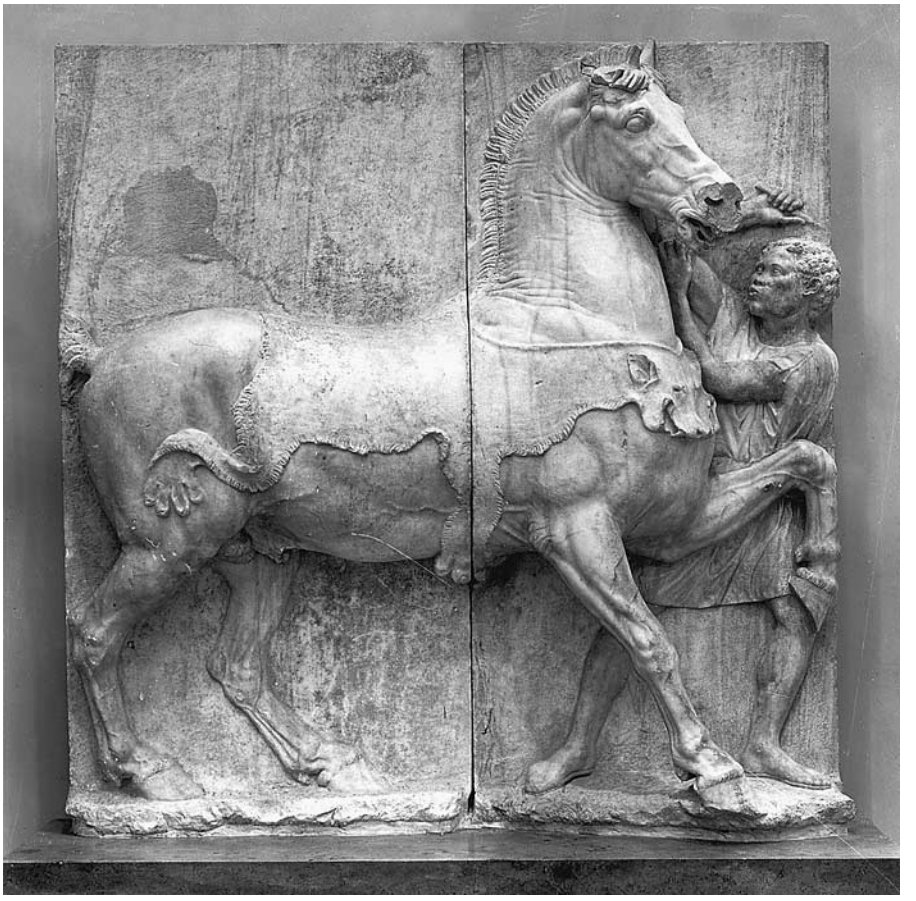


FIGURE 53. Horse and Groom relief. National Archaeological Museum, Athens (4464). Height 2 m. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 69/ 40).

wreck in an article on the god from Artemision and considered the implications that this newly published material had for our understanding of the Horse and Jockey.[43] The date of the pottery provides a *terminus ante quem* for the Horse and Jockey of the early first century B.C. Wünsche proposes that the East Greek pottery on board indicates that the Artemision ship was of Pergamene origin and suggests that the ship was returning to Pergamon with spoils from the sack of Corinth in 146 B.C. when it went down off the coast of Artemision. He, therefore, dates the Horse and Jockey to before 146 B.C. This convincing argument, generally not referred to in subsequent scholarship, is discussed in greater detail in Chapter 6.

The first work to focus on the Horse and Jockey Group after its 1972 restora-

tion was a large-format book on monumental Greek bronzes by Caroline Houser, with photographs by David Finn. Although the publication remains an excellent resource for its color and black-and-white photographs, its commentary is limited. Several important points, however, are made that support Kallipolitis's analysis. For example, Houser draws attention to the fragment of drapery attached to the Horse and reaffirms Kallipolitis's argument that the two statues therefore belong together. She persuasively explains the difference in scale between the Horse and Jockey as an expression of the Jockey's immense undertaking and the great power of the Horse. She classifies the boy as an Ethiopian and notes that both statues have been modeled with equal and careful attention to detail.[44]

In 1984, Hilde Rühfel published her survey of children in Greek art in which she considered the Horse and Jockey from Artemision in some detail, believing the group to be an athletic victory monument. She remarks that the Jockey is an unusual representation of a child that is characteristic of a new phase in Hellenistic art that begins at the start of the second century when children are represented in active poses.[45] In the proportions of the Jockey's body and in his facial features, she sees a boy of approximately ten years of age, whose small size in relation to the Horse makes him seem even younger. The large scale of the Horse, she argues, may indicate that the monument was for a racehorse and not a jockey. She also believes that the Jockey looks to the left since he is about to make a left-hand turn around the course. Citing ancient literary references, she notes that this was one of the most dangerous parts of the race course and most probably the reason for the tension visible in the Jockey's face. Rühfel cites the centrifugal composition and the interest in surface modeling, especially the anatomical details, as support for her mid-second-century B.C. date for the group.[46] She suggests that the Horse and Jockey were looted from a Greek sanctuary as Roman booty, and that the ship was on its way to Italy when it sank at Cape Artemision. She sees the location of the wreck as indicative of a Thessalian origin for the bronzes, possibly Larissa, which had an important festival with horse races, the Eleutheria, during the Late Hellenistic period.

Two years later, Jerome Pollitt published his synthetic work *Art in the Hellenistic Age*. In his chapter entitled "Rococo, Realism and the Exotic," he suggests that the Horse and Jockey belong together and that they are probably a votive group connected with athletic games. He compares the realistic portrayal of the Jockey with the Hellenistic statue of a seated boxer (see Fig. 56) in the Museo Nazionale Romano and emphasizes how it differs from rococo creations of children, such as the Boy Strangling a Goose attributed to Boethos of Chalkedon and known only in copies.[47] Pollitt dates the Horse and Jockey to the second or first century B.C.[48]

In *Scultura ellenistica* (1994), Paulo Moreno offers a new stylistic interpre-

tation of the Artemision Horse and Jockey, as well as another theory about the provenance of the group, which he speculates came from a Pergamene workshop of the late third century B.C. Emphasizing the centrifugal composition, he sees the slender proportions of the Jockey and the strength revealed in the musculature of both Horse and Jockey as reflecting Lysippan influence through a Pergamene canon. He notes an inherent contrast between man and animal, expressed in the diminutive form of the Jockey versus the powerful Horse. Moreno believes that the paradox in which the small Jockey controls the Horse is characteristic of Pergamene philosophical tendencies. He also sees parallels for the Jockey's face in the third-century Pergamene portraits of Philetairos and Seleukos I. While he does not specifically address the ethnicity of the Jockey, his comparisons suggest that he does not believe the boy is an Ethiopian. He suggests that the monument was dedicated to a jockey of not more than twelve years of age who was the victor in the youth category of the horse races held at Pergamon during the public festivals promoted by Attalos I, around 220 B.C.[49]

STYLE AND CHRONOLOGY

A review of the archaeological context of the statues (Chapter 2, Discovery) and their careful examination (Chapter 2, Description) leads to the conclusion that the Horse and Jockey from Artemision (including the front and back halves of the Horse) are part of the same group. As we saw in the preceding chapter, the technique of the statues, both of which were made using the indirect method of lost wax casting, is consistent with this analysis.[50] For many years, the shipwreck could only be broadly dated to the Late Hellenistic or Early Roman periods, but a Late Hellenistic date in the second or first century B.C. seemed most likely.[51] Now that the pottery from the shipwreck has been published and is dated to the second or early first century B.C., a *terminus ante quem* of around 80 B.C. can therefore be established.[52]

In addition to the theory that the Horse is an Early Classical creation,[53] the two statues have been dated anywhere between the late fourth and first centuries B.C., quite literally the entire span of the Hellenistic period. This wide range of possibilities indicates the inherent difficulty in dating Hellenistic sculpture that is not securely tied to a historical personage or event.[54] Unlike Archaic and Classical sculpture, there is no single overriding stylistic development, and there are few fixed points, in the history of Hellenistic sculpture. A lack of well-dated equestrian monuments and the complexity of concurrent styles, sometimes mixed with retrospective styles, continue to complicate accurate stylistic analysis. The problem is even more acute for bronze statuary, since the indirect method of lost-wax casting invites replication and copying. It was particularly easy for

a bronze sculptor to replicate earlier statues entirely or in part.[55] For these reasons, precise dating of the Horse and Jockey Group by stylistic analysis remains elusive. Stylistic analysis suggests a date in the later part of the second century, although one must accept this dating with caution. A later date is also possible, as is an earlier one in the third century B.C., when realistic works such as the "Dying Seneca" are first thought to have been produced.[56]

The naturalistic rendition of the head of the Horse is reminiscent of sculptures of the Classical period, such as the horses on the east pediment of the temple of Zeus at Olympia and the horses depicted on the Parthenon frieze (see Fig. 52) and east pediment.[57] The comparison is particularly apt with respect to the relatively long, narrow skull, the flat handling of the neck, and, especially, the edges of the masseteric muscles of the lower jaw. The treatment of the mane with its cropped hair, rendered as a series of narrow incised lines alternating with a wider furrow, recalls the formal language of the fifth century.

Other subtle features are not easily paralleled in works of the Classical period, however, and betray a Hellenistic origin. Such notable features include the violent forward thrust of the Horse's legs and the way in which its neck extends fully forward, as well as the incised tufts of hair on the hooves and at the base of its mane. No doubt the tail and tuft of hair on the forehead, now lost, originally had a similar wild and freely modeled character. While the fold of skin that divides the false from the true nostril can be found in Classical works, to my knowledge the bold, artificial continuation of that line up the head of the Artemision Horse (see Fig. 62) cannot. This feature does, however, occur in Hellenistic works, such as the bronze horse from Trastevere.[58] The thin, long proportions of the Horse's body would be unusual in a Classical sculpture but are entirely appropriate to a realistic style of the Hellenistic period. The same can be said of the brand of Nike on the Horse's right hind thigh, whose slender body is clearly not earlier than the fourth century B.C. The musculature of the Horse is fully developed and rendered with accuracy. In many places, such as the haunches and leg joints, the skeletal structure of its lean body is observable beneath the skin. Similarly, the shoulder blades appear as working underneath the flesh. While there are no exact parallels, similar anatomical details occur in other Hellenistic works, such as a marble Attic relief in Athens (see Fig. 53) of the third or second century B.C. and a marble equestrian statue from Melos, also in the National Archaeological Museum in Athens, and usually dated in the late second century B.C. Therefore, the Classical features observable in the Horse from Artemision are the kind of classicizing features that sometimes occur in works of sculpture dated after the Classical period. Their overt presence in the sculpture from Artemision may suggest a date in the second half of the second century B.C., when there was a revival of interest in imitating Classical forms.[59]

Realistic features abound in the Horse from Artemision: the narrow build of

FIGURE 54. Detail of the Jockey on the Horse from the right. Reins visible in his left hand and on the Horse's lower neck. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/70).

its body, its tense working muscles, the incised hoof and chin hairs, anatomically correct teeth, ears pressed back, and the way in which the bridle bit sits comfortably in the back of the Horse's mouth. A cropped mane with a border of shaved hair contrasts with free-flowing hair at the base of the neck (Fig. 54). The tuft of hair at the base of the neck would have been used by the Jockey for mounting the Horse and for added stability during equitation if necessary.[60] Intentional black patination of the hooves, the inserted eyes and inlaid brand, the separately attached bridle, and most probably a copper-colored tongue are other realistic features. Moreno has plausibly suggested that even the original surface of the bronze had a gleam that was intended to suggest the sweaty coat of a horse wet from perspiring during a race.[61]

In some instances, realistic features are taken to extremes that have an exaggerated, baroque effect reminiscent of other dynamic Hellenistic sculptures, such as the reliefs of the Pergamon altar. This is especially apparent in the boldly modeled veins of the head and legs and in the nostrils, which are flared beyond anything possible in nature.[62] The same can be said of the emphatic, forward-

thrusting composition. With both forelegs suspended in the air and the hind legs leaning outward, the composition forcefully conveys the urgency of motion without strictly adhering to a real moment in the Horse's gait. It is an artful composition, an artist's interpretation of equine speed, intensely focused frontwards, and the enlarged hind legs and foreshortened front legs add to this contrived image. Such purposeful distortion for the sake of enhancement is a characteristic of Late Hellenistic realism.[63]

At first glance, the Jockey appears to be in a completely different style. However, upon closer inspection, he also exhibits classicizing features. His slender proportions and slightly modeled muscles invite comparisons with works of the latter part of the fourth century B.C., as has been noted by several scholars.[64] However, in contrast to known Classical works, the artist is completely comfortable rendering the Jockey in a fairly complicated torsional pose.[65] Seen on his own, the figure forms a very centrifugal composition that emanates from his hips (see Fig. 25). The boy leans forward with his head turned to the left. His left shoulder pulls forward, while his right arm, bent at his side, pulls back as he prepares to goad the Horse. His right leg moves slightly forward, the left leg slightly back. This dynamic composition compares well with the so-called "Borghese Warrior" in the Louvre (Fig. 55), usually considered a Greek original by Agasias of Ephesos of the first century B.C.; the Jockey, however, is less rigidly and more realistically composed.[66] The relatively flat relief of the Jockey's hair, combined with the sudden projecting locks, is also comparable to the "Borghese Warrior"'s coiffure.[67]

The Jockey's drapery is carefully organized with several strong folds that reflect the arc of the upper edge of the garment as it hangs freely off the right shoulder, folded over itself. It is structurally independent of the figure of the boy. An interest in texture is expressed in shallow crinkly folds throughout the material that contrast with the deep contours of the drapery.[68] This realistic rendering of the drapery adds to the wind-blasted appearance of the figure. The cloth bunches in deep, baggy pockets, which alternate with stretches that cling closely to the boy's body. The bottom edge of the garment flies out in a series of deep ribbonlike folds at an angle behind him that enhances the expression of motion.

Like the Horse, the Jockey has many realistic features. The wind-swept curls above his forehead indicate the speed at which he is going. Details such as the plying of the spurs and goad as he slackens the reins to allow his mount full freedom of movement vividly convey the action of the moment. Singular features of his face—the small angular chin, the broad cheekbones, high forehead, full lips, and short broad nose—and a curious mixture of Greek and non-Greek physical traits, rendered in a realistic style, give a false impression of individualized portraiture. Here, too, however, realism is taken to an extreme that verges

FIGURE 55. The "Borghese" warrior. Musée du Louvre, Paris (Ma 527). Height 1.99 m. Photo © P. Lebaube, courtesy Musée du Louvre, AGER.

on something beyond portraiture. The facial features described above are rendered with such an intensity that in seeing the head alone, one would judge the boy to be much older than his size and physical build suggest. This impression is further emphasized by the furrowed brow, sidelong glance, and partially open mouth. It has been suggested by Moreno that the Artemision Jockey is a portrait of a particular young Pergamene victor in a horse race of the late third century B.C., an example of individual portraiture that flourished at that time.[69] However, the above stylistic analysis suggests that the Jockey is not an individual portrait but truly an early example of genre realism, a style that is generally thought to have developed during the second half of the second century B.C.[70] The group can be compared to other large-scale realistic genre works, such as the bronze Terme Boxer (Fig. 56).

The Horse, although frequently cited as life-size or larger than life-size,[71] is, in actuality, slightly under life-size, and the Jockey is on an even smaller scale. The conscious juxtaposition of different scales in two figures in a group is not a common feature of Greek sculpture. The practice, however, as Kallipolitis has noted, can be observed in some fourth-century works, such as the infant Dionysos and Hermes by Praxiteles and the Irene and Ploutos by Kephisodotos.[72] The contrast between large and small was a popular philosophical subject in Hellenistic academies and the idea may have been expressed in sculptures of the Late Hellenistic period.[73] Certainly, in this case, the sculptor has consciously used it to his advantage, emphasizing the power of the Horse versus the smallness appropriate to the Jockey. The powerful, oversized hind legs of the Horse reinforce the forward motion of the figures and, together with the foreshortened front legs, exaggerate the flying gallop pose. These stylistic features of the group further distance it from the realm of true portraiture. In the terms of Hellenistic rhetoric, the statue group exhibits strong *auxesis,* stylistic amplification, and *antithesis,* the juxtaposition of opposites characteristic of Hellenistic baroque sculpture.[74]

Composition is often considered a possible criterion for dating a work of sculpture. As we have seen above, the Jockey has a centrifugal composition typical of works datable to the third quarter of the second century B.C.[75] However, to assess composition properly, one must look at the group as a whole. The Horse and Jockey Group has little depth and does not have many points of view from which, it seems, it was intended to be viewed. The long sides (see Figs. 32–33, Pls. 1–2), particularly the left, offer the best views.[76] The location of the Nike brand on the right side of the Horse suggests that this side could also have been an important viewpoint. Bieber regards such compositions as typical of the Early Hellenistic period.[77] Kallipolitis and others consider it typical of the middle to third quarter of the second century B.C.[78] However, it is unlikely that any phase of Hellenistic sculpture was limited to one or only a few compositional types.

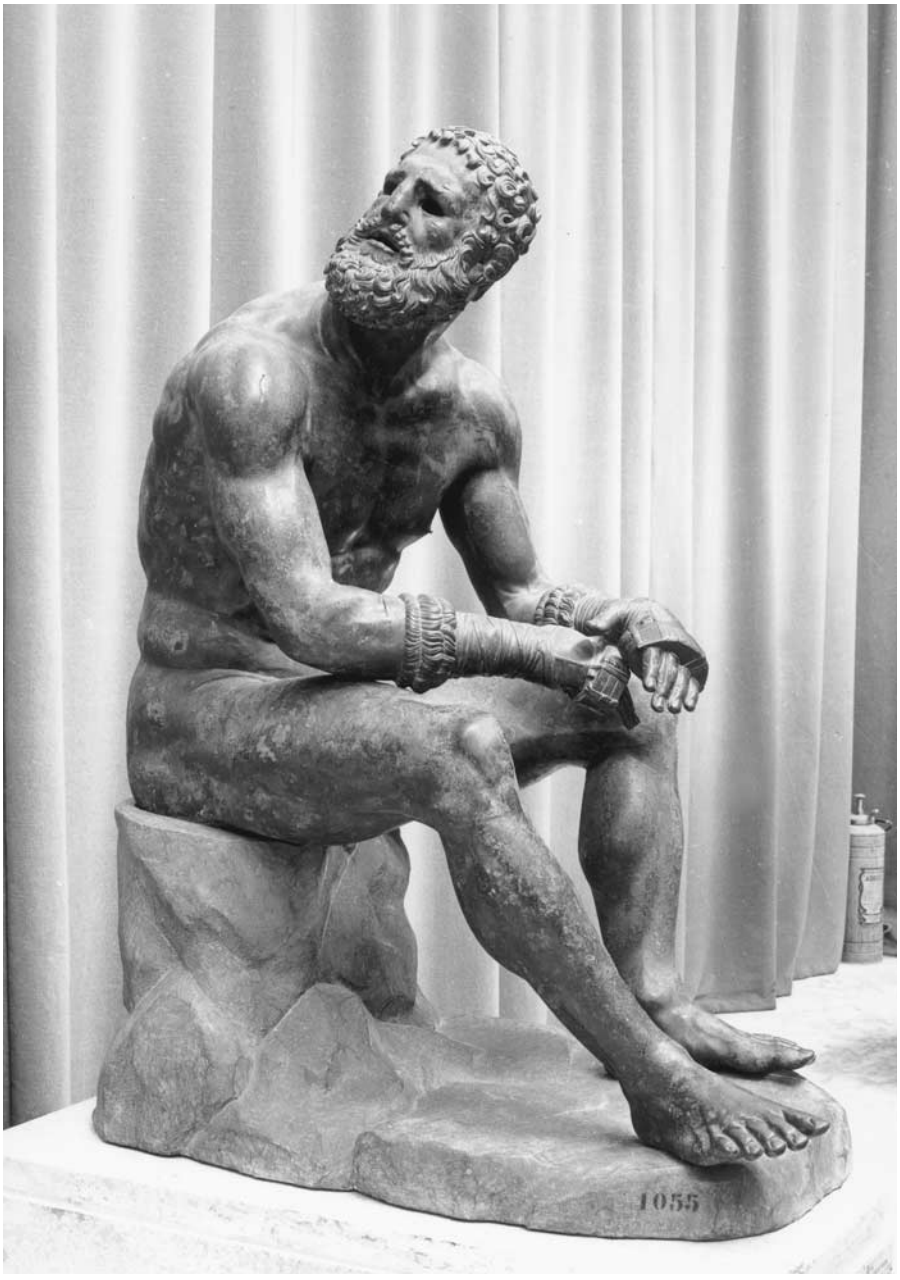


FIGURE 56. Bronze statue of a seated boxer. Museo Nazionale Romano (1055). Height 1.28 m. Photo by Koppermann, courtesy Deutsches Archäologisches Institut, Rome (neg. no. 66.1689).

Without doubt, other factors, such as the original location and function of the statue group, contributed to the choice of composition.

The above analysis of the stylistic features of the Horse and Jockey Group reveals few closely comparable works—not surprising given the paucity of extant Greek bronze originals. Nonetheless, a date within the Hellenistic period is secure on the basis of the physiognomy of the figures alone. The combination of classicizing features and exploded realism evident in both statues, an interest in depicting ethnic traits, and the well-executed centrifugal composition of the Jockey are most appropriate to a work dated to the second half of the second century B.C. according to our current understanding of trends in Hellenistic sculpture. The ability of Greek bronze sculptors to replicate statues and styles utilizing the indirect lost-wax process (the primary technique used to make this group) means that a later date is also entirely possible. However, a compelling interpretation of the archaeological context advocated in Chapter 6 may enable an even closer dating of the Artemision Horse and Jockey to ca. 150 B.C.

ICONOGRAPHY

A key element in the identification of the statue group is the correct interpretation of the position of the Horse. As was mentioned in the discussion of the restoration (Chapter 2), different reconstructions of the pose of the Horse are possible because of its fragmentary nature. Taking into consideration the position of both front and hind legs, the Horse could be jumping, lunging, or running.

The motion of lunging is very similar to that of jumping. Panayiotakis's original plaster cast (Figs. 29, 57) restores the Artemision Horse in such a pose. From an archaeological standpoint, there is no support for a restoration as jumping. In all of Greek sculpture in the round, there are no parallels for the jumping horse. Nor is jumping attested to in any ancient references to the many equestrian events held at the panhellenic games and other local festivals. On the other hand, there are examples of lunging horses in hunting and battle scenes of both mythical and historical subjects, particularly in relief sculpture and mosaics. Horses lunging in battle scenes are more common, as on the frieze of the Aemilius Paullus monument at Delphi and on the Amazonomachy frieze (now in the Louvre) from the temple of Artemis Leukophryene at Magnesia on the Maeander in Ionia.[79] Simple groups also occur, such as the mythical scene of Bellerophon and Pegasos battling the chimera.[80] Hunting scenes with lunging horses are rare but do occur, as in the so-called Krateros relief from Messene (Fig. 58) in the Louvre, dated on stylistic grounds to the early third century B.C.[81] Some scholars argue that this is a close copy of the large-scale bronze group by Leochares and Lysippos set up at Delphi depicting the marshal Krateros saving

FIGURE 57. Plaster cast of the Artemision Horse in the Cast Gallery of the University of Athens. Photo by the author.

Alexander the Great's life on a lion hunt in Syria.[82] If this is the case, the Krateros monument would provide a large-scale, freestanding parallel for a lunging horse in the Hellenistic period.[83] However, this theory is not universally accepted. Other scholars have argued that neither the literary sources nor the artistic principles of the late fourth century support a three-dimensional composition consisting of a mounted Krateros and Alexander represented on foot.[84] Nevertheless, considering the Artemision Horse alone, a lunging position is another arguable restoration.

A running or galloping position, as the statue appears in the National Archaeological Museum in Athens today, is the other, more probable restoration. Many iconographic parallels for the galloping type can be found in Greek vase painting of the sixth to fourth centuries B.C., especially in horse-racing scenes

FIGURE 58. "Krateros" relief from Messene. Musée du Louvre, Paris (Ma 858). Height 59.5 cm. Photo © M. P. Chuzeville, courtesy Musée du Louvre, AGER.

and cavalcades.[85] The same flying-gallop type is adopted in a well-known series of Republican coins of the first century B.C. that commemorate victories in the races by Calpurnius Piso.[86] The foreshortening of a horse's front legs and the elongation of the hind legs are conventions that were sometimes adopted by artists in antiquity when rendering this flying gallop pose.[87] As a relatively common motif in Greek vase painting, the type may well have been more popular in sculpture than the archaeological record permits us to suggest. While this type is rare in large-scale sculpture, one other example does exist. It is a marble group of a horse and rider, of Hellenistic or Roman date, from Aphrodisias. The group is fragmentary and has not been fully published, but enough is preserved to determine the running position.[88]

One of the most interesting iconographic features of the Horse from Artemision is the brand located on its right hind thigh (Figs. 42, 59). Greek horse breeders used brands at least as early as the Archaic period, when they infrequently appear on horses' rumps or upper thighs in equestrian scenes on black-figure and red-figure vases.[89] A large number of inscribed lead plaques of the Hellenistic period from two different well deposits in the Kerameikos and the vicinity of the Athenian Agora attest to the continuity of this practice during the Hellenistic period.[90] These plaques list a wide variety of brands used on horses of the Athenian cavalry. Included among these are "Nike" brands, suggesting that this was a common type in antiquity.[91] However, the brand in question—the most elaborate known from antiquity—is not simply a Nike, but a Nike in flight bearing a crown, so it should perhaps be set apart from those listed on the Athenian

FIGURE 59. Nike brand on the Artemision Horse's right hind thigh, prior to completion of 1972 restoration. Modern framework visible in background. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 68/969).

FIGURE 60. Left profile of the Artemision Horse's head, barrel of cannon of bit in situ at back of mouth. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/90).

plaques.[92] First and foremost, the brand certainly refers to the owner of the Horse, as Moreno has astutely observed.[93] It could even be a canting device for the owner's name, that is, the owner could have been called Nikosthenes, Nikodamos, or Nikagoras.[94] Secondly, the connotations of victory signified by the Nike herself, and particularly by the fact that she bears a crown, are unmistakable. But what kind of victory is signified? It could be agonistic or military. An identical motif was frequently employed in the coinage of the Greek colonies in Sicily and southern Italy in issues that commemorated victories in chariot races and single-horse races (see Fig. 72).[95] As the Athenian lead plaques demonstrate, however, a Nike brand was also appropriate for horses used in the military. Other features of the composition will have to help to determine the correct interpretation.

Previously undocumented details visible on the surface of the bronze reveal prominent features of the elaborate bridle worn by the Horse and now lost. That the Horse wore a bridle has been acknowledged by scholars since its discovery. Circular projections at the corners of its mouth are clearly identifiable as parts of the cannon of the mouthpiece (Fig. 60). The mouthpiece, or bit, rests at the

FIGURE 61. The Artemision Horse's muzzle from below. Pin under chin aligned with wear mark from noseband. Photo by the author.

back on the soft gum tissue behind the teeth, in the usual position for a horse that is being reined in at a gallop. The barrels of the cannon are recessed in the center, and may originally have been hollow. The hollow space would have received a metal rod, to which would have been attached the cheek pieces and the rein rings.[96] Since the tongue of the Horse does not extend as far back as the bit, it is unlikely that the inner parts of the mouthpiece were ever rendered. This area must not have been visible to the ancient viewer; in all likelihood, it was obscured by the cheek pieces and the closure of the mouth.[97] Reins would have been attached to the mouthpiece in one of two ways: either to a rein ring at the ends of the cannon or, possibly, at either end of the cheek pieces. A fragment of one rein still adhering to the upper right shoulder of the Horse (see Fig. 54) reveals that the reins were of double thickness. The double thickness, which may imitate two strips of leather stitched together, is a distinctive feature. It is important to note that the fragmentary pair of reins held in the Jockey's left hand (see Fig. 65) is of the same type, thus providing another reason for associating the two statues.

Several other details visible on the surface of the bronze provide clues to the

FIGURE 62. Detail of the Artemision Horse's head from above with two raised discs from bridle. Photo by the author.

original form of the bridle. A blackish gray blob of lead (?) underneath the chin just behind the muzzle is what remains of a lead (?) pin that secured something to the Horse's head (Fig. 61). Under raking light, a very regular, narrow, vertical band of discoloration can be seen on the right side of the Horse's head rising in alignment with the lead (?) pin. Taken together, the lead (?) pin, this ghost of a narrow vertical band, and their location just behind the muzzle make a strong case for a nose band, a common feature of Greek bridles that gave the rider greater control. This nose band, possibly made of silver or some other contrasting metal, would have fitted all around the Horse's muzzle and not just at the top, thereby providing an unobtrusive place to fasten the bridle to the Horse's head (by means of the pin).[98]

Further examination of the surface of the bronze reveals more about the original nature of the bridle. Two raised discs are visible above the nostrils on the muzzle of the Horse (Fig. 62). The discs are approximately one centimeter apart and lie on a vertical axis that runs from the center of the forehead down to the center of the muzzle. The disc closest to the nostrils is discernibly larger (by 0.5

cm) than the other. A circle of slight discoloration visible on the bronze between the Horse's eyes may signify the location of a third, even larger, disc on the same vertical axis. These discs only give a general indication of the circular shape of the bosses, or *phalerae,* that decorated the bridle.[99] How elaborate the bosses were and whether they had relief decoration cannot be determined from the existing evidence.[100]

The shaved mane of the Horse comes to a well-defined end just before a large hole at the top of the brow. The hole is irregular in shape, with rough edges where a feature, once attached, has been torn away. Should this hole be associated in some way with the bridle? It is more likely that an unshaved tuft of hair projected from the Horse's head at this point.[101] This hair would have been in Hellenistic style, contrasting with the shaved mane and harmonizing with the Horse's tail.[102] That the tuft of hair projected farther than the mane is a probable reason for its having been dislodged from the forehead.

While a basic typology for Greek horse bridle bits has been worked out from the Archaic to the beginning of the Hellenistic period,[103] at present there are not enough complete bridles preserved for us to be able further to distinguish specific types (racing, military, etc.) and regional styles. Some bits found at Greek sanctuaries are likely to have been used for horse racing and then dedicated to the gods.[104] Of course, many elements of the bridles would have been made of leather and other perishable materials, so we cannot expect them to be preserved. The practice of burying horses and their trappings with the dead was not common in Greece, as it was elsewhere in Europe and even in Macedonia.[105] Although some sculptural examples of Greek bridles do exist, they were frequently attached separately in metal, as here, and are therefore often missing or incomplete.[106]

To judge from the extant scenes depicting horsemanship on Archaic and Classical Attic vase painting, it would appear that Greek bridles were not elaborately decorated, although there is some indication that they became more sophisticated in the fourth century.[107] By the early Hellenistic period, bridles could be quite elaborate, as is seen in some nearly complete examples from Tomb II in the Great Tumulus at Vergina.[108] It is clear that the bridle worn by the Horse from Artemision was also elaborate, possibly of silvered bronze or of some material other than bronze, which might explain the signs of discoloration and its total disintegration. It has been argued here that the bridle had a nose strap, attached under the chin by a lead (?) pin, and a series of circular discs, possibly *phalerae,* or bosses, with relief decoration, aligned along the center of the forehead. Other features of the bridle, such as cheek straps and a brow band, can only be postulated.[109] This elaborate bridle adds to the evidence for dating the Horse in the Hellenistic period. Equally significant, the traces visible on the surface of the bronze now allow us better to visualize the Horse's ornate bridle, providing a more accurate indication of the way the monument would have looked in antiquity.

There is no evidence that the Horse from Artemision was equipped with any other tack. Although its midsection is poorly preserved (see Figs. 39–40), enough is extant to determine that the Horse did not have a saddle blanket.[110] The fragment of drapery from the Jockey that is attached directly to the Horse's withers also supports this conclusion. Proper saddles do not occur in antiquity until the Roman imperial period, when they were developed for Roman cavalry, but saddle blankets were sometimes used by Greek riders in Ionia and in the colonies of Sicily and southern Italy as early as the Archaic period.[111] The lack of a saddle blanket is consistent with practice in mainland Greece, where, judging from vase-painting iconography, saddle blankets were not commonly used during the Archaic and Classical periods, but the evidence for the Hellenistic period is too scant to enable us to identify this absence with any one specific region.[112]

Is it possible to determine the breed of the Horse? The animal has a slight build and is finely bred, as is apparent in its well-defined features. Its thin frame is very different from the heavy, large-bodied horses commonly depicted in military equestrian monuments of the Hellenistic period, such as the horse and rider from Melos.[113] Since the front and back halves do not join, the original length of the Horse is unknown. However, the current restoration, which is 15 cm shorter than the original plaster cast (see Figs. 29, 57), seems accurate.[114] Anderson argues that the Horse is a Greek purebred of the same descent as the horses of the Classical period, without any Asiatic influence.[115] Unfortunately, there is little evidence for the true physical characteristics of different breeds during the Hellenistic period. Very few complete skeletons have been recovered, and there is relatively little literary evidence to help determine the traits of different breeds as they were understood in antiquity.[116] The well-defined musculature of the shoulders and chest, as well as the anatomically correct and well-formed teeth indicate a horse in the prime of life, approximately between four and seven years of age. This is not a colt but a mature horse. Despite the many naturalistic details, exaggerated features, such as the flared nostrils, enlarged hind legs, foreshortened front legs, and the overt Classical style of the head, suggest that this is not a purely realistic depiction.

That the Jockey is riding on an animal moving at great speed is clear from his stance. He sits with his legs straddled, and leans forward to encourage the beast. With his left arm stretched out in front of him, he loosens the reins, allowing the animal greater freedom. The fragment of drapery preserved on the Horse, of the same character as the Jockey's garment and corresponding to the missing section of his costume, allows the association of the two statues, a union that is supported by iconographic analysis.[117] The Jockey's position on the Horse could, however, be adjusted slightly from its current restoration, which has him leaning unnaturally to one side (see Fig. 31). He could also lean back further or more forward, as he was first displayed in the National Archaeological Museum in Athens (see Fig. 25).

It is clear from the Jockey's preserved left leg, with its tensed muscles and slight inward turn, that the rider is in the act of spurring. The restoration of the right leg is most likely incorrect, as it should turn in slightly like the preserved leg. If the Jockey were kicking with only one leg, the Horse would be inclined to turn in one direction instead of moving forward, and the Jockey would be directing the Horse with the reins instead of letting up on them.[118] A similar kicking pose utilizing both legs, although without spurs, can be seen in a bronze statuette of a rider of the fourth century B.C. from Taras, now in the Cleveland Museum of Art.[119] The Artemision Jockey's mouth is slightly open, most likely indicating speech. He is probably urging the Horse on verbally, as well as by means of his legs, or he may be proclaiming victory as he looks back at his competitors. The expression adds to the excitement and activity of the group.

The Jockey has several attributes that help to identify him. The most interesting of these are the spurs attached to each foot (Fig. 63), which are held in place by ankle loops attached to long straps that cross under the heel. The straps are threaded through the ankle loops, where they are pulled tight, wrapped three times around the lower leg, and then tied in a knot at the front of each shin. Although spurs occur as a feature of *krepides* (men's boots) as early as the fourth century B.C., there are very few parallels for the Jockey's shoeless spurs.[120] A single example of a simplified type occurs on a red-figure shard from a cup attributed to Onesimos (ca. 490–480 B.C.) that is decorated with a scene that most likely depicts a horse race. This fragment demonstrates that such spurs were used at least as early as the early fifth century B.C.[121] Spurs are used to goad by means of jabbing the animal in the side, and their only function is to induce greater speed. While most of the extant spurs attached to *krepides* occur on military equestrian figures, the streamlined design without soles on the Artemision Jockey is a strong indication that the boy is a contestant in a horse race. Interesting analogies are found in representations of Hermes of the Hellenistic period, such as a bronze statuette of Hermes in the Metropolitan Museum of Art, New York, dated to the first century B.C. that wears wings attached to its feet with a very similar arrangement of straps.[122] A Pompeian bronze statue of Hermes from the Villa dei Papiri at Herculaneum has the same winged straps.[123] It is unlikely that the similarity went unnoticed by the ancient viewer, particularly given the analogous function.

The boy holds something in his right hand down at his side and slightly behind. He tightly grips this object, of which only a fragment of a round circular shaft remains (Fig. 64). As this shaft is completely contained within his palm, it is not possible to determine whether it is indicative of the shape of the object or only a connector. A variety of interpretations is possible, depending on the identification of the figure. As a huntsman, or warrior, he could be holding a spear, sword, or other weapon, whereas a mythical figure might be associated

FIGURE 63. Detail of the Jockey's spur straps. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/66).

with any number of attributes. If he is a jockey in an athletic contest, however, he is most likely holding a riding crop, or whip. Each possibility is discussed below in terms of the identification of the group.

The final visible attribute is the pair of reins that the boy holds in his left hand, which have a characteristic double layer (Figs. 54, 65) that may reflect two strips of leather fastened together. Such a design would have given added strength to the reins while maintaining flexibility. This is another realistic touch. The reins indicate that the boy is riding a horse with a proper bridle, not a halter.[124]

The Jockey wears a short, sleeveless chiton, known as an *exomis,* belted at the waist.[125] At first glance, the tunic is very similar to the heavy sleeveless garments sometimes worn by Ethiopians, an identification suggested by Werner Fuchs.[126] However, closer examination of the Jockey's garment reveals that it is certainly made of a much thinner, lighter material, not leather. It is very similar to a type worn by young grooms. Comparable examples occur on the Horse and Groom relief in Athens (see Fig. 53), a relief in Copenhagen, and a free-standing marble sculpture from Taras in Berlin.[127] The garment of the Jockey

FIGURE 64. Detail of the Artemision Jockey's right arm from front. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/71).

from Artemision is distinguished, however, by the right shoulder left bare. It is fastened only on the left shoulder, as typically worn by artisans or fishermen.[128] A nearly identical garment occurs on a bronze statuette from Volubilis that is attributed to an Alexandrian workshop of the first century B.C. This realistic work is usually interpreted as a fisherman because of its similarity to a number of statues identified as fishermen.[129] As in the case of the Jockey from Artemision, the figure wears a garment draped over his left shoulder, with an overfold that covers the belt. Only the fringed border at the bottom edge differs from the Artemision statue. The Jockey's garment, therefore, is a type that was used in the Hellenistic period to depict male figures in a variety of situations. Having his right shoulder bare, however, certainly facilitated the action of goading.

FIGURE 65. Detail of reins in the Artemision Jockey's left hand from left side. Photo courtesy Deutsches Archäologisches Institut Athen (neg. no. 80/65).

The ethnicity of the Jockey has been debated. Scholars have considered him to be an Ethiopian, a person of mixed Greek and Ethiopian heritage, a non-Greek type, an East Greek (Pergamene), or one of unknown ethnicity.[130] There were strict conventions for representing foreigners in Greek art,[131] and many images of black Africans, or Ethiopians, as they were known to the Greeks, exist today.[132] The primary characteristic for identifying Ethiopians in antiquity was the dark color of their skin.[133] The dark patina preserved in places on the Jockey's face under areas of deep-seated corrosion may be the remains of an original black patination that was applied to his skin in antiquity. In the same way, the hooves of the Horse were artificially patinated to produce a dark black sheen. Although this quality alone would secure the African descent of the Jockey, other facial characteristics indicate the same, such as his short broad nose, high

cheekbones, large forehead, and small angular chin. All of these features compare well to Greek depictions of Ethiopians, such as the Ethiopian in the relief in Athens (see Fig. 53).[134] The Artemision Jockey's chin and nose also compare well with a black basalt portrait of an African boy dated to the first half of the first century B.C.[135] Admittedly, however, the Jockey's features are not as pronounced as in many depictions of black Africans, and a "Nilotic" Ethiopian is thus one possible identification.[136] The fifth-century B.C. Greek historian Herodotus remarks that eastern Ethiopians had straight hair, while African Ethiopians had woolly hair.[137] Nilotic types have reduced prognathism, smaller, less everted lips, hair that ranges from curly to straight, and long narrow faces. The Jockey's rounded face and Greek hairstyle, however, do not fit well with this identification. His softened Ethiopian features and Greek hairstyle are much more likely to indicate that he is a person of mixed heritage, perhaps the son of a Greek and an Ethiopian. That this type of representation would occur in antiquity is not unexpected. Racial intermixing can be documented in Greece at least as early as the fifth century B.C. Classical art, however, focused on the extreme differences between Greeks and barbarians—that is, all non-Greeks. The expanded Hellenistic world thrust Greeks into much closer contact with many different cultures, including Ethiopians. Such contact led to a less exclusive perception of Greek and non-Greek cultures, which can be documented in Hellenistic literature and art.[138] The Artemision Jockey is a rare and eloquent testimony to this phenomenon in a large-scale sculpture of the highest quality.

The age of the boy can be roughly estimated. Scholars have suggested less than ten years, ten years, and twelve years of age.[139] I believe that his small size and slight frame suggest a young boy approximately ten years of age. He is comparable in age to the so-called Spinario, a Hellenistic work known from several copies.[140] The exaggerated intensity portrayed in the Jockey's face, however, gives the impression of a much older person.[141] Depending on the interpretation of the group, this incongruity can be read in different ways.

The boy has always been identified as a jockey, which automatically gives him and the Horse athletic connotations and associations. Without an inscription to identify the figures and the attribute missing from the boy's right hand, a variety of interpretations of the iconography of the group is possible: divine or mythical, hunting, military, or agonistic. It is important to consider the arguments for each of these possibilities before determining the best interpretation of the group.

Given that this is a large-scale monument, could this be a divine child or other mythical figure, a reference to a myth that is now lost? Can we see in this boy on his running horse an allegorical figure for the race of life?[142] Or could the group be a personification of some concept, such as competition, time, or even horse racing?[143] Upon closer examination, these interpretations are unlikely.

Agon, or competition, was represented as an allegorical figure in antiquity, but its iconography appears to have been quite different.[144] The personification of time is not known before the Roman period, and Greek allegorical figures for athletic events are not known at all. It is conceivable, however, that either the boy or the Horse is a divine figure in disguise.[145] For example, Zeus was known to transform himself into many guises. Poseidon, the patron god of horse racing, was also occasionally known to transform himself temporarily. Could the sculpture group from Artemision refer to a lost myth in which Poseidon was transformed into a horse to perform a task or win a race? The juxtaposition in scale between the two figures is appropriate to such a scenario; however, the brand on the Horse does not fit with this idea. Although a divine or allegorical figure is an attractive hypothesis, there are neither concrete parallels nor any distinct features to support such an identification. In fact, the clear interracial representation of the Jockey weighs heavily against a mythological interpretation and seems to place the Artemision group much more firmly in a contemporary Hellenistic genre.

A hunting scene is another possible interpretation, inasmuch as large-scale sculptural groups depicting hunts are known from the Hellenistic period.[146] We have seen that the iconography of the Horse from Artemision could support such a conclusion. If this were the case, the boy might be carrying a weapon of some kind, such as a spear. However, there are several reasons why this interpretation seems unwarranted. In a hunting scene, according to iconographic parallels, one would expect the boy on his Horse to be confronting an animal, lunging at it to inflict the deathblow. The way the Horse's neck is stretched forward, without any apprehension about what is immediately in front of it, does not support such a hypothesis. If a confrontation were being portrayed, the Jockey would have tighter control of the reins in a situation where the Horse might very easily act unpredictably. One would expect the Jockey to have his weapon raised, ready to attack, and not down at his side and slightly back.[147] The fact that he wears spur straps, instead of shoes with spurs, also seems inconsistent with hunting, where it would be necessary to dismount and perhaps even follow a quarry on foot.

It could also be suggested that the Horse and Jockey Group from Artemision is part of a battle scene of the type known from large-scale sculptural groups of the Hellenistic period.[148] Lunging poses similar to the Horse's stance are not common in battle scenes but can be paralleled in the instances cited above, in which horse and rider tower over a fallen foe. In this scenario of close combat, however, one would not expect the Horse to have its neck stretched forward without inhibition. Usually, horses are shown pulling their heads back slightly. One would also expect the boy to have a tighter rein, with his weapon in a position of attack or defense. The way the Jockey from Artemision turns away

from his right arm suggests that he is not involved in direct combat with anyone. Likewise, his youth is not appropriate in this context.

Many features do support the identification of the group as a racehorse and jockey in the act of a competition and moving at great speed. Various details create this effect in the Horse: the galloping pose, its outstretched neck, flaring nostrils, pinned-back ears, and prominent veins. The windswept hair and drapery, and the way the boy spurs the Horse and lets up on the reins to give it greater freedom of movement, are characteristic of a jockey in the heat of competition. The way he turns his head to the left also implies the existence of other competitors close at hand.[149] The missing attribute in his right hand can be explained as the whip typically used by Greek jockeys to urge on their steeds, especially at the end of the race. This identification is consistent with the position of his arm, held down at his side and slightly back in order to strike the Horse's rump. The same pose is attested in horse-racing scenes on earlier Greek vases (see Fig. 67). Perhaps more than anything else, the spurs are best explained as attributes of a jockey. Likewise, the Nike brand could easily connote victory in an equestrian contest, as it often did on coinage of the Classical and Hellenistic periods (see Fig. 72). Finally, the discrepancy in scale between the Horse and the Jockey is easily explained by this interpretation. The larger scale of the Horse emphasizes its important role in the race, and the smaller scale of the Jockey indicates his small size and diminutive role. It is possible to see in these two statues the entire composition, without the need to add additional figures, as is the case with many of the other hypotheses.

The preceding iconographic study supports the identification of the Horse and Jockey Group from Artemision as a representation of an athletic contest. The statues themselves provide little insight into their original context. The following chapter examines the evidence for Greek horse racing, focusing on the Hellenistic period, in order to understand better what the original context for such a group may have been.

5

ANCIENT GREEK HORSE RACING

Horse racing was the most prestigious and splendid of all Greek sports. It was both a fundamental element of the panhellenic games and a primary component of local festivals throughout the Greek world. While equestrian competitions took many different forms, all of them can be broadly grouped into two categories: chariot racing and events in which horses were ridden. The focus of this chapter is the events on horseback, with an overview of the evidence for horse racing throughout Greek antiquity, but particularly the Hellenistic period.[1] A wide array of information is synthesized to provide a sense of the importance of this sport to the Greeks and its place in their society. Ancient literary and epigraphic *testimonia,* numismatics, and archaeological evidence, such as hippodromes, Greek sculpture, and vase paintings, give a vivid picture of the competitors, the variety of races that were held at panhellenic and local festivals, the kinds of prizes won, and the dedications that were offered to the gods in commemoration of victory. Because of the fragmentary nature of the evidence, a diachronic presentation is given, bringing the evidence for earlier periods to bear on what was essentially a conservative agonistic equestrian tradition.

THE GEOMETRIC PERIOD (1000–700 B.C.)

The early Iron Age of Greece, a time also known as the Geometric period, witnessed dramatic transformations fundamental to the cultural genesis of Classical civilization. The foundation of the polis, or city-state, the introduction of the Greek alphabet, the establishment of panhellenic sanctuaries, and the

expansion of the Greek-speaking world by means of colonization to the east and west all occurred during this early period of Greek history.[2] Horses constitute one of the primary pictorial symbols on a number of richly decorated works of the Late Geometric period, indicating that they were important to the upper levels of Greek society at this time.[3] In most Greek city-states, ownership of horses was a mark of the upper class, defined in specific terms as *hippeis,* or the horse-owning class.[4] Cavalry became a prominent feature of the military, playing a decisive role in some of the first historic battles, such as the First Messenian War (ca. 740–720 B.C.) and the Lelantine War (late eighth century B.C.).[5]

Although there is no compelling evidence for horse racing in the Geometric period, a strong oral tradition, probably written down for the first time in the eighth century B.C. and preserved in the Homeric epics, relates the heroic practice of chariot racing. The most famous account is that of the chariot race at the funeral games held in honor of Patroklos described in considerable detail in the *Iliad* (23.257–650).[6] There is, however, no reference in the Homeric epics to the single-horse race, or *keles* (κέλης), as it was known to the ancient Greeks. According to later ancient *testimonia,* horse-racing events of any kind were conspicuously lacking in the first Olympic games (begun in 776 B.C.).[7]

THE ORIENTALIZING PERIOD (700–600 B.C.)

The seventh century B.C. is known as the Orientalizing period because of the increase in contact between Greece and the Near East, which had a profound impact on Greek society, as manifested in the archaeological record in art and architecture. It is likely that new breeds of horses from the East, particularly those well-suited for riding, were introduced to Greece at this time and contributed to the impetus for horse racing.[8] It was also during this period that the first recorded horse races were held at Olympia. The four-horse chariot race, or *tethrippon* (τέθριππον), was added to the program in the Twenty-fifth Olympiad (680 B.C.), and the *keles* was instituted shortly thereafter in the Thirty-third Olympiad (648 B.C.). Pausanias (5.8.8) tells us that the first victor of the *keles* was Krauxidas, a Thessalian from the city of Krannon. It is not coincidental that the first pictorial scenes that most likely relate to *keles* competitions appear shortly after this on Corinthian vases dated to the second half of the seventh century B.C.[9] Significantly, the earliest literary reference to a racehorse, a lyric poem by the Spartan poet Alcman that refers to breeds of racehorses from regions as distant as northern Italy, Scythia, and Lydia, also dates to this period.[10]

The sixth century B.C. witnessed the reorganization of the major Greek sanctuaries to include festivals with agonistic competitions, both athletic and equestrian. The games at Delphi, Isthmia, and Nemea reached panhellenic status alongside those at Olympia. The *keles* was introduced at Delphi in 582 B.C. as a feature of the First Pythian Games, according to Pausanias, who also records that the Arkadian Agesilas of Lousoi was victor in the *keles* at Delphi during the Eleventh Pythian Games.[11] The *keles* was introduced at Isthmia in 508 B.C., considerably later than the foundation of the Isthmian Games in 581 B.C.[12] While it is not known when the *keles* was incorporated into the Nemean Games, a bronze plaque from the sanctuary recording the dedication of a (statue of a) racehorse is likely related to a victory in the Nemean horse races in the late sixth century B.C.[13] Although the *keles* (along with the four-horse chariot race) continued to be a feature of the games at Olympia, little is known of the early history of the event there. The next recorded victor is Kallias, son of Phainippos, of Athens in 564 B.C.[14]

Roughly around the time when panhellenic centers were forming their programs, Athens established its own regional agonistic competitions, the Panathenaia (ca. 566–565 B.C.).[15] While there is no preserved record of when the *keles* was introduced to the Panathenaic Games, the aforementioned victory by an Athenian at Olympia may lend credence to the idea that the *keles* was included in the original program. In any event, *keles* scenes appear on some of the earliest panathenaic amphorae, vases filled with oil that were awarded as prizes to victors in the games.[16] There is little evidence for the *keles* at other sanctuaries during the Archaic period.[17]

Judging from the archaeological record, horse racing was a popular subject on Archaic Greek vases, more so than in any other period. Horse-racing scenes occur on vases from Archaic regional ceramic centers such as Athens, Lakonia, Crete, Klazomenai, and the Chalkidike, indicating the widespread popularity of the sport.[18] These representations, although abbreviated and not always easy to interpret, can be helpful for understanding elements of the ancient Greek horse race. A brief discussion of some of the more interesting scenes in black-figure and red-figure vase paintings of Athens, a dominant pottery center by the middle of the sixth century B.C., illustrates the richness of the repertoire.

Among the most important and instructive representations are fragments of two vases by the early Athenian black-figure painter and potter Sophilos. A fragment (ca. 580 B.C.) from a dinos (a large mixing bowl for wine) preserves part of the chariot races at the funeral games of Patroklos, mentioned above.[19] Although the scene represented is not a single-horse race, this sixth-

century adaptation of a Homeric myth gives some insight into the contemporary conception of equestrian spectator sports. Games are watched by numerous spectators from stands, or *ikria* (ἴκρια), presumably much like the equestrian competitions of the day. Remarkably, this is the only extant representation of its kind from any period of Greek art. Another black-figure dinos (dated ca. 570 B.C.) attributed to the same painter is a masterpiece of the type that includes many of the salient elements of the *keles*.[20] The scene occupies a primary position, a shoulder register that continues all the way around the vase. From left to right, it depicts a man draped in a himation and holding a staff, watching as six horses with their jockeys gallop off to the right. The standing figure may well be a judge positioned at the beginning of the race to initiate the competition and to ensure that there were no false starts. At the opposite end, the victor's horse is shown passing the finishing post at a gallop, with the jockey turning his head to see the progress of his competitors. This figure is an important precedent for the Artemision Jockey's own gesture. Two large bronze tripod cauldrons, one taller than the other, stand in front of the victorious rider and must represent prizes for the contest.[21] The jockeys are naked youths and carry long riding crops to goad their horses.[22] As was typical of Greek horse races, they ride bareback without any equipment other than a bridle and goad. It has been suggested that a series of black-figure vases (dated ca. 580–560 B.C.), known as horse-head amphorae, may have been prizes for victors in *keles* races.[23]

A series of vases related to panathenaic amphorae show some very interesting scenes of victors. On a well-known vase in the British Museum, a victorious horse and jockey are led by an official who proclaims: "The horse of Dyneiketos is victorious" [DVNEIKETV:HIPOS:NIKAI] in an inscription in front of him (Fig. 66).[24] Behind the horse, a nude young man carries a large bronze tripod, the prize, and a victor's crown. In a similar scene on a vase in the Nauplion Museum, both the jockey and horse wear victor's crowns.[25] Late Archaic panathenaic amphorae also illustrate abbreviated racing scenes, frequently with horses springing from the starting post or in mid-race (Fig. 67); these depictions, of course, refer specifically to the panathenaic games held at Athens.

Scenes on three early Athenian red-figure vases draw attention to other aspects of horse racing. A large column krater dated 510–500 B.C. has a rim decorated with a *keles* scene and a four-horse chariot race on either side of the handles.[26] This is one of several vases that include both of these events, which were so closely related in all panhellenic games.[27] A fine red-figure kylix attributed to Onesimos depicts in its tondo an Ethiopian groom tending to a horse.[28] Ethiopians are also represented as grooms in sculpture of the Classical and Hellenistic periods.[29] A myth relates that Poseidon, patron god of horses and horse

FIGURE 66. Detail of an Attic black-figure prize amphora of panathenaic shape with horse-racing victor scene, ca. 520–500 B.C. The British Museum, London (B 144). Photo © The British Museum, courtesy Trustees of The British Museum.

racing, visited Ethiopia, and it is likely that the Ethiopians, as blacks were known in antiquity, had a special association with horses, horsemanship and racing.[30] A fragment of a red-figure kylix dated 490–480 B.C., also attributed to Onesimos, provides the earliest illustration of a spur-strap on the foot of a jockey in the midst of a race.[31]

Our knowledge of the history of the *keles* event at Olympia resumes in the Late Archaic period with the victories of a Corinthian family, first of Pheidolas in 512 and then of his sons in 508 B.C.[32] Pausanias relates an unusual story about the former race:

> The mare of the Corinthian Pheidolas was called, the Corinthians relate, Aura (Breeze), and at the beginning of the race she chanced to throw her rider. But nevertheless she went on running properly, turned round the post, and, when she heard the trumpet, quickened her pace, reached the umpires first, realized that she had won and stopped running. The Eleans proclaimed Pheidolas the winner and allowed him to dedicate a statue of this mare.[33]

FIGURE 67. Attic black-figure panathenaic amphora. Side B with horse-racing scene, ca. 490 B.C. The Metropolitan Museum of Art, New York, Fletcher Fund, 1956 (56.171.3). Height 66.3 cm. Courtesy The Metropolitan Museum of Art.

The story is interesting for a number of reasons. Both mares and stallions could compete in the *keles,* since no distinction was made at that time on the basis of the horse's sex. It is clear from the numerous ancient references to boy jockeys and the youthful depictions of jockeys on Greek vases that the Greeks knew the weight of the jockey was an important factor in racing (as it is today). However, this story illustrates that at this time there was no regulation weight imposed by ancient Greek authorities, since the horse was not disqualified even though it lost its jockey at the beginning of the race. The fact that the horse "turned round the post" implies that the *keles* was at least two lengths of the

hippodrome. Two lengths is in fact the distance that most scholars ascribe to the race.[34] Finally, the passage mentions the use of an audible signal, a trumpet, to mark either the turning of the post or the last length of the race. An audible signal combined with a visual signal from a judge is also mentioned for the starting of the chariot race in Sophocles' *Electra* (line 711).[35]

In 496 B.C., Empedokles, son of Exainetos of Akragas, won the *keles* at Olympia, and Krokon of Eretria was the victor in 492 B.C.[36] A new equestrian event was added to the Olympic program at this time, a race for mares called the *kalpe* (*κάλπη*), and Pataikos is recorded as being the first victor.[37] It was an unusual event in which the jockey jumped from his horse to complete the last segment of the race on foot.[38] This brought the equestrian events at Olympia to four: the *tethrippon,* the *keles,* the *kalpe,* and the *apene* (*ἀπήνη*), a two-mule chariot race popular in the west.[39]

Although no examples survive, it is apparent from literary and epigraphic *testimonia* that statues were erected at sanctuaries as dedications by victors in the horse races beginning in the Late Archaic period. All appear to have been of bronze and considerably under life-size.[40] On the basis of Pausanias's account (6.13.9), Pheidolas is believed to have dedicated a statue of his horse Aura in the Altis at Olympia.[41] Joachim Ebert has identified a fragmentary dedicatory inscription from Olympia of the late sixth century B.C. as the plaque for a stone base that supported a small bronze statue of a horse erected in honor of a victory in the *keles*.[42] Krokon of Eretria also set up a small statue of a horse in the Altis at Olympia in honor of his victory in 492 B.C.[43] Finally, Pliny (*HN* 34.19.78) in his chapter on bronze mentions a statue group, presumably a victor dedication, of boy jockeys on horses by the Late Archaic sculptor Hegias. Pliny (*HN* 34.9.19) also states that the origin of the equestrian statue, which became so popular in Hellenistic and Roman times, lay in Greek athletic monuments of victors in their sacred contests, which he suggests preceded sculptural dedications in honor of victories in chariot races.

While statues may have been the most splendid victor dedications, it is clear that other kinds of dedications were made in commemoration of victories in the races. Miniature chariot wheels with dedicatory inscriptions are surely offerings by victors in chariot races.[44] In the same way, bridles from the sanctuary at Olympia are likely to have been dedications by victors in horse races.[45] A Late Archaic stele from Tegea was dedicated by a victor in the *tethrippon*.[46] Stelai may also have been dedicated in commemoration of *keles* victories. Pausanias mentions seeing a carved relief of a horse in the Altis at Olympia that commemorated the victory of Pheidolas's sons, and he says that the oldest votive offering at Olympia by a victor in the chariot races was by Miltiades of Athens, who dedicated an ivory horn, set up in the treasury of the Sikyonians.[47]

Victory in the panhellenic games brought prestige to the victor, his family, and his city. Poems, commissioned by the owner of the horse, drew attention to that accomplishment, as in Pindar's *Pythian* 3:

> FOR HIERON OF SYRACUSE WINNER, SINGLE-HORSE RACE
>
> And if I had landed, bringing with me
> two blessings, golden health and a victory revel
> to add luster to the crowns from the Pythian games [482 B.C., 478 B.C.]
> which Pherenikos once won when victorious at Kirrha[48]

There was an even greater prestige in being victorious at more than one of the games. Competing at all four panhellenic festivals, which took at least two years, formed a circuit known as a *periodos*. To be called a *periodonikes* in all four was considered a great honor.[49] While it is apparent that this was a goal of stable owners, the epithet *periodonikes* is not preserved for any victors in the *keles*. It is therefore unclear whether or not a victor had to win with the same horse, or the same combination of jockey and horse.[50] Both Lykos, the horse of Pheidolas's sons,[51] and Pherenikos, the horse of Hieron of Syracuse, won at two of the panhellenic centers. Pindar and Bacchylides boast that Pherenikos did not need to be whipped, and Bacchylides even says of Pherenikos:

> Chestnut-maned Pherenikos, storm-paced horse, was seen winning at the wide-eddying Alpheos by gold-armed Dawn, and in holy Pytho too; and resting my hand on the earth I make my proclamation: never yet in a contest was he dirtied by the dust of horses ahead of him as he raced to the finish, for he speeds like the rush of the north wind, heeding his steersman as he gains for hospitable Hiero a victory which brings new applause.[52]

The exact number of contestants to compete in the *keles* is not known. In all likelihood, the number was not always consistent. Pindar (*P.* 5.49–51) records forty-one contestants in the chariot races of the Pythian games at Delphi in 462 B.C., but this seems to be an exceptional or inflated number. In the mythic games of the *Iliad* (23.257–650) and Sophocles' *Electra* (line 708) there are only five and ten contestants respectively, which seems much more reasonable. Even in Roman times, when chariot racing became a popular spectacle, no more than twelve chariots normally competed at a time.[53] While there is no direct evidence for *keles* events, it seems likely by analogy with the chariot races that the *keles* races usually had between five and twenty contestants.

The history of horse racing in the Classical period is dominated by the

Olympic games, for which there is the most evidence.[54] At least eleven victors are recorded in the ancient sources for the *keles* events there, including victors from Sicily, Attica, Thessaly, the Peloponnesos, and Macedonia.[55] Since anecdotes about some of the more interesting contestants give insight into the nature of the games, topics related to six Classical victors in the equestrian events are singled out in the following discussion.

City-states were eligible to enter a horse in the races; for example, the city of Argos is recorded as winning the *keles* at Olympia in 480 B.C.[56] Not only does this show the commitment of a *polis* to maintaining a horse for competition, it also demonstrates an interest in the games at a community level.[57]

Owners could enter more than one horse or team of horses in a single event. The famous Athenian statesman Alcibiades entered seven chariots in the *tethrippon* at Olympia in 416 B.C., taking first, second, and fourth places.[58] Although victor lists erected at panhellenic sanctuaries and local cities usually list only first place, it is clear from this passage by Thucydides that several different places were recognized in the equestrian events, as in other athletic and musical events. Alcibiades is an extravagant example, but the ability of owners to have multiple entries in a single contest emphasizes the aristocratic nature of the equestrian games.[59]

Jockeys and charioteers are seldom mentioned in the literary and epigraphic sources, despite the fact that they were an essential component of the racing team.[60] There are two reasons for this. In the first place, while the owner or his/her son occasionally acted as jockey or charioteer, most of the time paid professionals or servants were used.[61] Second, the honor of victory in the equestrian events of the panhellenic games was bestowed primarily upon the owner of the horse, who bred and trained the animal and paid for its transportation to and from the games. One example of an owner who physically competed himself as a jockey is Aigysos, victor in the *keles* at Olympia in 400 B.C. He set up a dedicatory statue commemorating his victory and proclaiming that he was both owner of the horse and jockey in the race.[62] More frequently, the name of the horse, and not the jockey, is recorded and its achievement recognized.[63]

Women, as owners, could compete in the equestrian contests. The first woman to win the chariot race at Olympia was Kyniska, a Spartan princess, in the beginning of the fourth century B.C.[64] Her achievement was acknowledged with a large-scale bronze statue erected within the Altis, of which the inscribed base has been recovered.[65] It is generally believed that women did not compete as jockeys or charioteers in the games, but this may not always have been the case.[66]

Regulations surrounding the races were subject to continued review and improvement. This is clear in the case of Troilos of Elis, who was victor in the two-horse chariot races at Olympia in the fourth century B.C. Pausanias relates that:

> Troilos, at the time that he was umpire, succeeded in winning victories in the chariot-races, one for the chariot drawn by a full-grown pair, and another for a chariot drawn by foals. The date of his victories was the hundred and second Festival (372 B.C.). After this the Eleans passed a law that in the future no umpire was to compete in the chariot-races. The statue of Troilos was made by Lysippos.[67]

This anecdote demonstrates that the Greeks in the late Classical period were sensitive to a possible conflict of interest on the part of a judge who entered his own horse in a race of which he was a judge.

Owners did not have to be present at the races when they won. The best example is Philip II of Macedon, who was victor in the *keles* at Olympia in 356 B.C. on the same day that his son Alexander was born. We learn from Plutarch (*Alex.* 3.8) that Philip II was elsewhere when he won. While there are few other concrete instances, it must have been a fairly common occurrence for an owner to be absent from equestrian events in which (s)he took part.

During the Classical period, the program for the equestrian events was reorganized and expanded at the panhellenic centers and elsewhere, most notably Athens. The *kalpe,* which does not seem to have ever been a part of the program at Delphi, Isthmia, or Nemea, was dropped from the Olympic program after the Eighty-fourth Olympiad (444 B.C.).[68] The *synoris* (*συνωρίς*), or two-horse chariot race, was added at Olympia in 408 B.C., and ten years later at Delphi, where Lykormas of Larissa was winner.[69] Sometime in the first quarter of the fourth century B.C., a second age category for the four-horse chariot was added at Olympia and Delphi. This new age division demonstrates an increasing interest in the games and a continued refinement of the programs at the panhellenic festivals in the Classical period.

While not part of the *periodos,* the games of the greater Panathenaia, held every fifth year, were extensive and widely attended.[70] These games included a variety of equestrian events, illustrating the variability that could occur in Greek festival programs. The Athenians were passionate horsemen, famous for their cavalry. It is apparent that the Panathenaic Games were influenced by the cavalry, so much so that they were enlarged to include various military contests by the fourth century B.C. An inscription of ca. 370 B.C. preserves a partial list of the equestrian events and the prizes that were given.[71] In addition to the chariot race for both colts and full-grown horses, there was a series of specialized events listed under the separate heading of "(prizes) for warriors" [*ΠΟΛΕΜΙΣΤΗΡΙΟΙΣ*]: the *keles,* a chariot race (*ζεῦγος ἵππων*), a chariot procession (*ζεῦγος πομπικόν*), and a javelin throw on horseback (*ἀφ' ἵππου ἀκοντίζων*). Both first and second places are listed, followed by the prizes that were awarded.[72] The warrior events, although more extensive, were noticeably less expensive to hold than the nonmilitary events, since the winners received significantly smaller prizes.[73] The two-

horse chariot race is also attested at the Panathenaic Games in the first half of the fourth century B.C.[74]

Two other unusual horseback riding events are known to have been held at Athens in the Classical period.[75] One is the *anthippasia* (ἀνθιππασία), or "riding opposite," which had distinct military overtones. It was a kind of competition involving cavalry display that took place in the Athenian hippodrome.[76] Except for a marble base with relief decoration signed by the fourth-century B.C. sculptor Bryaxis that bears the names of victors in this event, very little is known about the *anthippasia*.[77] The other riding contest attested in the literary sources is the *aphippolampas* (ἀφιππολαμπάς), described by Plato (*R.* 1.328a) as a novelty instituted in 429 B.C. in honor of the goddess Bendis, which was a torch race on horseback.[78]

Inscriptional evidence provides some indication of local festivals that included equestrian events during the Classical period. Larissa, the principal city of Thessaly, Oropos in Attica, several sanctuaries in Lakonia, Rhodes, and Aphrodisias in Caria all held festivals with equestrian events. As at Athens, these local festivals had much greater variation than the four or five event programs that were standard at the panhellenic sanctuaries.

At Larissa, a contest called the *aphippodroma* (ἀφιππoδρομά) is mentioned in a victor list.[79] In this event, which was analogous to the *apobates* (ἀποβάτης) contest for chariots at Athens and the *kalpe* at Olympia, the jockey jumped from his horse to complete the last lap of the race on foot.[80] A fourth-century B.C. inscription from the sanctuary of Amphiaraos at Oropos contains a list of most of the equestrian events held there.[81] Interestingly, the program of events follows closely that of the panathenaic games discussed above and, perhaps not surprisingly, many of the winners are Athenians.[82]

Another important inscription from Sparta lists no fewer than sixty-eight victories by the Lacedaimonian Damonon and his son in chariot and *keles* events at eight different festivals in Lakonia held between 440 and 435 B.C.[83] This inscription attests to the prominence of festivals in Lakonia in the fifth century B.C. and their local stature, since such a large number of victories could not have been achieved in such a short period of time at the panhellenic festivals.[84]

Rhodes had several different festivals with equestrian events in the Classical period. Perhaps the most important of these was the Halieia, held in the city of Rhodes. This festival, famous for its chariot races, was held at least from the late fifth century B.C. on. One unusual Rhodian festival, called the *hippokathesia* (ἱπποκαθέσια), has been interpreted as a preliminary horse show, or fair, connected with all of the festivals on Rhodes that had equestrian events.[85]

Notwithstanding the local variations in contests described above, the *tethrippon, keles,* and *synoris* were the three most important Greek horse races at local festivals and the panhellenic games. It must be stressed that these three races

did not have any distinct military connotations and that they appear to have been truly agonistic in nature.[86]

Although scenes related to horse racing are still common on fifth-century B.C. Athenian vases, little new is added to the repertoire discussed above. There is a significant decrease in vase representations in the fourth century B.C., although panathenaic amphorae with horse-racing scenes continued to be produced. It is not possible to know whether this decline reflects a decreased interest in horse racing or whether it was the result of other factors, arbitrary or otherwise.[87]

Coins with scenes related to equestrian events and victories enjoy great popularity in the Classical period, especially in Sicily and Magna Graecia. The Greek colonies in Sicily were tremendously successful at the horse-racing contests of the panhellenic games in the Late Archaic and Classical periods, when at least fifteen of their victories are recorded.[88] Coins may have been used to broadcast local success in the panhellenic games and other festival competitions. Perhaps the best examples are the long series of Syracusan dekadrachms depicting a four-horse chariot scene in which the driver is being crowned by a flying Nike. These magnificent coins are the first to be signed by a die engraver, and they herald a new artistic era for ancient die casting.[89] Another series, of Tarentine coins, is particularly important for its variety of equestrian scenes, which include representations of the *keles, tethrippon, synoris,* and either the *kalpe* or *aphippodroma,* as well as what were most likely military events, such as a race for the *hippos polemistes* (ἵππος πολεμιστής), or armed horse.[90] A didrachm of 430–420 B.C. from Motya in Punic Sicily and issues from Kelenderis in Cilicia of the first half of the fourth century B.C. probably also represent an *aphippodroma* event.[91] Macedonian coins depicting a horse and a jockey holding a palm branch (Fig. 68), minted during the reign of Philip II (r. 359–336 B.C.), as well as after his death, clearly commemorate the victory of the king's horse in the *keles* at Olympia in 356 B.C. and served the propaganda purpose of stressing the Macedonian monarchy's ties to the Greek world; this is one of the rare cases in which it is possible to link a specific coin issue to a specific victory by a specific individual with any degree of certainty.[92]

Statues erected in honor of victors as dedications to the gods continued to be popular in the Classical period. Such monuments could be set up at the sanctuary where the victory occurred, as well as in the victor's home city-state. Since the statues were most often made of bronze, very few originals are preserved and more are known through copies.[93] Four examples, known only through literary and epigraphic sources, attest to the proliferation of the horse and jockey type. Three are described by Pausanias during his visit to Olympia. The fourth was set up on the Acropolis at Athens. On the first, Pausanias says:

> Nearby is a bronze chariot and a man mounted on it; race-horses stand by the chariot, one on each side, and there are children seated on the horses. These are memo-

FIGURE 68. Posthumous silver tetradrachm of Philip II (359–336 B.C.) of Macedonia. Obverse depicts head of Zeus. Reverse depicts naked rider with palm. The American Numismatic Society, New York (1964.42.22). Courtesy The American Numismatic Society, New York.

> rials to the Olympic victories of Hieron the son of Deinomenes, who ruled as tyrant over the Syracusans after his brother Gelon. But Hieron did not send these offerings: rather it was Deinomenes, the son of Hieron, who gave them to the god. The chariot was the work of Onatas of Aegina, while the horses on either side of it and the children upon them are the work of Kalamis.[94]

Kalamis, a prominent sculptor of the Early Classical period, was famous for his horses.[95] It is not possible to tell from Pausanias's description how large the statue group was, but it is likely to have been approximately life-size by analogy with the contemporary bronze chariot group set up in the sanctuary of Pythian Apollo at Delphi, of which the famous charioteer (Fig. 69) is well preserved.[96] A second *keles* statue of a horse and rider is described by Pausanias as follows:

> In the *Altis* by the side of Timosthenes are statues of Timon and of Aisypos, the son of Timon, who is represented as a boy mounted on a horse. For the fact is that the boy's victory was in the horse race, while Timon claimed victory in the chariot race. The artist who fashioned the portraits for Timon and for his son was Daidalos of Sicyon, who also made the trophy in the *Altis* for the Eleans, commemorating their victory over the Spartans.[97]

Since we know that Aisypos was victor in the *keles* at Olympia in 400 B.C., the statue must have been commissioned sometime thereafter.[98] Daidalos of Sikyon, known for another athletic group in bronze, was a later follower of the fifth-

FIGURE 69. Delphi Charioteer. Delphi Archaeological Museum (3483). Height 1.83 m. Courtesy École française d'Athènes, Cl. Rolley (neg. no. R2762.10).

century B.C. sculptor Polykleitos.[99] Of the third *keles* statue, Pausanias records that:

> A boy seated on a horse and a man standing by the horse the inscription declares to be Xenombrotos of Meropian Kos, who was proclaimed victor in the horse-race, and Xenodikos, who was announced a winner in the boys' boxing match. The statue of the latter is by Pantias, that of the former is by Philotimos the Aeginetan.[100]

Fragments of the original inscription have been recovered.[101] Although Xenombrotos's victory in the *keles* at Olympia was in 420 B.C., the letter forms of the epigram suggest a date for the monument in the second half of the fourth century B.C.[102] Ps. Plutarch (*Vitae X oratorum* 839c) makes mention of another monument, of the Athenian Isokrates as a boy riding a horse set up on the Athenian Acropolis. It probably commemorates a victory in the races of ca. 420 B.C. and was erected sometime thereafter.[103]

A fifth variation may be represented on a red-figure chous attributed by Sir John Beazley to the Tarquinia Painter (Fig. 70) and dated to ca. 470–460 B.C.[104] It has an unusual scene in Greek vase painting that depicts an infibulated horseman standing next to and holding the reins of a standing, bridled horse. It has been suggested that this scene is a bronze statue group of a victorious horseman.[105] The statue type would be a hitherto unknown, but not surprising, variant of the mounted horse and jockey type attested in the above literary sources. The static pose of the figures and the lack of decoration on the bottom border lend support to this provocative interpretation.

Other types of statuary were also commissioned to commemorate equestrian victories during the Classical period. Kleogenes of Elis, victor in the *keles* at Olympia in the fourth century B.C., dedicated a portrait statue of himself.[106] Pausanias (6.1.7) records another statue of a Spartan victor in the horse races, represented in an attitude of prayer. It is notable that many of the dedicatory statues associated with horse racing were located, according to Pausanias, in the same area within the Altis, to the right of the temple of Hera. More statues of uncertain type are known from ancient literary and epigraphic *testimonia*. Pausanias (6.2.1–2) mentions that after Lykinos of Sparta entered colts in the race for full-grown horses and won at Olympia, he dedicated two statues there in honor of his victories. Several other Spartan victors in horse races set up statues in the Altis, but Pausanias (6.1.7; 6.2.1–2) does not specify in which events they won. They may have included chariot races and *keles* events.[107]

There is some evidence that racehorses occasionally received elaborate burials. Herodotus relates this story: "Cimon lies buried outside the city, beyond the road that is called Through the Hollow; and the mares that won him three Olympic prizes are buried over against his grave. None save the mares of the Laconian Euagoras had ever achieved the same."[108] There is, however, no in-

FIGURE 70. Attic red-figure chous attributed to the Tarquinia Painter, with figure of a youth standing beside a horse, ca. 470–460 B.C. Photo by the author.

dication of what the burials looked like or whether they were adorned with sculpture.[109]

THE HELLENISTIC PERIOD (323–31 B.C.)

Greek horse racing reached its fullest and most spectacular extent during the Hellenistic period. The panhellenic games expanded to six events with the addition of a two-horse chariot race for colts and a single-horse race for colts. Interestingly, the six-event program was not introduced by Olympia but occurred

first at Delphi. This was a logical progression from the four events of the Classical period that allowed each type of race to have a youth category, as had been the case for many years with the athletic events.[110] However, there is no evidence for a youth category for jockeys at the panhellenic festivals.[111] The age categories are clearly for the horses, reflecting a mature and well-defined system in which horses could begin to compete at an early age.

Many Olympic victors are known for the single-horse races of the late fourth and third centuries B.C. Nikagoras of Rhodes was victor in 308 B.C., and he is known to have won *keles* and chariot events at Isthmia, Nemea, and Sikyon. Pandion of Thessaly was victor in 296 B.C. According to Scipio Africanus, Hippokrates of Thessaly was the first victor in the newly established *keles* for colts, held in 256 B.C. However, Pausanias (5.8.11) ascribes this victory to Tlepolemos of Lycia. Pantarkes of Elis won in 228 and Thrasonides of Elis in 212 B.C. While little is known of the above individuals, when one takes into consideration the victors in the chariot events, the aristocratic and even royal status of the Olympic equestrian competitors and race-horse breeders in the early Hellenistic period becomes clear. Lampos of Philippi in Macedonia was victor in the *tethrippon* in 304 B.C., and Theochrestos of Cyrene (famous for its horses) in North Africa was victor in the same event in 300.[112] Both Lampos and Theochrestos erected large-scale bronze chariot groups at Olympia in commemoration of their victories.[113] Theochrestos's grandfather also won the *tethrippon* at Olympia in 360 B.C., suggesting a family tradition of horse breeding and racing that spanned several generations.[114] Attalos I, future king of Pergamon, won the *tethrippon* for colts in 256 B.C., and Pergamon was known for its fine racehorses.[115] Aratos (271–213 B.C.), son of Kleinias, who won the *tethrippon* in 232, was an important Sikyonian statesman and *strategos* of the Achaian League.[116]

Practically no names of victors in the equestrian events at Olympia have been preserved from the second century B.C., but eight *keles* victors are known in the first century B.C.[117] All of the first-century B.C. victors were from Elis, the city neighboring Olympia, a very different demographic spread from the third century B.C., discussed above. It has plausibly been suggested that the Olympic games were not widely attended at this time.[118]

Keles victors in the other panhellenic games are not as well known. Nikagoras of Rhodes, mentioned above, won at Isthmia and Nemea. Two short poems of Hellenistic date preserved in the *Anthologia Graeca* provide some indirect evidence as they relate the stories of racehorses who have passed their prime and been relegated to milling grain:

> I, Sir, who once gained the crown on the banks of Alpheius, and was twice proclaimed victor by the water of Castalia; I who was announced the winner at Nemea, and for-

merly, as a colt, at Isthmus; I who ran swift as the winged winds—see me now, how in my old age I turn the rotating stone driven in mockery of the crowns I won.

I, Pegasos, attach blame to thee, my country Thessaly, breeder of horses, for this unmerited end of my days. I, who was led in procession at Pytho and Isthmus; I who went to the festival of Nemean Zeus and to Olympia to win the Arcadian olive-twigs, now drag the heavy weight of the round Nisyrian mill-stone, grinding fine from the ears the fruit of Demeter.[119]

Although they are probably fictitious, these horses provide some insight into the other panhellenic games. In the first poem, the horse claims to have competed and been victorious in both age groups during the course of its racing career. Both poems illustrate the enduring ambition in the Hellenistic era of competing at all four of the panhellenic festivals and completing the *periodos*.[120]

Most horse races took place within hippodromes throughout classical antiquity. The Greek hippodrome is thought to have been a simple structure with a running track centered around two turn posts (*νύσσαι*) and a place for spectators. Unfortunately, not a single one has been fully excavated in Greece, and only a handful have been securely identified.[121] The best candidate is at the sanctuary of Zeus on Mount Lykaion.[122] The most elaborate hippodrome was that at Olympia, for which we have a detailed description by Pausanias:

When you have passed beyond the stadium, at the point where the umpires sit, is a place set apart for the horse races, and also the starting-place for the horses. The starting-place is in the shape of the prow of a ship, and its ram is turned towards the course. At the point where the prow adjoins the porch of Agnaptus it broadens, and a bronze dolphin on a rod has been made at the very point of the ram. Each side of the starting-place is more than four hundred feet in length, and its sides are built stalls. These stalls are assigned by lot to those who enter for the races. Before the chariots or race horses is stretched a cord as a barrier. An altar of unburnt brick, plastered on the outside, is made at every Festival as near as possible to the center of the prow, and a bronze eagle stands on the altar with his wings stretched out to the fullest extent. The man appointed to start the racing sets in motion the mechanism in the altar, and then the eagle has been made to jump upwards so as to become visible to the spectators, while the dolphin falls to the ground. First on either side the barriers are withdrawn by the porch of Agnaptus, and the horses standing thereby run off first. As they run they reach those to whom the second station has been allotted, and then are withdrawn the barriers at the second station. The same thing happens to all the horses in turn, until at the ram of the prow they are all abreast. After this it is left to the charioteers to display their skill and the horses their speed. It was Cleoetas who originally devised the method of starting, and he appears to have been proud of the discovery, as on the statue at Athens he wrote the inscription:

Who first invented the method of starting the horses at Olympia,
He made me, Cleoetas the son of Aristocles.

It is said that after Cleoetas some further device was added to the mechanism by Aristeides.

The race course has one side longer than the other, and on the longer side, which is a bank, there stands, at the passage through the bank, Taraxippos, the terror of horses. It has the shape of a round altar. . . . On one turning post is a bronze statue of Hippodameia carrying a ribbon, and about to crown Pelops with it for his victory.

The other side of the course is not a bank of earth but a low hill.[123]

Many different reconstructions of the plan of the Olympic hippodrome have been suggested on the basis of Pausanias's description. The most recent and most accurate is that of Ebert, who combines information from Pausanias's description with a new reading of the eleventh-century A.D. codex from Constantinople that gives the dimensions of the hippodrome.[124] Most scholars believe that Pausanias's account is essentially of the third-century B.C. hippodrome refurbished by the architect Aristeides, who improved the starting mechanism known as the *aphesis* (ἄφεσις). While the elaborate starting mechanism at Olympia must have been very helpful in deterring false starts, there is little evidence for its use elsewhere.[125] A Hellenistic inscription regarding leases of land on the island of Delos refers to the hippodrome there as farmland, suggesting that it was only set up temporarily for the festival.[126] This may well have been the case for other hippodromes associated with local festivals. The evident inclusion of horse races in the games at Delos, a small sacred island, attests to the continued religious importance of equestrian events in the Hellenistic period.

The exact length of the single-horse races is likely to have varied from site to site. As with so many other features of the horse races, there is very little information except at Olympia.[127] The late codex from Constantinople, mentioned above, gives the length of all six equestrian events at Olympia and the dimensions of the hippodrome. On the basis of this document, it is possible to estimate the lengths of the races there. The single-horse race for colts was the shortest race: only once around the turning post, approximately 1,472 m. The single-horse race for adult horses went two times around the post, approximately 2,624 m. The chariot races were considerably longer, as many as twelve circuits for the four-horse chariot race for adult horses, or approximately 14,144 m.[128] Many different ancient sources refer to the danger of the turn at the post, especially in chariot races.[129] This must have been true of *keles* events as well.[130]

The games at Athens were also enlarged in the Hellenistic period. An important series of victor lists (Fig. 71) of the first half of the second century B.C. gives us a very complete program of the equestrian events held during the panathenaic

FIGURE 71. *IG* II^2 2314. Second-century B.C. panathenaic victor list. Epigraphical Museum, Athens (8093). Photo by Vassilia Stamatopoulou, courtesy Epigraphical Museum, Athens.

festival.[131] As in the Classical period, the Athenian program differed markedly from the panhellenic ones by including many more equestrian events, most of which were military in nature. By 166 B.C., at least 26 equestrian competitions were held during the festival. There were both competitions open only to Athenian citizens and others open to all competitors. The first twelve events, for citizens only, took place in the agora probably in the course of one day. Six of these were riding events, all of which were open only to phylarchs (*φύλαρχος* = cavalry commander) and knights (*ἱππεῖς* = cavalry members), and all were obviously related to training for the Athenian cavalry. There was a race for warhorses (discussed above), an up-and-back (*δίαυλος*) race, and a straight-out sprinting race (*ἀκάμπιον* = literally a race "without turn"). The horses in these events are referred to as common riding horses (*ἵπποι*) rather than as racehorses (*κελήται*), which were used in the open events that took place in the hippodrome.[132]

The final part of the equestrian competitions was divided into two sections, both of which took place (probably) on the same day in the hippodrome. In the first section, six events corresponding to those of the panhellenic programs were open to all. Judging from the lists of victors, many important figures competed in these six events, including royals like Ptolemy V Epiphanes, Ptolemy VI Philometor and his wife Kleopatra II, Eumenes II, and the princes Attalos, Philetairos, and Athenaios of Pergamon.[133] Some of the victors in the single-horse events are known: Prince Athenaios of Pergamon probably won the *keles* race of 178 B.C., for example,[134] and Herakleitos, the son of Antidoros, from Antioch near Daphne in Syria, was victor in the *keles* for colts in 166 B.C.; Demophon, son of Sosiphanes, from Antioch at the river Kydnos (Tarsos), was victor in the *keles* event of the same year, and a woman named Asklepiades, daughter of Philiskos, won the *keles* for colts in 162 B.C.[135] It is unlikely any of these competitors themselves gathered in Athens; instead, they would have used professional jockeys and charioteers. The last seven or ten races, which composed the second section, were open only to Athenian citizens and included just one ridden event, a long-distance (*πολύδρομος*) race of unknown length.[136] Eumenes II (d. 160 or 159 B.C.), king of Pergamon and an honorary citizen of Athens, was victor in this long-distance single-horse race in 162 B.C.[137] As in the Classical period, panathenaic amphorae were awarded as prizes for equestrian victories at Athens.

Cavalry-related events seem to have been a recurrent feature of Athenian festivals, including the Theseia and the Pythian festivals of the Hellenistic period.[138] Athenian inscriptions of the second quarter of the second century B.C. preserve knowledge of several of the equestrian events associated with a newly established Greater Theseia, a festival that honored the hero Theseus, mythic unifier of Attica.[139] In addition to armed races on horseback of two different lengths

and several other cavalry-related categories that correspond to events of the Panathenaic Games (discussed above), there were events for racehorses and a javelin throw on horseback that was open to all.[140] The known victors in all of these events all appear to have been local Athenian citizens. The Pythian games, an Athenian festival centered around bringing back sacred fire from Delphi to purify the city of Athens, included a series of equestrian events similar in character to the Panathenaic and Theseia festivals. A series of inscriptions on the Athenian treasury at Delphi lists the victors in this competition, all of whom appear to have been Athenians.[141]

During the Hellenistic period, it became common for kings to sponsor public festivals in honor of the royal house at their principal cities, as well as in the local *chora*. These festivals often included athletic competitions and equestrian events, and the format of the equestrian events seems generally to have followed the normal pattern of Greek festivals. The first such games known to have been instituted in Egypt were the Ptolemaieia, founded by Ptolemy II Philadelphos in honor of Ptolemy I Soter ca. 279–278 B.C. These games were held periodically in Alexandria, and when the festival year coincided with the Olympic games, they were said to be "isolympic" or equal to the Olympic games. Another Ptolemaic festival known to have included equestrian events was the Basileia, commemorating the birthday of Ptolemy II Philadelphos.[142] Seleukid kings are also known to have instituted public games. Antiochos IV Epiphanes (r. 175–163 B.C.) held elaborate games at Daphne near Antioch in 167 B.C., as did Antiochos VIII Epiphanes Philometor Kallinikos ca. 120–115 B.C.[143] Both of these festivals are likely to have included equestrian events held in the hippodrome at Daphne.[144] Public games were held in honor of Antiochos I Soter at Magnesia on the Maeander.[145] Games were also instituted by members of the Attalid dynasty, as well as in honor of them.[146] Two Delphic decrees ca. 166 and 162 B.C., written in response to ambassadors of Sardis, mention games instituted by Sardis in honor of Eumenes II and the goddess Athena Nikephoros that included equestrian events.[147]

Events on horseback continued to be popular at local festivals throughout the Greek world during the Hellenistic period; in fact, they are attested at more sites than at any other time. There is evidence for horse racing at several major regional sanctuaries, such as the Naia festival at Dodona in Epirus in the early third century B.C. and at Larissa in Thessaly, as well as the games of the Heraia at the Argive Heraion.[148] In Boeotia, equestrian events were featured at the Basileia festival at Lebadeia, the Herakleia of Thebes, and the Pamboeotia festival held at the sanctuary of Athena Itonia at Coronea.[149] Ordinarily, during the Hellenistic period, competitors in the local and panhellenic equestrian games appear to have been Greeks. However, a victor list from the games at Lebadeia of the second century B.C. ascribes victory to Poplios Likinios (Publius Licinius)

son of Poplios (Publius) of Rome in the *keles,* as well as in four chariot events of the same year.[150] Horse races are attested at Lykaion in Arkadia and on Delos.[151] Horse races were also held in association with festivals at Ambryssos in Phokis and Lete in Macedonia, although little is known about these local races.[152] While this is undoubtedly a very incomplete account, having been assembled from chance archaeological finds, the above records nonetheless verify the widespread popularity of horse racing in the Hellenistic period at a local as well as a panhellenic level.

The widespread phenomenon of Greek horse racing in the Hellenistic period most likely involved a wide variety of competitors. As in the Classical period, owners may have raced themselves, especially at local festivals. In many cases, as with the other athletic events, it is likely, however, that the jockeys and the horses they rode were professionals who trained year round and competed at many different festivals.

Very little evidence for single-horse racing is preserved in vase painting and sculpture of the Hellenistic period. Although horse-racing scenes do continue to appear on panathenaic amphorae,[153] the lack of representations on vases in general reflects more a decline in the painted pottery industry or a change in fashion than a lack of interest in horse racing. Agonistic equestrian scenes continued to be popular on coins, especially issues from Magna Graecia. Scenes associated with single horse races are much rarer than chariot scenes. A long series of issues from Taras (modern Taranto) illustrates several different types of *keles* scenes in which a victorious horse and jockey are being crowned. The jockey is sometimes shown crowning the horse, being crowned himself by a winged victory (Fig. 72) of the same type as the brand on the rump of the Horse from Artemision, crowning himself, or a combination thereof.[154] These issues begin in the late fifth century and continue at least through the Hannibalic occupation of Taras at the end of the third century B.C.[155]

Unlike in the case of the preceding periods, there are few ancient literary sources for sculpture of the Hellenistic era. Athletic sculpture continued to be produced, even if it was not one of the major art forms of this period, and a few large-scale bronzes actually exist (see Figs. 20.1–2, 56).[156] The evidence for equestrian agonistic sculpture, however, is even more limited. It consists primarily of fragmentary remains of sculptural monuments, mostly statue bases with dedicatory inscriptions, commissioned by victors in *keles* events. It is clear from this material that a variety of monuments continued to be produced, even if there is very little concrete evidence for the horse and jockey type that is attested in the Late Archaic and Classical periods.[157]

Large-scale bronze groups were commissioned to commemorate multiple victories at the games. An early third-century B.C. base for a sculptural group from Lindos lists the equestrian victories of Nikagoras of Rhodes. Although the base

FIGURE 72. Silver didrachm from Taras, ca. 272–235 B.C. Obverse, naked horseman crowned by Nike. Museum of Fine Arts, Boston, Gift of Mrs. George L. Batchelder, Jr., and Gordon Abbot (Res. 55.5). Courtesy Museum of Fine Arts, Boston. Reproduced with permission. © 1999 Museum of Fine Arts, Boston. All rights reserved.

is fragmentary and the exact nature of the group is not known, the inscription informs us that the monument was set up to commemorate victories in the *keles* at Olympia, Isthmia, Nemea, and the Pythian games at Sikyon, as well as victories in the chariot races.[158] Another large monument celebrates the victories of several family members from Elis in the *keles* and chariot races at Olympia in the first century B.C.[159]

Bronze statues of standing figures, most likely horse owners, were a common type of *keles* victor monument in the Hellenistic period. At least five examples are known from inscribed bases, all from Olympia. They span the early third century to the third quarter of the first century B.C., practically the entire Hellenistic period. One owner named Telemachos set up a bronze statue (of himself) to commemorate his victory in the *tethrippon* at Olympia and the *keles* at Delphi.[160] This statue was nearly life-size. Another, Thrasonides, set up a smaller bronze statue of himself on a column to commemorate his victory in the *keles polikos* in 216 B.C.[161] Three other victors from Elis erected similar monuments in commemoration of single victories in the *keles teleios* and *keles polikos*.[162]

Monuments of uncertain type are also known. Pausanias (6.15.2) relates that Pantarkes won in the *keles* at Olympia in 138 B.C. and erected a monument there. The marble plate for a large monument commissioned in honor of the victory of Kallippos Peisanos of Elis in the *keles polikos* was removed from a Byzantine wall at Olympia during the early excavations.[163]

The Greeks continued to race horses long after 31 B.C., and well into the Roman imperial period, but those races are beyond the scope of this study.

6

CONCLUSIONS

Sculptors of the Hellenistic Age created a wide variety of bronze statues, which were erected throughout the ancient Mediterranean region. Large-scale sculpture continued to be primarily religious or civic in nature, serving cultic, votive, commemorative, or honorific functions. The few existing bronze statues of the period are extraordinarily diverse; practically each one represents a different type. The Horse and Jockey Group from Artemision is demonstrably among the finest of these works preserved today. The statue group yields insight into the refined finishing techniques of Hellenistic bronze smiths. It provides evidence for a known but otherwise poorly represented athletic statue type, and is arguably a most evocative testimony to the widespread practice of horse racing, which was an integral part of the games held at panhellenic sanctuaries, as well as at many local festivals all over the Greek world.

Over the course of the past seventy years, the story of the discovery of the Horse and Jockey from Artemision and their archaeological context has frequently been confused or simply forgotten. Careful review of newspaper articles, brief archaeological reports, the narrative written by Nikos Bertos, the archaeologist in charge of the first systematic investigation of the Artemision wreck, and the logbook of his government vessel, the *Pleias,* provide a relatively clear picture of the unusual circumstances surrounding the statues' recovery and some indication of the ancient ship on which they were cargo. Although the two parts of the Horse were found separately and at a distance from each other both chronologically and topographically, I am convinced that they belong to the same statue.[1] It is also clear that the Jockey goes with the Horse. In addition to the clear thematic and even stylistic affinities between the two statues, several features strongly indicate that the Horse and Jockey belong together as a group:

the piece of drapery attached to the forepart of the Horse, the matching reins preserved in the Jockey's hands and at the base of the mane of the Horse, and the fact that the two statues were found together. The technique of both statues is compatible with this conclusion.

There are minor problems with the modern 1972 restoration. The Horse's right foreleg could not be repositioned without damage and should be higher, and the style of the tail seems too rigid. The Jockey leans too much to the left, and his right leg should turn in slightly like the left leg, because he is clearly goading the Horse with his spurs. However, on the whole, the restoration is excellent, and the flying gallop pose of the Horse seems completely justified. While no conclusive evidence, such as lead residue inside the rear hooves of the Horse, was found to suggest that the statues had been attached to a stone base in antiquity, this is a likely supposition.[2] The hind legs of the Horse would have been the primary supports for the statue, as is indicated by the greater thickness of the bronze in this area. Additional support in the midsection, as is seen in the modern restoration, was probably not originally necessary. Systematic examination and description of the statues document their state of preservation and have drawn attention to details previously unnoticed. Most significantly, wear marks on the surface of the Horse's head and a pin beneath its chin enable a reconstruction of the Horse's elaborate bridle, now lost.

Technical analysis of the bronzes yielded considerable information about their manufacture. Both statues were cast in sections by the indirect lost-wax process and pieced together by means of flow welds. Bertos recorded finding clay core material within the head of the Horse. This clay core was kept in place during the manufacturing process with iron chaplets, one of which is still preserved on the interior of the Horse's neck. Examination of the exterior and interior by means of a remote-controlled fiber-optic probe revealed many of the metallurgical joins. Small blemishes on the surface of the bronze were patched mechanically with hammered rectangular pieces of bronze. Larger blemishes were refinished with cast patches. The Horse's hooves were artificially patinated black and the Jockey's skin likely received similar treatment. The Horse's brand and the eyes of both figures were inlaid. Separate attachments included the Horse's bridle and the whip or goad that the Jockey held in his right hand. The fundamental manufacturing techniques are consistent with other Greek bronze statues that have been examined. The above technical analysis is supplemented with a chemical analysis of both statues that provides information about the composition of the metal, an unleaded tin bronze. This research, undertaken by Helen Andreopoulou-Mangou of the National Archaeological Museum in Athens, appears in the Appendix.

In addition to the early theory that the Horse is an Early Classical creation, the two statues have been dated from anywhere in the late fourth century B.C.

to the first century B.C., the entire span of the Hellenistic period. The inability of scholars to reach a consensus is symptomatic of the difficulty of dating Hellenistic sculpture that is not securely associated with a historical event or personage. The problem is compounded by the fact that it was particularly easy for a bronze sculptor to replicate earlier statues, entirely or in part, making dating by stylistic analysis alone particularly precarious. With these cautionary remarks in mind, the combination of classicizing features and exploded realism evident in both statues, an interest in depicting ethnic traits, and the well-executed centrifugal composition of the Jockey are most appropriate to a work dated to the second half of the second century B.C., according to our current understanding of trends in Hellenistic sculpture. As we shall see below, this broad dating can be more closely defined through a reexamination of the statues' archaeological context. The classicizing features and exploded realism suggest that neither statue is a true portrait, and that the Horse and its rider instead represent types.

Scholars have attributed the statues to a variety of sculptors, including Kalamis, Lysippos, and the Pergamene school. However, this author does not believe that it is possible to attribute the Horse and Jockey Group to any specific sculptor or workshop at the present time. Not enough original bronze works datable to the Hellenistic period are preserved to support this kind of detailed stylistic analysis.

Iconographic analysis supports the conclusion that the Horse and Jockey depict a horse-racing scene. Furthermore, the clear discrepancy in scale between the powerful Horse and its diminutive rider, the refined features of the Horse, and the Jockey's tack (notably the spur straps), as well as a sense of vivid determination, evoke the image of a thoroughbred, probably of mainland Greek stock, being raced by a professional jockey. The moment depicted may well be the very moment of victory, or just before the Horse crosses the finish line; in either case, the Jockey would be looking back at this crucial juncture in the race. The turn of the Jockey's head is a clever and successful way for the artist to insinuate the competitors close at hand without actually representing them. The archaizing pose of the Horse with its flying-gallop stance fits superbly within the known iconography of horse racing. It reflects the conservative nature of Greek athletic statuary, a phenomenon that has been documented for the Classical period,[3] if not recognized previously in this statue group of the Hellenistic period. However, it is difficult to know the artist's intentions for this specific style and iconography.[4] It is possible that the classicizing features of the Horse are a specific reference to the Parthenon sculptures and, by association, the glorious past of fifth-century Athens or more generally Classical Greece. Certainly, by way of an old-fashioned pose and the overt classicizing features of the Horse, the sculptor has placed great emphasis on tradition. At the same time, however,

the Horse's fine features and taut physique, and the more daring, intense, windswept rendition of the Jockey suggest a date for the Artemision Group in the second half of the second century B.C. The sculptor evokes tradition and adapts it in a highly dramatic way.[5]

A survey of the evidence for ancient Greek horse racing shows that it was a popular aristocratic sport practiced by Greeks all over the Hellenistic world at the panhellenic games and many local festivals. While there were a variety of horse races, including many associated with cavalry, the *keles* event held at the panhellenic games and other major sanctuaries was the competition where young professional jockeys were often used. It is surely this event that is being represented in the Horse and Jockey Group.

Scholars have been uncertain as to how to read the subtle features of the Jockey's physiognomy. A correct assessment is crucial, however. The Jockey from Artemision could be the son of the owner of the Horse, but the combination of his prominent Ethiopian facial features (and black skin) and Greek hairstyle indicates that he is of mixed heritage. He is, therefore, more likely to be a professional or trained servant than a member of the Greek aristocracy. Black Africans, or Ethiopians, as the Greeks called them, were considered to be particularly good with horses, and it may be this quality that is evoked in the Ethiopian features of the Jockey. As a representation of a mixed ethnic type, the Artemision Jockey is an important and rare artistic example of a phenomenon that was known to occur in ancient Greece as early as the middle of the fifth century B.C.,[6] which must have become more common in the Hellenistic period. Greek artists had rigid conventions for depicting non-Greeks. Examples of African-Greek mixed types may occur in art as early as the fifth century B.C., but they are exceedingly rare in the Classical period.[7] The unusually vivid mixture of ethnic traits in the Artemision Jockey reflects an awareness and acceptance of the cosmopolitan world of contact, exchange, and interracial connections that existed in the Hellenistic period. The assimilation of foreigners, particularly Ethiopians, into Greek culture is expressed in other works of Greek art at this time. A particularly fine example can be seen in a bronze statuette of an Ethiopian in the Museum of Fine Arts in Boston (Fig. 73).[8] The boy is draped in a Greek himation and represented in the pose of a Greek orator, a stance very similar to the statuette of a philosopher in New York (see Fig. 17). The image presents its subject with sympathetic interest and dignity, and in this way is comparable to the Artemision Jockey. Another example of a related type, thought to be a work of the Late Hellenistic period, is the large-scale statue of an African boy found in the sea off the coast of Turkey and now in the archaeological museum at Bodrum.[9]

What is the best interpretation for the original function of the Horse and Jockey Group from Artemision? Three ancient contexts seem possible: funer-

FIGURE 73. Bronze statuette of an Ethiopian youth, ca. 150–50 B.C. Museum of Fine Arts, Boston, J. H. and E. A. Payne Fund, 59.11. Height 8 cm. Courtesy Museum of Fine Arts, Boston. Reproduced with permission. © 2000 Museum of Fine Arts, Boston. All rights reserved.

ary, decorative, or dedicatory. The larger scale of the Horse might support the theory that the group is a funerary monument to a famous racehorse. While racehorses are known to have been given elaborate burials on occasion in the Classical period,[10] this appears to have been the exception rather than the rule. Large-scale bronze funerary memorials are rare in any case for people, much less animals.[11] Perhaps more indicative of the fate of old racehorses in the Hel-

lenistic period are the poems cited in Chapter 5 above (*Anthologia Graeca* 9.19–21). Furthermore, there is no clue in the sculptures today to support their identification as a funerary monument, although an epigram could have made this clear. Certainly, the group has none of the somberness apparent in most Greek funerary sculpture. If one accepts a late date for the statues, it is possible (although unlikely) that it was created for a decorative purpose, possibly even for a Roman customer.

On the basis of the existing evidence, the best interpretation is that the group was set up in a sanctuary to honor one or more victories in horse races. Although practically no examples survive, it is apparent from literary and epigraphic *testimonia* that statues of horses with jockeys, frequently made of bronze, were erected in honor of victories in the horse races as early as the Late Archaic period and throughout the Classical period. The Horse and Jockey Group from Artemision appears to be an example of this type from the Hellenistic period. The scale of the monument, which is, including the Horse, slightly under life-size, is also consistent with a victor's dedication. Since athletic statuary continued to be produced in the Hellenistic period, there is no reason why the horse and jockey type would not have continued, especially with the enlargement of the equestrian programs at the panhellenic games and elsewhere.

It is notable that there appears to be no place for the representation of the owner in the Artemision Group. This is in contrast to the numerous examples of statues of owners from Olympia that commemorate victories in the *keles* event at the Olympic games in the second and first centuries B.C. The statue group is best seen from the side views (Pls. 1–2), which must have been the most important views when the monument was set up. These views are entirely appropriate to a spectator watching a horse race. Thus the artist, in a way, returns the ancient spectator, who would have seen the dedication in a sanctuary, to the climactic moment of the race in the hippodrome. Unlike a portrait of the owner-victor, the Artemision statue group evokes the spirit of competition and the race itself. Certainly, there was good reason for the owner to choose a lavish monument that did not include a representation of himself, although his (or her) name would have appeared prominently on the base of the statue group, probably along one of the long sides. Perhaps the victor and owner was a city-state or the monument was erected posthumously by a city-state or relative. Or it may have been considered inappropriate for owners to represent themselves on agonistic equestrian victory monuments in some city-states during the Hellenistic period. After the Roman conquest of parts of Greece in the second century B.C., perhaps there were political reasons not to represent oneself, even in a sanctuary dedication. To be sure, there could be political motivations behind the erection of athletic victory dedications.[12]

Chapter 5 shows that Greek royalty competed in the games. Given the large

size of the monument and the high quality of the sculpture, the patron who commissioned the Horse and Jockey Group may well have been a member of a royal family or a wealthy Greek aristocrat.[13] The size and high quality of the sculpture make it likely that the statue group was erected in honor of victory in one or more of the panhellenic games. However, without the base on which they were affixed, which would have carried the dedicatory inscription listing the victory, or victories, and name of the owner, it is not possible to determine with any greater degree of certainty who erected the dedication.

The archaeological context and the bronzes themselves do offer some clues to the history of the Artemision Horse and Jockey Group in antiquity and perhaps even their original location. Several late Hellenistic shipwrecks carrying cargoes of sculpture are now known: the Antikythera shipwreck in Greek waters, the Mahdia shipwreck off the coast of Tunisia, and the Artemision shipwreck.[14] To these can be added the bronzes found in Piraeus harbor, which appear to have been crated and ready for shipment by sea when the building they were in was destroyed, probably during Sulla's sack of Piraeus in 86 B.C.[15] Another first-century B.C. shipwreck near Golfe Juan off the coast of France carried a cargo of high-quality Greek metalwork, especially *klinai* attachments and bronze vessels, as well as 300 amphorae of wine.[16] Recent studies of the Mahdia wreck, the most thoroughly studied of the shipwrecks, have suggested that the ship originated in Piraeus and that the cargo of sculpture was destined for the art market in central Italy when it was blown off course toward North Africa.[17] Some of the large-scale works clearly appear to be plunder, since they reveal signs of previous installation on statue bases. It is likely that the Artemision bronzes were also plunder of some kind. The existence of the Early Classical bronze god (see Fig. 26) suggests a cargo of sculpture that had already been erected somewhere, most likely at a sanctuary. Although we cannot be certain that all the Artemision bronzes were taken on board at the same point of origin, the series of large hammered patches that have been interpreted as repairs would also support the idea that the Horse and Jockey Group had previously been set up.

The date of the Artemision shipwreck can be roughly approximated by the pottery on board to between the second and early first century B.C.[18] Furthermore, the lead-lined hull, which appears to have been a common feature of Late Classical, Hellenistic, and Early Imperial ships, but does not occur in later periods, corroborates this date. It has been argued above that the stylistic features of the Horse and Jockey are most appropriate to a work dated to the second half of the second century B.C. Can we improve on this rather broad stylistic date? I believe that we can. Scholars have suggested various scenarios for the route of the ship, its origin, and its final destination. According to one theory, the statues were plundered from a sanctuary in northern Greece, such as Deme-

trias in Macedonia or Larissa in Thessaly, and when it sank in a storm off Cape Artemision, the ship carrying them was traveling south, possibly headed for the Roman art market.[19] In another scenario, the ship stopped to pick up its cargo at the Sanctuary of Artemis, near the wreck site.[20] While these theories help to exhibit the wide range of conceivable interpretations, all are pure speculation. For certain, the location of the shipwreck within the Trikiri channel north of Euboia suggests a northerly route. Delphi, the closest of the panhellenic centers, and places like Dion and Larissa are quite possible points of origin, but still unprovable.[21] The pottery from the Artemision shipwreck, however, provides an important clue that requires explanation. The few identifiable pieces are East Greek skyphoi, most likely of Pergamene manufacture. Such small finds on shipwrecks are usually taken to be items belonging to the ship's crew and, consequently, indicative of the ship's origin. Therefore, this East Greek pottery strongly suggests that the ship's owner and crew were from a Greek settlement in western Asia Minor, most likely Pergamon. The ship could have been on its way to or from Pergamon. Indeed, Moreno has suggested the latter, since he believes that the Horse and Jockey were set up at Pergamon.[22] However, while there were certainly many ships traveling between northern Euboia and the west coast of Asia Minor, a strong circumstantial case can be made for the Artemision ship having been on its way *to* Pergamon. In fact, there is a known historical event that would explain the East Greek crew, the precious cargo of plundered art works, and the ship's northerly route along mainland Greece. In 146 B.C., the senatorial consul Mummius and his armies sacked Corinth. Mummius, a great lover of Greek art, took many of the city-state's statues for himself and brought them to Rome. Pausanias relates that Mummius also gave some other pieces of the sculptural booty to his first general, Attalos, who shipped it back to Pergamon.[23] Pausanias actually saw some of this booty at Pergamon during his travels in the second century A.D.[24]

It is very likely that the Artemision shipwreck was one of the ships carrying booty from Corinth for Attalos that did not make it back to Pergamon.[25] If so, this would provide a *terminus ante quem* for the Horse and Jockey of 146 B.C. and by the above stylistic analysis place the Artemision Group ca. 150–146 B.C., about a quarter of a century earlier than most scholars have dated the group in recent years. As we have seen, however, this dating is completely compatible with the stylistic features evident in the statues. Such a date also fits well with the lavishness of a monument more likely to have been commissioned at a time when horse racing was at its height and royalty from many of the different Hellenistic kingdoms were still competing in the panhellenic games. The year 146 B.C. marks a significant turning point for Roman occupation of the East, when many of the Hellenistic kingdoms fell into decline.[26] Macedonia had become a Roman province, and by the end of the third quarter of the second century B.C.,

the Seleukid and Attalid dynasties had effectively ended, giving way to unstable monarchies and Roman domination.[27]

The Horse and Jockey Group from Artemision is a fitting testimony to the Greek sport of horse racing in the middle of the second century B.C. The monument appeals to the sport's popularity, recalling as it does the climax of an actual *keles* event. For us today, the sculpture also reveals many other facets of Hellenistic Greek culture. The most important is the racial integration of Ethiopians into Greek society and the skill with which the artist has represented this through the Jockey's physiognomy. Indeed, the Artemision Jockey is the finest extant example of a person of Greek and Ethiopian decent in Greek art. The statues themselves provide a glimpse of the excellence achieved by Hellenistic bronze sculptors in athletic sculptural dedications commissioned by members of the highest level of Greek society.

Appendix

CHEMICAL ANALYSIS AND METALLOGRAPHIC EXAMINATION

Helen Andreopoulou-Mangou
Chemistry Laboratory, National Archaeological Museum, Athens

The Horse and Jockey Group (Museum inv. no. 15177) was found under the sea at Cape Artemision, Euboia, and is dated to the Hellenistic period, perhaps ca. 150–140 B.C. There has been a long-standing controversy over whether or not the Horse is of an earlier date than the Jockey.

The following scientific analyses supplement the technical analysis presented in Chapter 3. Chemical analysis of samples taken from both Horse and Jockey indicate the types of copper alloys used for their casting. The alloys of the Horse and Jockey are distinct but similar. Interestingly, both works are unleaded tin bronzes, which attests to the continued use of this alloy for large-scale statuary in the Hellenistic period. Metallographic examination of the Horse shows the microstructure of the cast copper alloy as well as of the final finishing surface treatment applied.

SAMPLING

The samples were taken from two different places, which represent two separate cast parts of the group. Sample no. 1, as a small piece, was cut from the large metal body fragment on the proper left side of the Horse, near where the Jockey's lower shin now rests, when this piece was taken off the body of the Horse during the last restoration of the group (in February 1994). Sample no. 2, as filings, was taken with a tungsten carbide drill of two-millimeter diameter from the bottom of the Jockey's tunic, proper right side, at the same time that the first sample was taken.

A tiny piece cut from sample no. 1 was used for the metallographic examination. It was embedded in acrylic resin and ground using silicon carbide paper and alumina paste. For scratch-free final polishing, diamond paste (ca. 2.5 μm

diameter) was used with a velvet cloth. The etching solution was an alcoholic $FeCl_3$. The examination was made under a Nikon model MS metallographic microscope in the Chemistry Laboratory of the National Archaeological Museum at Athens (Mangou and Ioannou 1997: 60–63).

METHOD OF ANALYSIS

The samples were analyzed in the Chemistry Laboratory of the National Archaeological Museum at Athens by means of the Atomic Absorption Spectroscopy (AAS) technique in a Perkin-Elmer spectro-photometer (model 5000). The samples were dissolved in aqua regia, and the elements determined were Cu, Pb, Zn, Ag, Fe, Ni, Co, Au, and Bi in an oxidized flame of acetylene-air; Sn in a reduced flame of acetylene-N_2O; and As and Sb in a graphite tube (HGA 500) (Mangou and Ioannou 1997: 60–63).

CHEMICAL COMPOSITION

The following table gives the percentage chemical composition of the two samples:

Element	*Sample no. 1*	*Sample no. 2*	*Element*	*Sample no. 1*	*Sample no. 2*
Cu	87.98	88.26	**Ag**	0.01	0.01
Sn	9.47	10.17	**Fe**	0.08	0.68
Pb	not detected	0.17	**Ni**	0.02	0.06
Zn	0.01	0.02	**Co**	0.04	0.27
As	0.04	0.05	**Au**	0.20	0.21
Sb	0.03	0.03	**Bi**	0.06	0.06

Recalculation of the percentages to 100.00 was not done. The sum of the percentages is not 100.00 owing to the inevitable presence of corrosion products in the samples taken and to the accuracy of the method of analysis (ca. ±2%).

METALLOGRAPHIC EXAMINATION

The metallographic examination of the tiny piece taken from the Horse showed the typical microstructure of cast tin bronze alloy (Cu-Sn) (Figs. A1 and A2). The black areas result from holes (air bubbles) embedded during casting, as well as from corrosion. Fig. A3 shows the final mechanical treatment applied to the surface (casting skin) to eliminate casting imperfections. The lines imprinted on the bronze crystals probably result from abrasives applied in various directions.

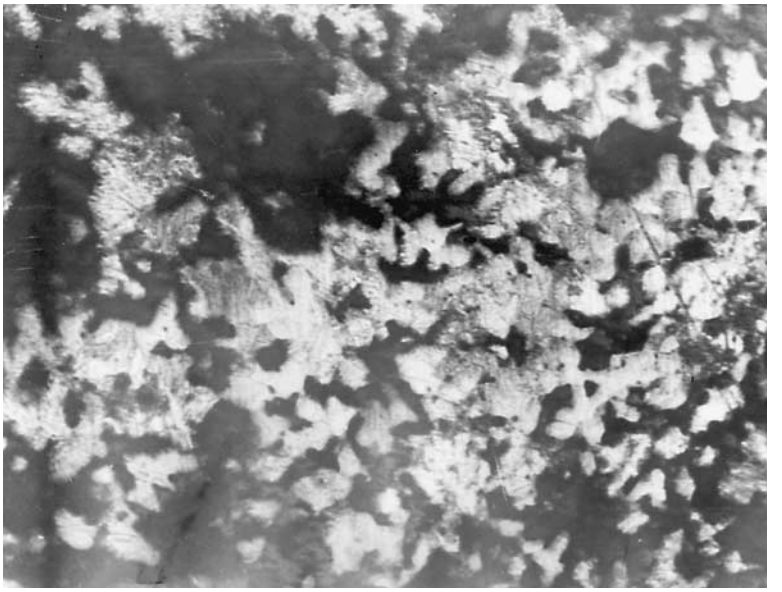


FIGURE A1. Horse, sample no. 1. Metallographic cross section, magnified 75×. Photo by Dr. H. Andreopoulou-Mangou.

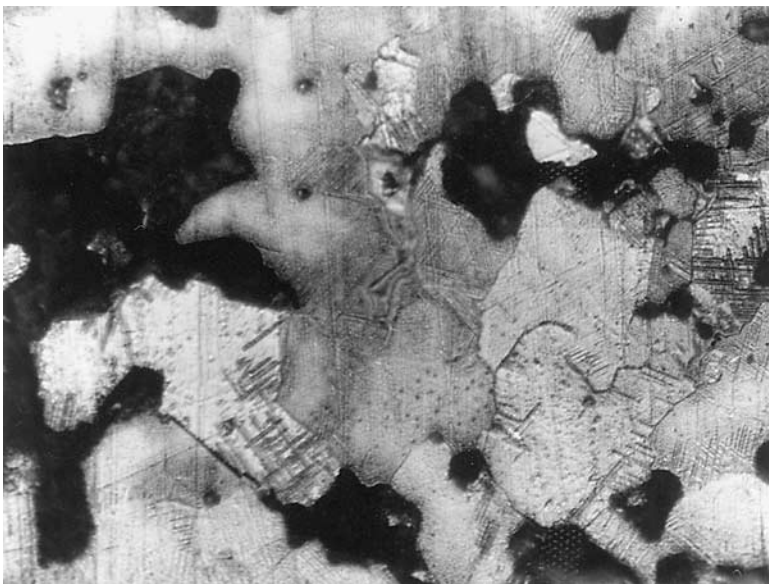


FIGURE A2. Horse, sample no. 1. Metallographic cross section, magnified 300×. Photo by Dr. H. Andreopoulou-Mangou.

FIGURE A3. Horse, sample no. 1. Metallographic surface section, magnified 300×, illustrating the final intensely polished cold-worked microstructure. Photo by Dr. H. Andreopoulou-Mangou.

CONCLUSIONS

The chemical analysis of the two samples showed that both parts of the group were made from normal tin bronzes (copper alloys Cu-Sn), with a tin (Sn) content of 9.47% for the first sample and 10.17% for the second.

These copper alloys have slightly lower melting points than pure copper (1083 °C) and absorb fewer gases during casting than molten copper, thus enabling them to flow more freely through the molds. It is an important advantage for the cast metal (here the normal bronzes) to be kept liquid for as long as may be necessary to fill the mold without being weakened and disfigured with blow-holes. Furthermore, normal tin bronze is superior to copper in its mechanical properties (e.g., hardness, tensile strength). On the other hand, tin bronze with more than 15% tin (Sn) is unsuitable for statuary because of its increasing brittleness.

Sample no. 1 has no lead (Pb), while sample no. 2 has lead at a minor level (0.17%). This means that the tin bronzes were not supplemented by lead, which lowers the melting point of the copper alloys still further, improves their fluidity through the molds, and allows the metal to be worked more easily in the cold state with files, chisels, and even saws.

Comparison of the chemical composition of the Horse with that of the Jockey shows that both parts of the group were made from unleaded tin bronze. The differences in the percentage concentrations of the elements Fe, Pb, and Co may well indicate that a different origin copper or a different batch of tin bronze alloy was used for the casting.

In a number of studies (esp. Haynes 1992: 87), it has been stated that a composition of unleaded tin bronze was mainly used for Archaic and Classical (pre-Hellenistic) statues, although leaded tin bronze was widely used for statuettes during these periods (Craddock 1977). From the end of the fourth century B.C., statues of leaded tin bronze appeared on the Greek mainland, and leaded tin bronze became the rule during the Roman empire. The foregoing chemical analysis of the Horse and Jockey indicates, however, that unleaded tin bronze was still used by the Greek craftsmen for casting statuary during the Hellenistic period.

NOTES

CHAPTER 1. HELLENISTIC BRONZE STATUARY: AN INTRODUCTION

1. In any case, such an overview would not be possible given the paucity of extant Hellenistic bronze statues. Recent general surveys of Hellenistic sculpture include Fuchs 1979; Pollitt 1986; Smith 1991; Stewart 1990; and Moreno 1994. Earlier studies include Lawrence 1927; Bieber 1955; Bieber 1961; Havelock 1971; and Charbonneaux 1973. There are also studies of particular periods (e.g., Ridgway 1990, 2000, 2002), regional schools of sculpture (e.g., Palagia and Coulson 1998), and particular styles as well as individual monuments (Mattusch 1997).

2. For a more complete account of the Hellenistic period, see Green 1990. And see also Stewart 1988: 35; Gruen 1984.

3. For a collection of the primary ancient literary sources for Hellenistic sculpture, see Pollitt 1990: 108–23.

4. Sculptural and painted representations of people reading became quite popular in the Hellenistic period. See Zanker 1995: 194–97.

5. Chemical analyses of existing Greek and Roman bronzes have shown that lead, which lowers the melting point of the alloy, was also commonly added to tin bronzes during the Roman period. For a discussion of the chemical composition of the Horse and Jockey Group from Artemision, see the Appendix to this book.

6. On Greek statuettes of the Hellenistic period, see Thomas 1992: esp. 120–52.

7. See Cellini [1910] 1949: 366–68, bk. 2, chs. 76–77. One example of a statue cast in one piece is Cellini's statue of Perseus with the head of Medusa, now in the Loggia dei Lanzi in Florence (see Pope-Hennessy 1985).

8. While very few master models survive from antiquity, one likely example is a fragmentary Classical Greek standing female figure made of terra-cotta, now in the Metropolitan Museum of Art, New York, Rogers Fund, 1906, inv. no. 06.1151 (Ling 2000: 41, fig. 19). See also Chapter 3, n. 86 for further discussion.

9. One example is the Apollo Belvedere, which many scholars believe reflects a work of the Early Hellenistic period. For a discussion of this statue and the type, see Ridgway 1990: 93–94. For the plaster cast fragments from Baiae, see Landwehr 1985: 104–11.

10. Mattusch 1996: 141–90; *Fire of Hephaistos:* 259–62.

11. For two more examples of a bronze series production, dating to the Late Hellenistic period, see Bothmer 1990: no. 136, 188–90.

12. Large bronze sleeping Eros from Rhodes: Metropolitan Museum of Art, New York, inv. no. 43.11.4. Mertens 1985: 52–53, no. 34. For the type, see Söldner 1986: 11–75, 605, cat. no. 17. Smaller version in bronze: Metropolitan Museum of Art, inv. no. 13.225.2. Richter (1915: 90–91, cat. no. 132; 1922: 160, fig. 100) and Bieber (1955: 145) consider it a Hellenistic work. Söldner (1986: 604, cat. no. 16) dates the piece to the Roman period. It is likely a Roman version of a Hellenistic type.

13. Musée du Louvre, Br. no. 2. See Ridgway 1967a: 43–75.

14. National Archaeological Museum, Naples, Pompeii inv. no. 22924. Mattusch 1996: 139–40, pl. 5.

15. Ridgway 1967a: 62, 71.

16. Piraeus Museum, inv. no. 4645. Palagia 1997: 177–95.

17. Palagia 1997: esp. pp. 180–83. Mattusch (1996: 140) also leans toward seeing the Piraeus Apollo as a reflection of the Archaic style rather than "an Archaic work."

18. See Zimmer 1990: 84–118. For Rhodes, see now also Zimmer 1999, 2000.

19. Higgins 1988: 124–37.

20. Haynes (1992: 121–28) makes a strong argument for the statue being cast in successive stages rather than being made of sheet metal, as has been argued by some scholars. See Ling 2000: 120, fig. 63.

21. On earlier statue groups of marble and bronze, which tended to be much more static, see Schanz 1980. On statue groups of the Late Hellenistic period, see Kell 1988.

22. For a thorough discussion of the Granikos monument, see Calcani 1989; for a compilation of the literary sources, see Stewart 1993a: 388–90; and see ibid.: 270–77 and Chapter 3 below on the Krateros monument (see Fig. 58).

23. British Museum, inv. no. GR 1868.5–20.65 (Burn 1991: 131, fig. 111).

24. See Mattusch 1999: 75–82; 1996: 141–90.

25. One example is the hanging Marsyas known from fifty-nine copies in a variety of sizes and media. For a discussion of issues pertaining to the original work, or, as is most likely in this case, at least two different original works, and the copies and supposition that the original Marsyas compositions were of bronze, see Weis 1992: 19–34.

26. Ridgway 1990: 275–312; Stewart 1990: 205–7, pls. 667–75.

27. The original statue is believed to have been made of bronze. See Himmelmann 1981: 195; Smith 1991: 138; Ridgway 1990: 332–37.

28. On the issue of Greek and Roman copies, see Ridgway 1984, 1989; Marvin 1989.

29. We have many more statue bases for Hellenistic bronze statues than the statues themselves. On Hellenistic statue bases, see Schmidt 1995.

30. Even as the subject matter of sculpture became increasingly decorative in the Late Hellenistic period, it is probable that almost all of it was displayed under the guise of domestic religious dedications. See Harward 1982. One example of a popular type that became essentially decorative is the crouching Aphrodite, which would have been made in bronze as well as marble.

31. Faulstich 1997: 177.

32. Damaskos 1999: 201.

33. British Museum, inv. no. GR 1873.8–20.1 (Bronzes 266). The head is usually dated on a stylistic basis to the second century B.C. See Walters 1899: no. 266 and fig.

3; Burn 1991: 128–29. The head was found together with other fragments of more than one statue. See, e.g., Lightfoot 1998: 274, fig. 22.1. Very little is known of Hellenistic Satala, and the site awaits future archaeological exploration. It was among the many places looted of its monuments, including its bronze statuary, by the emperor Constantine in ca. 330 A.D. (Foss 1976: no. 6, pp. 107–8). I am grateful to Chris Lightfoot for this reference. Ridgway (1990: 324) believes that the head cannot be earlier than the Augustan period.

34. See, e.g., two gilt bronze wings thought to belong to a figure of Nike that once stood in the hand of the monumental cult statue of Athena in the temple of Athena Polias at Priene (Faulstich 1997: 57). See also Wiegand and Schrader 1904: 111; Carter 1983: 212–13, 221–23, 247–49, pl. xxxvii, a–d. The gilded bronze Nike would have stood about 1.1 m high. The throne of the cult statue of Zeus Ammon in Ai Khanoum, dated to the first half of the third century B.C., and housed in a temple built between the late fourth and the middle of the second century B.C., was decorated with wood, ivory, and bronze (Faulstich 1997: 103).

35. Smith (1988: 15, n. 6) cites a cult statue of Lysimachos from Priene. Cult images of rulers usually were not located within their own temples, but outside or within the temple of a god or goddess.

36. Madrid Diadochos: Museo del Prado, inv. no. 99. The head is from the Odescalchi Collection in Rome, with no earlier provenance. It is broken off at the lower neck and stands 45 cm in height. See Schröder 1993: 75–77, with previous bibliography; Kreikenbom 1992: esp. p. 21; Brown 1995: 63–64, 70, pl. 43, fig. 41a–b. Mantua Ptolemaic queen: Kyrieleis 1975: no. L3, pp. 182, 105–12, pls. 92, 93.1–2, 94.1. Kyrieleis identifies her as Arsinoë III, a portrait datable to the late third century B.C.

37. The so-called Ierapetra Youth in the Herakleion Archaeological Museum has been interpreted as a Late Hellenistic funerary statue (Raftopoulou 1975: 28). However, this theory is not supported by any archaeological context. It is much more likely that the statue is an honorific image of an individual that was erected in a public area, such as an agora or gymnasium.

38. See Rice 1999: 270.

39. See Diogenes Laertius 6.35 and *IG* II^2 555, 13–14; Smith 1988: 16. A drachma was a typical day's wage for the average worker.

40. See Pape 1975: 12–14.

41. See Marvin 1989: 29–45. Examples of ancient bronze copies of bronze statues are rare. One demonstrable piece is a male torso in the Metropolitan Museum of Art, New York, inv. no. 20.194, a Hellenistic or, more likely, Roman copy of a Greek statue of the early fifth century B.C. See Mattusch 1996: 198–201.

42. This material awaits conservation and final publication. For a preliminary discussion, see Mattusch 1997: 13; De Palma and Fiorentino 2002: 175–81. For the identification of the statue of the Hellenistic Prince as Aemilius Paullus, see Moreno 1998: 222–24.

43. Bodrum Museum, inv. no. 756. The statue, the lower part of which is missing, was recovered from the sea near Bodrum in 1963. The preserved height is 47 cm. A standing, draped African boy with short curly hair extends his left hand toward the viewer. It is usually dated to the Late Hellenistic period. See *Art Treasures of Turkey:* no. 145, p. 93, pl. 145.

44. Izmir Museum of Archaeology, inv. no. 3544. See *Art Treasures of Turkey:* no. 130, p. 91, pl. 130; Ridgway 1967b; Ridgway 1990: 251–52, pls. 125a–b.

45. National Archaeological Museum, Athens, inv. no. 15118. See Rhomaios 1924; Ridgway 1997: 343–44, pls. 84a–c, p. 360, n. 38, with previous bibliography; Mattusch 1997: 15–16, fig. 12.

46. J. Paul Getty Museum, Malibu, inv. no. 77.AB.30. See Viacava 1994; Mattusch 1997, with previous bibliography; and, for a technical study, Podany and Scott 2000: 178–91.

47. Other identifications have also been proposed, including Aeolus, god of the winds.

48. See Palagia 1997: 177–95.

49. Olympia Archaeological Museum, inv. no. B 2001. Bol 1978: no. 223, pp. 50–52, 119–20, pls. 42–47.

50. Since bronzes were also intentionally destroyed in antiquity, damage can be deliberate as well as accidental.

51. Albright-Knox Art Gallery, Buffalo, N.Y., George B. and Jenny R. Mathews Fund, inv. no. 53: 1. Height of the Artemis 0.92 m. Height of the base 0.318 m. See *Fire of Hephaistos:* 274–82, pl. 5, no. 35. The statue is usually dated on a stylistic basis to the Late Hellenistic period and is said to have been found in Rome.

52. Saint Louis Art Museum, museum purchase, inv. no. 36: 26. See *Fire of Hephaistos:* 237–42, no. 25. While this identification is uncertain, since no clear attributes besides the crown are preserved, it is a likely possibility. The bronze, which comes from Egypt, exhibits a dark black patina that may well have been intentional.

53. *Fire of Hephaistos:* 266–74.

54. Bardo Museum, Tunis, inv. no. F 106. See Söldner 1994: 399–429.

55. Bardo Museum, Tunis, inv. no. F 107. See Mattusch 1994b: 431–50; Harward 1982: 148. Another bronze version of the Mahdia herm exists in the J. Paul Getty Museum, Malibu, inv. no. 79.AB.138. See *Fire of Hephaistos:* 186–91, no. 3, with previous bibliography.

56. Camp 1986: 97–100, fig. 72; Mattusch 1994a: 73–82.

57. Camp 1986: 163–64.

58. Metropolitan Museum of Art, New York, inv. no. 1972.11.1. Himmelmann 1981: 205–7; Mitten and Kozloff 1988: no. 22, pp. 137–41. Alternative identities have also been proposed, including the Classical Greek sculptor Pheidias. The diptych, an ancient sketchbook, tucked into the figure's belt is a particularly revealing detail.

59. Mercando 1991: 41, fig. 53; Gabucci 1999: esp. 4–6. A large-scale bronze satyr in the Antikensammlungen in Munich has also been dated to the Hellenistic period. See Lawrence 1927: 17, pl. 22b, who suggests a date in the middle of the third century B.C. Ridgway questions whether large-scale statues of satyrs were truly made in the Hellenistic period (Bulloch et al. 1993: 233).

60. A monumental bronze statue of Alexander has recently been published, although the author argues that it is a Roman copy dating to the second half of the second century A.D. (Kunze 2000: 11, 31). For Alexander's imagery in statuary, see Stewart 1993a: 43–70, 380–414, 421–31.

61. See Svenson 1995. For a discussion of the types, see Smith 1988: esp. 46, n. 2; 1993: 208–10. There has been a great deal of scholarship on Hellenistic ruler portraits

in recent years. See also Fleischer 1991; Hintzen-Bohlen 1992; Brown 1995; Bringmann and von Steuben 1995; Bergmann 1998; Fröhlich 1998.

62. The armored statue, both on foot and on horseback, had specific military connotations and does not seem to have been as popular in the Hellenistic period as it became in imperial Roman times (Smith 1991: 19). Ridgway (Bulloch et al. 1993: 240) has pointed out that we have so little extant statuary that this may be a misconception.

63. Museo Nazionale Romano, Rome, inv. no. 1049. See Himmelmann 1989: 126–49; Ridgway 2000: 305–9, 313, pls. 72a–b.

64. Another statue of this type is a bronze torso from Tarsus, alternatively identified as a late fourth century B.C. or later Hellenistic work, that entered the collection of the National Archaeological Museum in Istanbul in 1875. Devambez thinks it is an original work of the fourth century B.C. (Devambez 1937: 51–56, esp. 56, pls. XIII–XIV). D. M. Robinson sees the torso as a Hellenistic variant of the athletic statue by Polykleitos known as the Cyniscus (Robinson 1936: no. 35, p. 149).

65. Bothmer 1990: no. 173, pp. 238–40.

66. Rolley 1983: 44–45, fig. 24 and cat. 211; 1988: 88–94; Nenna 1998: cat. no. 28, p. 62.

67. Bastan Museum, Teheran, inv. no. 2477. Smith 1988: 173, no. 95; Stewart 1990: 218, pl. 768. A Late Hellenistic statue of a local ruler is known from the same sanctuary. See Smith 1988: 173, no. 96.

68. J. Paul Getty Museum, Malibu, inv. no. 73.AB.8. Smith 1988: 163. On Seleukid portraiture, see also Fleischer 1991.

69. Shear 1971; Camp 1998: fig. 30; Houser 1987a: 255–81.

70. Metropolitan Museum of Art, New York, inv. no. 55.11.11. *Search for Alexander,* no. 46, p. 123.

71. See, e.g., the Granikos monument discussed above or the victory monument of Aemilius Paullus at Delphi, erected in 168/7 B.C. Aemilius Paullus was a Roman senator whose army won the battle of Pydna, ending the third Macedonian war; the victory monument at Delphi, a tall base crowned by a bronze equestrian figure, was made by Greek sculptors (Schmidt 1995: 643, fig. 183; Stewart 1990: 220–21). A large-scale bronze horse from Trastevere in Rome and now in the Palazzo Conservatori Museum may also be a Hellenistic work. Bergemann (1990: cat. no. P50, pp. 103–5) dates it to ca. 100 B.C. Calcani (1989: 111–12) dates it to the fourth century B.C., and most recently Presicce has argued for a mid-fifth-century B.C. date (Presicce and Touchette 2002: 75). The fragments of a Macedonian rider discovered in the sea near the island of Kythera, also discussed above, are part of another equestrian statue type that may have been commissioned by nonroyal patrons.

72. Kyrieleis 1975: no. L3, p. 182, 105–12, pls. 92, 93.1–2, 94.1.

73. Museum of Fine Arts, Boston, C. P. Perkins Collection, inv. no. 96.712. See *Fire of Hephaistos:* no. 40, pp. 296–98, with previous bibliography.

74. Ackland Art Museum, University of North Carolina, Chapel Hill, Ackland Fund, inv. no. 67.24.1. See *Fire of Hephaistos:* no. 37, pp. 284–88; Smith 1988: no. 42, p. 163.

75. See Thompson 1996: esp. 21–44.

76. Fundamental references for the study of Greek portraiture are Richter's (1965) three-volume work and the abridged edition edited by R. R. R. Smith (Richter 1984). See also Fittschen 1988: 393–406, with previous bibliography.

77. There are several different fictional portraits of Homer, including a blind type that originated in the Hellenistic period (Richter 1984: 147–50). The only extant large-scale bronze identified as Sophokles, usually dated to the Late Hellenistic period, is the Arundel head in the British Museum, inv. no. Bronze 847 (Richter 1965: 131–32, figs. 708–10; Richter 1984: 209; Burn 1991: 133, fig. 114).

78. The portrait is known in about fifty copies, including three statues, of which the one in Copenhagen is the most important. See Richter 1984: 109–13.

79. On portraits of philosophers, see Hoff 1994; Schefold 1997; Sgobbo 1972; Zanker 1995.

80. On miniature copies, see Bartman 1992.

81. Metropolitan Museum of Art, New York, Rogers Fund, 1910, inv. no. 10.231.1. See Kozloff and Mitten 1988: no. 26, pp. 154–59.

82. The veiled female figure in the Ackland Art Museum discussed above is one possible fragmentary example, if it is not a deity. The recent discovery off the island of Kythera is another possible example.

83. Metropolitan Museum of Art, New York, inv. no. 1972.118.95. See Thompson 1950: 371–85; Kozloff and Mitten 1988: no. 14, pp. 102–6, for discussion and previous bibliography. See also Ridgway 1990: 219–21.

84. Bruns-Özgan and Özgan 1994: 91.

85. Herakleion Archaeological Museum, Crete, the so-called Ierapetra Youth (Raftopoulou 1975).

86. Ierapetra was a major center on Crete in the Late Hellenistic period and became part of the Roman empire in the second quarter of the first century B.C. The town continued to prosper under the Romans and even minted its own coinage (Papadakis 1986: esp. 13–18). Such statues continued to be made well into the Roman imperial period, so a later date for the Ierapetra Youth is also possible.

87. Richter sees a profound disillusionment and sadness in the Delos head that contrasts with resolute contemporary Late Republican Roman faces (1984: 52–53). Cf., e.g., Gorbunova and Saverkina 1975: no. 106, a first-century B.C. Roman Republican bronze portrait head in the Hermitage Museum, Saint Petersburg.

88. Kunsthistorisches Museum, Vienna, inv. no. VI 3168. Gschwantler 1995: 287–93; Ridgway 1990: 77–78, pl. 38a–b. The statue has been dated from the third century B.C. to the first century A.D., the time of its archaeological context. It was found within the central court of the harbor gymnasium at Ephesos and is believed to have adorned one of the niches in the south wall. A related bronze head recently acquired by the Kimball Museum of Art, Fort Worth, Texas, and known since the sixteenth century, is likely a Roman copy of the same type. See Sotheby's 2000: no. 60, pp. 58–65.

89. The statue is usually considered to be a work of the Early Hellenistic period. Zimmer and Hackländer 1997; Zimmer 2000: 192–96; Hackländer 2000: 201–6; Mattusch 1998: 149–51.

90. Izmir Archaeological Museum, inv. no. 9363. The statue has been dated to the Late Hellenistic (Dedeoglu 1993: 31) or early imperial Roman period (Uçankus 1989). Ridgway (2000: 313, pl. 76) sees parallels with second-century B.C. and third-century A.D. works, emphasizing the difficulty of dating bronze statues. Smith (1991: 55, fig. 61) dates it to the first century B.C. or first century A.D. For a discussion of athletic statue types in the Hellenistic period, see Rausa 1994. Ridgway (2000:

312–13) believes that the statues of wrestlers in competition do not stem back to Hellenistic originals.

91. J. Paul Getty Museum, Malibu, inv. no. 77.AB.30. See n. 46 above for references. Another bronze head in the J. Paul Getty Museum, inv. no. 71.AB.458, may also be Hellenistic, if not Roman. See *Fire of Hephaistos:* 311–13, no. 44.

92. Museo Nazionale Romano, Rome, inv. no. 1055 (Himmelmann 1989: 150–74). The bronze arm of a boxer was also found on the Antikythera wreck.

93. National Archaeological Museum, Athens, inv. no. 6439. The head of a boxer from Olympia is more likely a Late Classical work (see Bol 1978: 40–43, 114–15, cat. no. 159, pls. 30–32; Mattusch 1996: 84–87, pl. 3.5; Ridgway 1997: 344–45, pls. 85a–e) although some scholars continue to believe it is a work of the Early Hellenistic period (e.g., Robertson 1981: 190, fig. 264).

94. British Museum, inv. no. GR 1861.11–27.13. The head has been dated in the Classical period as well as in the Early Hellenistic period, ca. 300 B.C. See Mattusch 1996: 80–83, fig. 3.4. Ridgway 2000: 308 suggests that the Cyrene head may even be Roman, since its archaeological context is imperial.

95. National Archaeological Museum, Palermo. For an Early Hellenistic date, see Rolley 1983: 48, fig. 27. If Hellenistic in date, it seems likely that the rams served as dedications at a sanctuary. It is also conceivable that they formed part of a mythical group, such as a scene representing Odysseus and his companions in the cave of the cyclops Polyphemus. Cf., e.g., the Polyphemus group at Sperlonga. Wilson (1990: 343–46) considers the Palermo ram Roman and dates it to the Julio-Claudian period. Ridgway (1997: 308, 320, n. 57) dates the ram even later, to the Hadrianic period or later, because of the rendering of the eyes. Our corpus of Hellenistic bronzes is so small, however, that it may be hazardous to rely on such specific technical features, which quite conceivably could have been used earlier as well. For example, a bronze male head with eyes fashioned in a similar manner has been dated as early as the Late Hellenistic period (Symes 1999: no. 23), although this dating is also on stylistic grounds.

96. Metropolitan Museum of Art, New York, Fletcher Fund, 1923, inv. no. 23.69 (Mertens 1985: no. 42, pp. 62–63).

97. Noble 1968: 253–56.

98. For a careful technical assessment of the horse, see Lefferts et al. 1981: 1–42. See also Mattusch 1975: 286–301.

CHAPTER 2. AN EARLY UNDERWATER RESCUE EXCAVATION

1. Artemision is the ancient name as well as the modern toponym. According to Diodorus Siculus (11.12), Cape Artemision takes its name from a sanctuary of Artemis *Προσηώς* located on a hilltop nearby. This sanctuary has been located and inscriptions from the site indicate that it was refurbished during the Late Hellenistic period (Lolling 1883).

2. On the first century B.C. Antikythera shipwreck, which many consider to be the beginning of marine archaeology, see the excavation report *Τὰ Εὑρήματα* 1902 and Throckmorton 1969: 113–68. On the 1907 underwater excavation of a first-century B.C. shipwreck off the coast of Mahdia, Tunisia, see, with previous bibliography, the two-volume work *Das Wrack*.

3. See *ILN,* October 13, 1928, 675, and "A Sea-God" 1929 for one version of the events that led up to the seizure of the statue of a god.

4. In an interview at Istiaias with a correspondent from the Athenian newspaper *Ἑλλενίκη,* September 27, 1928. Translation by the author.

5. *Ἑλλενίκη,* September 27, 1928; *Ἑστια,* November 28, 1928; *Ἔμπρος,* December 10, 1928.

6. Bertos 1926: 87–95. The 1926 date of the publication is misleading and no doubt has added to the general confusion on the early history of the statues.

7. I thank Dr. Willard Bascom for references to the early Greek newspaper articles on the Artemision wreck, for a copy of the log book of the *Pleias,* and for the numerous discussions and correspondence that we have had about the Artemision wreck. Most of the archaeological journals made note of the recovery of the statues in their yearly archaeological reports: *BCH* 52 (1928): 466–67; *AA* 1928, pp. 607–16; *AJA* 34 (1930): 367–68; *JHS* 49 (1929): 235–36. See also *ILN,* March 30, 1929, 524–25.

8. Bertos 1926: 89. According to Bertos, the divers speculated that they were going to recover a statue of Artemis from the nearby sanctuary from which Cape Artemision takes its name.

9. Ibid., 90.

10. Ibid., 92.

11. Ibid., 94.

12. Evidence for lead lining was discovered at both the Antikythera and Mahdia wreck sites. The earliest example of lead sheathing comes from the Porticello shipwreck (415–385 B.C.). See Eiseman and Ridgway 1987: 16. The best-preserved examples (now lost) come from the large Roman ships (first century A.D.) from Lake Nemi. See Ucelli 1950. While our understanding of the history of ancient ships in the Mediterranean is sketchy at best, it may be significant that of the half dozen shipwrecks (whose hull was preserved) datable to the later Roman and Byzantine periods, none used lead lining in the construction of their hull. For a discussion of lead lining or sheathing, see Casson 1971: 210, 214–16. See also Muckelroy 1978: 65.

13. Unfortunately, no further information is available for the lead or the pottery that could provide a means of dating the shipwreck.

14. Payne 1930: 244.

15. Karo 1930: 129–30.

16. Karo (1930: 130) notes that the Archaeological Service needed new diving apparatus. Underwater archaeology was catapulted forward in the 1940s after the invention of the self-contained underwater breathing apparatus (SCUBA) during World War II (see Bass 1966).

17. Herbig 1929: 637. This is the most detailed and perhaps the most influential account, and it is referred to in several later studies. In a recent article on ancient Mediterranean shipwrecks that transported art, Gelsdorf dates the Artemision wreck to 200–80 B.C. (Gelsdorf 1994: no. 41, p. 765). This date seems, however, to be based on Herbig's 1929 report. Without having seen the pottery himself, C. A. Robinson (1945: 125) called it nondescript and questioned its Hellenistic dating, saying that it might date from anywhere between the fourth century B.C. and the fourth century A.D.

18. A cryptic notation dated 1929 on the back of a photograph of the unrestored

Jockey from Artemision in the archives of the American School of Classical Studies also notes that an investigation of the site was going on at that time. I thank the archivist, Dr. Natalia Vogeikoff, for her assistance with this material.

19. Athens, National Archaeological Museum, inv. nos. 16259 and 16259a; Wünsche 1979: 105–6, fig. 41, and n. 80, no. 3.

20. Jantzen 1938: 542.

21. Lemerle 1936: pl. 49.

22. Blegen 1936: 550. The specific location of this chance find is not given by Blegen. A handwritten notation on a drawing by the artist George Kastriotis, now in the archives of the Gennadion Library at the American School of Classical Studies at Athens, refers to the hind quarters of the bronze horse as coming from Oreoi, which is several kilometers west of Pefki. This corroborates Bertos's theory that this part of the horse was no longer in the immediate area of the wreck site. Another brief report refers to fishermen finding another leg fragment of a bronze horse in the same area the following year (Lemerle 1937). No further mention of this bronze fragment is ever made and one cannot, therefore, be certain as to whether it even came from the same wreck.

23. Brief mention of the investigation is made in an article in the Greek newspaper, *Ἐλευθεροτύπια*, September 23, 1982. To my knowledge, no official report of this investigation was ever published, perhaps because of its apparent failure.

24. Bascom 1996: 368.

25. The fundamental work on object conservation is Plenderleith and Werner 1971. However, it deals very little with the conservation of underwater objects. See also, with bibliography, Hamilton 1976. For a history of the discipline, see Beale 1996: 65–80.

26. Bertos 1926: 89, 91, 93.

27. Zenghelis 1929: 114–15.

28. Philadelpheus 1930: 185–87. See also a brief article by Philadelpheus in the Greek newspaper *Πρωΐα* (Philadelpheus 1928).

29. Theophaneidis 1927–28: 13.

30. Kallipolitis 1972: 3.

31. Photographs (both left and right profile views) of the cast of the Horse together with a cast of the Jockey were published in an article by Walter Pach in 1953 (Pach 1953: 140–41). For an earlier photograph of the cast, see Vanderpool 1949: 198. For even earlier discussion of the cast, see Jantzen 1938.

32. Cast Gallery of the University of Athens, inv. no. 56. I am grateful to Dr. Olga Palagia, acting curator of the Cast Gallery at the University of Athens, for showing me the cast of the Artemision horse. There is a catalogue of the casts (Palagia and Palaiokrassa 1990), but unfortunately it stops at inv. no. 55.

33. I am grateful to Lucy Krystallis and Iannis Damigos, conservators who both assisted in the restoration, for sharing their recollections of it with me.

34. Kallipolitis 1972: 422, 425, fig. 5. Part of this metal skeletal system can be seen in Fig. 59. A hole with a modern thread for a screw also exists in the center of the right side of the neck. It has the same diameter as the restoration screws but for some reason was not used. The metal on the edges of this small hole shines brightly, indicating that it is a modern hole.

35. Kallipolitis 1972: 422, 421, 420.

36. Bertos 1926: 92.

37. The opening can also be seen in an early photograph of the Jockey while he was unattached to his old museum mount (Bianchi Bandinelli 1950: pl. 42). The old mount (Fig. 25) had long metal supports beneath the legs that covered this large open space.

CHAPTER 3. TECHNICAL ANALYSIS

1. Mattusch 1975; Bol 1985; Haynes 1992; Hemingway 1996a.

2. See, e.g., *Due bronzi; Fire of Hephaistos;* Mattusch 1997; Zimmer and Hackländer 1997.

3. See, e.g., Ridgway 1967; Eiseman and Ridgway 1987; Mattusch 1988, 1996.

4. All the examples are gathered and discussed in Eaverly 1995. See also review of Eaverly 1995 by Hemingway in *BMCR* 7, 5 (1996): 403–5.

5. See Eaverly 1995: 36. The example she refers to is incorrectly referenced. She means Acropolis no. 623, not Acropolis no. 148. See also her discussion in the catalogue, p. 97. For a discussion of the evidence for Archaic bronze statues of horse and riders, see Chapter 5.

6. Perhaps the earliest known bronze examples are two Early Classical racehorses with boy riders, attributed to Kalamis, that formed part of a sculptural group dedicated at Olympia in recognition of the victories of Hieron, the son of Deinomenes, and seen by Pausanias (6.12.1). There is some debate as to whether or not these statues were truly large-scale (Roques de Maumont 1958: 17, 97, n. 15). However, the Charioteer and associated bronze horse fragments from Delphi provide an example of a large-scale chariot group, a type closely related to the equestrian groups (Chamoux 1955; Rolley 1990).

7. For a discussion of the evidence for equestrian statues in the Classical period, see Roques de Maumont 1958: 14–21. See also Bergemann 1990: 10–11 for a stylistic analysis of rider statues from the fifth century B.C.

8. Williams 1989: 530.

9. Walters 1899: 32, no. 265. The figure had been variously identified as a victor in a *hoplitodromos,* Ares, or a warrior mounting a chariot (Williams 1989: 529).

10. All the fragments were submitted to chemical analysis and have very close alloys, which supports the association of the fragments by Williams (1989: 550) on the basis of acquisition, scale, finish, and patina. The alloys have a high lead content, and Craddock (1986: 233) suggests that Greek founders in Magna Graecia may have deliberately added lead to their copper alloys as a result of contact with Etruscan metalworking techniques.

11. Williams 1989: 546.

12. Haynes 1962: 804. For two examples of overcasts of Classical Greek statues that exhibit casts of patches, see Mattusch 1996: 197–206, esp. fig. 6.2, and *Fire of Hephaistos:* 198–201, no. 7, fig. 7h.

13. Williams 1989: 542.

14. Haynes 1962: 803; Williams 1989: 538.

15. Haynes 1992: 35–38; Mattusch 1988: 158.

16. Williams 1989: 530.

17. Staatliche Museen zu Berlin–Preußischer Kulturbesitz Antikensammlung, inv. no. F2294. The vase has been extensively published. See with previous bibliography: *Fire*

of Hephaistos: 182–84; Robertson 1992: 107–9; Beazley 1989: 78–83; Schwandner and Zimmer 1983; Mattusch 1980. The accompanying Fig. 37 was drawn by the author in July 1996. It was done in Cambridge, Mass., with the ability to consult the vase itself, which was on display in the Sackler Museum at the time. Only a few details of musculature on the figures rendered in dilute glaze are not included in the drawing.

18. Bronze casting is a very conservative discipline and one that has a long history in the Mediterranean (Hemingway 1996b; Bol 1985: 18–29). Craftsmen experimented with casting techniques for large-scale statuary in the Archaic period, and fundamental procedures appear to have been worked out by the Classical period and used throughout antiquity, and even later. Given the conservative nature of the discipline, it is tempting to see the techniques used to make the Piot bronzes as representative of casting traditions in the Classical period. However, with such a paucity of evidence, this hypothesis must remain very tentative.

19. Besides the life-size bronze horse from Trastevere discussed in Chapter 1, n. 71, several other fragments of bronze horses could belong to Hellenistic equestrian monuments or chariot groups. See Siedentopf 1968: 78. Of these the most likely to belong to a horse and rider group is a hoof with fetlock excavated in the Athenian Kerameikos (Gruben 1968; Willemsen 1968: 24, pl. 17). The Kerameikos hoof is typologically and stylistically very similar to the forehooves of the Artemision Horse. I am grateful to Dr. Ursula Knigge, director of the Kerameikos Excavations, for allowing me to study this fragment.

20. Shear 1973; Camp 1998: fig. 30. For this dating and other discussion, see Mattusch 1996: 125–28, esp. n. 74.

21. Houser 1987a: 255–81.

22. Siedentopf (1968) assembled 190 examples of this equestrian type from literary, epigraphic, and archaeological evidence. The majority of these Hellenistic life-size statues were bronze, and they were set up at twenty different locations in Greece, Macedonia, the Aegean islands, and the Ionian coast of Anatolia, as far inland as Sardis. Such a wide scattering of statues based on very fragmentary evidence is clear testimony to the widespread popularity of this equestrian type. See also Treister 2002 for evidence of bases in the Pontus region.

23. On the foil gilding technique, see Oddy et al. 1990: 106–7. I am grateful to Dr. John McK. Camp, director of the Agora excavations, for permission to study this statue and to Dr. Jan Jordan, registrar of the Athenian Agora excavations, for assisting me in the Stoa of Attalos in April 1995.

24. A preliminary presentation of my technical analysis was made at the Thirteenth International Bronze Congress, held at Harvard University in 1996. That paper (Hemingway 2000) did not include my subsequent examination of the interior of the bronzes presented here.

25. I am grateful to Craig Mauzy for assisting me with the investigation of the interiors of the statues on February 24 and March 3, 1997.

26. The drawings were first inked in the drafting room of the American School of Classical Studies. The drawings illustrated here are revised, using the Macintosh version of the computer program Illustrator 6.0. I am very grateful to Henry Lie and the Harvard University Art Museums for the use of their computer equipment for this purpose.

27. The original surface of the right forehoof is not as well preserved.

28. Zenghelis 1929: 123.

29. Apparently, this technique was used for other Hellenistic bronzes. See, e.g., the statue of a child god in the Saint Louis Art Museum, inv. no. 36:26 (*Fire of Hephaistos:* 237–42, esp. 239, no. 25). For black patination of small-scale objects, see also Born 1990: esp. 185–87; Willer 1994. The technique was also used in Egypt (Cooney 1966).

30. Eggert 1994.

31. Dontas (1986: 183, n. 6) lists the thickness of the horse as two millimeters, although he does not specify from where his measurement was taken.

32. I was able to see the greater thickness of the base of the right hind leg while the horse was hoisted up during a restoration of the modern support in November of 1994. As might be expected, the bottom of the hoof is completely open, unlike the forehooves, to receive the statue support.

33. Bertos 1926: 91.

34. Clay seems to have been the most popular core material for Greek bronze statues (Haynes 1992: 66). In the Hellenistic period, plaster was also sometimes used (*Fire of Hephaistos:* 269).

35. Several other ancient examples of flow welds have been documented. See *Fire of Hephaistos:* no. 24, pls. 24i–j; no. 39, pls. 39g–h. See also Steinberg 1973.

36. This is a slightly different technique from the joining method identified for the Early Classical god from Artemision (Tzachou-Alexandri 2000: 91, figs. 1c, 2) and the Classical Riace warriors (Formigli 1984: fig. 24; Haynes 1992: 96, fig. 6), where oval-shaped basins cut into the thickness of the bronze are used to reinforce a welded edge-to-edge joint. In those cases, the ovals are noticeably more regular in form.

37. For an illustration of the modern armature, see Kallipolitis 1972: 425, fig. 5.

38. Casson 1933: 163.

39. Alternatively this break may only be a fracture in the bronze. Its unusual jointed appearance seems to support the identification as a join.

40. Haynes 1992: 93.

41. Toledo Museum of Art, Toledo, Ohio, inv. no. 1968.72. See *Fire of Hephaistos:* 266–72, figs. 32c, 32d.

42. Another line of the same character, and, perhaps, a continuation of the first, can be seen along the length of the lower left jaw bone to the muzzle, where it runs up in a straight line to the left nostril.

43. Sectioning of pieces to create a stronger mechanical bond between cast parts occurs on other Hellenistic bronzes. See, e.g., a dove-tail joint on an arm from the "Philosopher Group" from the Antikythera shipwreck (Bol 1972: 27–28, pl. 12.1).

44. In this respect, one should bear in mind the evidence for large hammered patches that may also be later repairs.

45. For examples of wax joins visible on the interior of statues, see *Fire of Hephaistos:* 167, 240–41, figs. 26c–d.

46. The sections of the cast are clearly identifiable since they appear as raised lines.

47. The correlation may be coincidence, however, since this is an excellent place to section the statue. Essentially the same technique would have been used in antiquity to section the wax molds from the original model. Once the sections of wax were removed from the model, they would have been repositioned together before the casting mold was built up around them.

48. A sculptors' workshop at Baiae, near Pompeii, has produced many ancient ex-

amples of plaster casts of Greek bronze sculptures (Landwehr 1985). Ancient bronze over-casts have also been identified (Mattusch 1996: 197–206).

49. See, e.g., the Terme Boxer (Fig. 56), Museo Nazionale Romano, inv. no. 1055 (Himmelmann 1989; Geominy and Lehmann 1989). See also discussions by Bol and Haynes (Bol 1985; Haynes 1992: 98–99).

50. Haynes recognizes that cast patches were sometimes used by Greek bronze smiths (Haynes 1992: 98). For two Roman examples, see *Fire of Hephaistos:* 170, and nos. 39 and 47.

51. For an example of an eye for a large-scale bronze statue from Pergamon, see Winter 1908: 368, no. 466, fig. 466.

52. Tin is another possibility. See *Fire of Hephaistos:* 230, no. 23.

53. Himmelmann 1989: 170–71.

54. See Chapter 1, n. 71, and n. 19 above; Bergemann 1990: P50, pl.1a. As has been noted, the date of the horse is debated. The same technique was adopted by some Roman bronze smiths. Roman examples include a horse head in Florence, two different horse heads in Naples, and the Horses of San Marco in Venice. See Bergemann 1990: cat. nos. P21, pl. 6a,; P42, pl. 6d; P31, pl. 7a. It was much more common in the Roman period to cast most of the bridle together with the horse's head. See, e.g., the Cartoceto bronzes (Stucchi 1988: figs. 26–29) and the horse head in the Walters Art Gallery, Baltimore (*Fire of Hephaistos:* no. 20).

55. Similar pins were used to fasten the nose bands of the Horses of San Marco (Toniato 1982: 84–85, pls. 63, 66).

56. For a detailed discussion of the evidence for the bridle, see the iconography section in the following chapter.

57. As the color looks very different in various lighting situations, it is important to have adequate light when assessing the true color of the bronze.

58. Haynes gives a thickness of three millimeters for the Jockey, although he does not specify where he took his measurement (Haynes 1992: 68).

59. Izmir Archaeological Museum, inv. no. 3544. See Ridgway 1967b: pl. 100, fig. 12; Mattusch 1996: 11–12, fig. 1.10.

60. I could not determine whether or not this shard was lodged there in antiquity or during the early restoration of the Jockey.

61. The two ovals visible on the exterior surface of the upper left arm might be part of a flow weld join instead of cast patches; however, this area was inaccessible on the interior. In any event, the arms and legs are places where the wax model was likely to have been pieced together.

62. This open space would also have made it easier to fit the Jockey in place. See also Bianchi Bandinelli 1950: pl. 42.

63. Metropolitan Museum of Art, New York, inv. no. 43.11.4. See Mertens 1985: 52–53.

64. The last two connected ovals are probably part of a flow weld used to connect the left arm to the body. It was not possible to see this area on the interior.

65. Compare a pair of over-life-size inlaid eyes in the Metropolitan Museum of Art, New York, inv. no. 1991.11.3a–b (Fig. 8; Mattusch 1996: pl. 1). See also an eye in the J. Paul Getty Museum in Malibu, inv. no. 84.AI.625 (*Fire of Hephaistos:* 204–5, no. 9). For the dramatic effect of eyes in situ on a Hellenistic bronze, see the portrait head of a

man from Delos (Fig. 19.1–2), Athens National Archaeological Museum, inv. no. 14.612 and the head of a philosopher from the Antikythera shipwreck (Fig. 10.1–2), Athens National Archaeological Museum, inv. no. Br 13400. See also the discussion in Haynes 1992: 106–8.

66. The teeth of Greek bronze statues were often added in silver (Houser 1987b; Mattusch 1996: 25).

67. Getty victorious athlete (Fig. 20.1–2) (Mattusch 1997; Frel 1982), cited Chapter 1, n. 46, above; "Worried man" from Delos (Fig. 19.1–2), National Archaeological Museum, Athens, inv. no. 14.612, cited Chapter 1, n. 87, above; portrait of a child from Olympia (Fig. 12.1–2), Archaeological Museum, inv. no. B 2001, cited Chapter 1, n. 49, above.

68. Many of the representations of metalworking on vases are gathered by Gerhard Zimmer (Zimmer 1982). See Mattusch 1975: 30–57 for a compendium of ancient *testimonia,* and see also Zimmer 1985. On Archaic and Classical metallurgical installations, see Zimmer 1990; Mattusch 1975: 92–197. A comprehensive study of Hellenistic foundry sites has yet to be undertaken. Some of the best ethnographic accounts of metalworking come from studies of tribes in West Africa. See Spande 1977; Grebenart 1988; Jaggar 1994.

69. This follows Haynes's (1992) discussion of bronze-casting techniques.

70. On the techniques employed by the Chinese in antiquity for casting bronze, see Chase 1991.

71. Kluge 1927: esp. 1: 67–104; 1929.

72. Casson 1933: 148–66; Hill 1949: xii–xvi.

73. Mattusch 1975: 12–22; 1988: 22–25; Haynes 1992: 24–33.

74. A clear example is the hair net of an imperial Roman portrait of a woman in the Princeton Art Museum, inv. no. 80–10 (*Fire of Hephaistos:* 293–95, fig. 39e).

75. On the Riace warriors, see Formigli 1984: 122. For the Porticello bronzes, see Eiseman and Ridgway 1987: S1, S8. Solid sections resulting inadvertently from wax settling in the extremities of the mold are also known. See, e.g., *Fire of Hephaistos:* no. 24, fig. 24.l.

76. Haynes 1992; Mattusch 1996.

77. Porticello shipwreck: Eiseman and Ridgway 1987: 93. Archaic and Early Classical statues: Mattusch 1988: 61, 134; *Fire of Hephaistos:* nos. 6, 36.

78. Haynes 1992; Mattusch 1996.

79. Similar heavy wax brush strokes can be seen on the interior of one of the arms associated with the Hellenistic Philosopher group from the Antikythera shipwreck. See Bol 1972: 27–28, pl. 12.1.

80. For illustrations of the fundamental steps of the indirect lost-wax process used in Classical antiquity, see Fig. 7.1–10.

81. Very few original models survive from antiquity. A red-figure *oinochoe* from Capua depicts Athena sculpting a clay horse, which may well be a model from which molds would have been made to cast a bronze statue (Zimmer 1982: 33, pl. 1). A terracotta female figure of the mid fifth century B.C., now in the Metropolitan Museum of Art, New York (inv. no. 06.1151), is possibly a model for the preparation of molds (Tölle-Kastenbein 1980: no. 28d, pp. 170, 318, pl. 117a; Ling 2000: 41, fig. 19). A solid clay statuette of the Classical period in the collection of the Harvard University Art Museums (inv. no. 1983.4) may also be a clay sketch for a larger bronze statue (Hemingway

1999: 34, n. 4). Bol illustrates an early imperial Roman clay model in his book on ancient bronze working (Bol 1985: 119, fig. 77).

82. Bertos 1926: 91.

CHAPTER 4. QUESTIONS OF STYLE AND IDENTIFICATION

1. Bertos 1926: 95. Bertos's view of Greek art as an evolutionary cycle in which the Archaic, Classical and Hellenistic were periods of experimentation, a high point, and then decline respectively was a common way of understanding the development of Greek sculpture in the nineteenth and early twentieth centuries. This view is now recognized as a categorically false and contrived assessment of the Hellenistic period. On the historiography of the study of Hellenistic sculpture, see Ridgway 1988.

2. Bertos 1926: 93–94.

3. Arvanitopoulos 1929: 141. Arvanitopoulos does not correctly understand the pose. He suggests that the hind legs are bent back, rather than stretched forward and compares the pose with a picture on a vase in the British Museum (ibid.: the third horse in fig. 52).

4. Ibid.: 138.

5. Arvanitopoulos 1929: 142. For an illustration, see Boardman and Finn 1985: pls. 15–16.

6. Pliny *HN* 34.71.

7. Arvanitopoulos 1929: 143–44. For a compilation of ancient sources on Kalamis, see Pollitt 1990: 46–48. Comparing a sculpture to statues known only from brief descriptions by much later sources, as Arvanitopoulos does, is a precarious methodology that provides no conclusive results.

8. Arvanitopoulos 1929: 146. In support of his argument, he cites Beardsley (Beardsley 1929), at the time an authoritative study. Portraits of people with mixed heritage have subsequently been identified by Snowden (1970: 182, 184–85), undermining Arvanitopoulos's argument.

9. Herbig (1929: 637) supports the idea of a pastiche and believes that the Horse is rearing, not galloping. However, he clearly changes his opinion regarding the position of the Horse in a later article where he refers to the Horse from Artemision as galloping (ibid.: 6, fig. 4).

10. Arvanitopoulos 1929: 146–47.

11. Hdt. 7.192.

12. Lolling 1883: 19–20. I visited the site of the sanctuary in July 2000. The nineteenth-century German excavations have been backfilled, and only a few ancient shards were visible on the knoll where the sanctuary once stood. A modern Greek Orthodox church, dedicated to Saint George and restored in 1989, has been built on top of the foundations of the ancient temple to Artemis. A single ashlar marble block behind the apse of the church, with anathyrosis visible on one face, is the only clear indication of ancient architecture on the site.

13. Reinach 1930: 142–43, 145.

14. The bibliography on the god from Artemision is extensive, and Beyen's work is by no means definitive. For a summary of the scholarship up to 1975 with bibliogra-

phy, see Houser 1987a: 120–44. The identification of the statue as Zeus or Poseidon is still debated. See also Ridgway 1970b: 62–63; Wünsche 1979: 77–111.

15. Beyen 1930: 51–52. Mylonas also places the statue in northern Greece but identifies it as Zeus (Mylonas 1944). Other localities have been suggested, including northern Euboia (Reinach 1930; Lullies and Hirmer 1960: 75), Athens, and the Peloponnesos. On the technique of the god from Artemision, which differs in significant ways from the Horse and Jockey Group, see Tzachou-Alexandri 2000: 86–95.

16. Kinch 1920.

17. Beyen 1930: 52.

18. Kinch 1920: pls. II–V. For extensive bibliography on the so-called Kinch tomb, see Miller 1993: 109–10, cat. no. 18a.

19. Beyen 1930: 52–53.

20. In fact, a student of Buschor's, Tobias Gerichte (Gerichte 1956), was working on the Horse and Jockey from Artemision as the focus of his doctoral thesis, which remains unfinished and was never published. I am grateful to Dr. Judith Binder for this information.

21. Buschor 1936: 69–70. In 1930, Raubitschek and Buschor saw the pottery from the Artemision shipwreck. On the basis of their analysis of the ceramic evidence, they believed that it could have been a Late Hellenistic ship from Corinth with the spoils of Mummius's victory being sent to Pergamon (personal correspondence with Anthony Raubitschek). See also Raubitschek 1949: 507, where he suggests that the date of the wreck is in the second century B.C. after the fall of Corinth (146 B.C.). See now also Wünsche 1979: 105–6, fig. 41.

22. Buschor 1936: 117. Buschor stood by his initial stylistic analysis (Buschor 1936, 1948). In a later book on Hellenistic portraiture, he refers to the Jockey alone as an excellent example of portraiture of the second century B.C. He places it stylistically not long after a Pompeian bronze portrait of a Hellenistic ruler as Hermes in the Naples Archaeological Museum, which he believes is a copy of a Hellenistic original of the second century B.C. (Buschor 1949: 36, fig. 31). George Hanfmann agrees with Buschor's analysis of the Artemision statues, although he dates the Jockey earlier, between 230 and 200 B.C. (Hanfmann 1963: 91; 1967: 369, no. 232). Richter offers a similar date for the Jockey, ca. 240–200 B.C. (Richter 1959: 166, fig. 239).

23. Lemerle 1936: 452.

24. Charles Picard suggested, for example, that it might be from another bronze horse that was part of the cargo of the same ship. He dated the Horse from Artemision to the Early Classical period, seeing it as testimony to the perfection sculptors such as Myron achieved in works of animal sculpture during that period (Picard 1939: 253, fig. 112). Dorothy Hill was also uncertain whether or not all of the existing fragments (dated by her to ca. 450 B.C.) belonged to only one horse from the Artemision wreck, which she considered a "Roman plunder ship" (Hill 1949: xvi). Hanfmann, without presenting any argument, says "the Horse definitely does not belong to the Jockey" (Hanfmann 1967: 369).

25. Carl Blümel (1939: 89, cat. no. 95), in his survey of ancient sculptural representations of animals, placed the forepart of the Horse in the second century B.C.

26. Schuchhardt 1940: 429, reaffirmed in Schuchhardt 1978 (see discussion later in this chapter). Peter Bol also dates the Horse and Jockey Group to the middle of the second century B.C. and compares it to a small-scale bronze group of Herakles and a

centaur in Vienna (Bol 1970: 89, figs. 19–20). In particular, Bol sees stylistic affinities between the eyes of the Jockey and those in his group, and he compares the rendering of anatomical details on the rear part of the Horse from Artemision with those of the centaur, such as the thighs, where the muscles and veins are only reproduced on the surface without strong articulation or accent. In his survey of ancient Greek and Roman equestrian statues, Harald von Roques de Maumont (1958: 35) cites the Horse and Jockey Group from Artemision as a good example of an athletic victor monument of the Hellenistic period and dates it to the second quarter of the second century B.C. He suggests that it was set up by either the state or the father of the boy, or that it was simply a victor's monument. Subsequently, Heinrich Siedentopf made another study of Hellenistic rider monuments, but he does not consider athletic monuments and makes only brief mention of the Horse and Jockey Group from Artemision (Siedentopf 1968: 7–9). Johannes Bergemann, an authority on large-scale Roman equestrian sculpture, compares the Horse from Artemision to Roman works such as the Horses of San Marco (Bergemann 1988: 119–20, pls. 50.3, 51.3) and considers the Horse and Jockey Group to be a significant Greek precedent for Roman equestrian sculpture (Bergemann 1990: 11). The date of the Horses of San Marco has been hotly debated, however, and some scholars even consider them to be reused Greek statues from a fourth-century or Hellenistic quadriga monument. See, with previous bibliography, *Die Pferde von San Marco:* 35–54.

27. Ashmole and Yalouris 1967: pls. 28–30, 53–54.

28. Markman 1943: 132. Lippold (1950: 336) also dates the Horse to this time, ca. 280–230 B.C., his Hellenistic II period, the so-called *Hochblüte des 3. Jahrhunderts*. He considers it an original Hellenistic bronze that belongs with the Jockey, of the same date. Lippold calls the Jockey rustic and believes, incorrectly, that the Horse is rearing, not galloping.

29. Bieber 1961: 151. See review of Bieber 1955 by Evelyn Harrison in *AJA* 61 (1957): 298–303. Ranuccio Bianchi Bandinelli (1950: 85, 113, 192, pls. 42–43) also dates the Jockey from Artemision to his first period of Hellenistic sculpture, somewhere in the third century B.C.

30. Alscher 1957: 122–24. Werner Fuchs (1979: 142) also accepts that the Jockey and Horse belong together, although he discusses only the Jockey, which he dates to ca. 140–130 B.C., early in his Late Hellenistic period. He sees the Jockey as a characteristic example of works from this period, emphasizing the centrifugal composition and the evident pathos reminiscent of Fuchs's preceding "High Hellenistic" period. Fuchs first mentions the Horse from Artemision in his book on Neo-Attic reliefs, in which he follows Schuchhardt 1940 and Alscher 1957 in seeing classicizing features in the Horse that he considers a Late Hellenistic creation (Fuchs 1959: 121, n. 12). In his publication of the finds from the Mahdia shipwreck, Fuchs also compares the Horse from Artemision to a bronze protome of a horse on a fulcrum attachment from the wreck (Fuchs 1963: 32, pl. 48.2).

31. Alscher 1957: 122.

32. Ashmole and Yalouris 1967: pls. 28–30, 53–54; Alscher 1957: 124.

33. Alscher 1957: 123–24. Christine Havelock (1971: 141) agrees with Alscher's analysis. She thinks that the Horse does not belong to the same group. However, Havelock changed her opinion after Kallipolitis's 1972 publication, and in her revised second edition, she says that the Horse does belong despite the slight difference in scale (Havelock 1981: 141).

34. Anderson 1961: 20. This work is still a fundamental reference. That same year Hans Walter published an article entitled "Zur späthellenistischen Plastik" that focused primarily on a marble head from Samos, now in the Louvre (Walter 1961: pls. 78–81.2). Despite obvious stylistic differences in hairstyles, Walter observes similarities between the position and appearance of the marble head in the Louvre and the Jockey from Artemision (ibid.: 150).

35. Hausmann 1962: 270.

36. Snowden 1970: 88. For subsequent scholarship by Frank Snowden on blacks in antiquity, see Snowden 1976, 1983, 1997. Jean Charbonneaux, with no reference to Kallipolitis's 1972 publication, discusses the Jockey from Artemision in a general book on Hellenistic art. In his chapter on second-century trends, entitled "Alexandrianism and Erotic Mythology," he identifies the Jockey as an Alexandrian portrait or caricature (Charbonneaux 1973: 310, fig. 342). This idea is in keeping with a controversial theory that there was only one Hellenistic school of realistic portraiture, which originated and worked in Alexandria, Egypt. On realistic art in Alexandria, with a summary of the previous scholarship, see Himmelmann 1981.

37. Michaud 1973: 1, figs. 1–4.

38. Kallipolitis 1972: 423–24. For the horse from Melos, see Kallipolitis 1971: 45, fig.1; Roques de Maumont 1958: fig. 49.

39. Eirene and Ploutos by Kephisodotos: Munich Glyptotek, inv. no. 219, a Roman copy that may, in fact, be close to the original composition. For illustrations, see Stewart 1990: pls. 485–87. Hermes and infant Dionysos by Praxiteles: Olympia Archaeological Museum. The date of the Hermes of Praxiteles excavated in the Heraion at Olympia is hotly debated (Boardman 1995: 53). In my opinion it is likely to be a close Hellenistic copy of the fourth-century B.C. original. For additional illustrations, see Stewart 1990: pls. 607–8.

40. Kallipolitis 1972: 424. National Archaeological Museum, Athens, inv. no. 3335, Stewart 1990: pl. 834.

41. Manolis Andronikos continued to question the association of the Horse and the Jockey even after the restoration: "The problem whether the horse and rider actually belong to the same composition remains unsolved. Only painstaking research on the part of art historians is likely to produce conclusive evidence" (Andronikos 1975: 85).

42. Schuchhardt 1978: 82, 90–91, 88–89. Andrew Stewart also finds the resemblance between the Jockey and the groom striking (Stewart 1979: 63–64).

43. Wünsche 1979: 105–6, fig. 41.

44. Houser and Finn 1983: 87, 90. Claude Rolley published his survey in French of Greek bronzes that same year; an English translation followed in 1986. Citing the fragment of drapery on the Horse, he also argues that the Horse and Jockey must belong together and places them in the middle of the second century B.C., suggesting that the so-called "baroque" features of both statues are lingering elements from earlier in the century mixed with classicizing features, such as those evident in the Horse's head, which he believes are typical of tendencies in the sculptural style of the time (Rolley 1983: 54). This interpretation is essentially the same as that of Schuchhardt 1940.

45. Rühfel 1984a: 280–86, esp. 280. Rühfel contrasts the pose of the Jockey from Artemision with that of two Early Hellenistic bronze statuettes of boys from Dodona (Rühfel 1984a: 284; Ridgway 1990: 338–39).

46. Rühfel 1984a: 283–86.

47. Pollitt 1986: 147; cf. his fig. 132. Andrew Stewart, in his general work on Greek sculpture, suspects that the Horse and Jockey Group from Artemision is a victor monument of ca. 150–125 B.C. He argues that the racial specificity of the Jockey's physiognomy (which he identifies as Ethiopian) "verges on effects more proper to genre sculpture, fully realized here as never before" (Stewart 1990: 225, pls. 815–16). In this vein, he compares the Jockey to the statue of the old market woman in New York (ibid., pl. 818). Decker, in his book on Greek athletics, also identifies the Horse and Jockey Group (he incorrectly says from Marathon) as a victor monument in the horse races (Decker 1995: 111, fig. 47). R. R. R. Smith sees the Jockey from Artemision as a vivid example of genre realism, "clearly not a portrait but a generic jockey." However, he is uncertain of the boy's ethnicity. He dates the group more conservatively to the third or second century B.C. The contrast between "noble" horse and "lowly" rider, he argues, was intentional and suggests the much higher relative value of the horse as compared to the jockey in Hellenistic society (Smith 1991: 54). Smith compares the Jockey to the marble copy of the Spinario in the British Museum (inv. no. 1755), which he considers to be a faithful replica of a similar genre study (ibid.: 136). See also J. G. Pedley 1993: 334, fig. 10.24, who dates the Jockey and Horse to ca. 220–200 B.C. and believes that the ship that carried them was heading for the art market in Rome.

48. In *L'Enfant d'Hiérapétra,* a monograph on the Late Hellenistic bronze statue known as the Ierapetra Youth, Éliane Raftopoulou considers the Jockey from Artemision to be a very direct antecedent of that work, which she dates to the second half of the first century B.C. Although the statues represent two very different types, their heads show similarities. In particular, Raftopoulou notes the violent movement that permeates the fleshy mass of the Jockey's face (see Fig. 34) and the forceful power that animates his head. She sees similar features in the Ierapetra Youth, where, in her opinion, they have been reduced to an "unquietness" *(inquiet)* expressed in a lively play between light and dark visible on the surface of the bronze (Raftopoulou 1975: 10). Both heads express a psychologically charged concern, which is calmer and more strictly delimited in the Ierapetra Youth. She notes similarities in the hairstyles of both works, the Ierapetra Youth's hair being essentially the same cut but slightly longer. She also sees a similarity in age and possibly race (ibid.: 18). The Ierapetra Youth is in the Herakleion Archaeological Museum, inv. no. 2677. I am grateful to the ephor of Cretan Antiquities for permission to examine and photograph it.

49. Moreno 1994: 296–302, figs. 368, 370–375, 377, 379. See now also the discussion by Ridgway (2000: 311–12), who dates the Artemision group to the second century B.C.

50. Some scholars have tried to use technique as a means of dating bronze statues (e.g., S. C. Jones 1994). For example, the thinness of these castings and the application of wax by means of a brush might be taken as indications of a Hellenistic date. Similarly, the use of flow welds versus the technique of joining used for the Artemision god and the Riace bronzes is a difference in practice that might have chronological significance. However, given the very few extant examples of Greek bronze statuary and the conservative nature of lost-wax casting, dating by means of technique is not reliable at present and must be used with extreme caution.

51. The existence of large quantities of lead sheathing from the interior of the hull

supports this dating. Although it was originally assessed as Late Hellenistic (Herbig 1929: 637), no formal publication of the pottery from the Artemision wreck appeared until 1979 (Wünsche 1979: 105–6, fig. 41). A reinvestigation of the wreck site (Bascom 1996) might improve our understanding of the wreck as well. C. A. Robinson's second-hand diagnosis (1945: 145), which makes it sound as if there were only a few shards from the wreck, was misleading. It is clear from the early reports that a considerable amount of pottery, including whole vessels, were found (see Chapter 2, Discovery, for references).

52. Gelsdorf 1994: 765; Wünsche 1979: 105–6, fig. 41.

53. Bertos 1926; Arvanitopoulos 1929; Buschor 1936; Picard 1939; Hill 1949.

54. On the chronology of Hellenistic sculpture, see Pollitt 1986: 265–71; Ridgway 1988; Smith 1991: 269–73. On the styles of the late fourth and third century B.C., see Ridgway 1990: esp. 372–74.

55. See, e.g., Ridgway's comments on the Piraeus bronzes (1990: 363). See also Mattusch 1996 for a discussion of this problem. Carol Mattusch takes an especially strong stance against dating Hellenistic bronze sculpture. In a recent catalogue and exhibition, she refrained from offering any commentary on the dates of fifty-five Greek and Roman bronzes from North American collections *(Fire of Hephaistos)*.

56. See Laubscher 1982: 12–42; Ridgway 1990: 328–38. See also Chapter 1, n. 27.

57. Temple of Zeus at Olympia: Ashmole and Yalouris 1967: pls. 28–30, 53–54. The modeling of the Horse from Artemision is clearly much more articulated, especially in the muzzle (cf. Figs. 60–62). Parthenon frieze: Boardman and Finn 1985: 114–17. The veins of the Horse from Artemision are generally not as pronounced as those on the horses in the Parthenon frieze (see, e.g., Fig. 52). This was one of Buschor's reasons for placing the Horse from Artemision chronologically earlier than the Parthenon sculptures, but later than the less articulated horses of the east pediment of the temple of Zeus at Olympia. While Buschor's observations are quite correct, his conclusions can be refuted on other grounds, as argued later in this chapter.

58. Bronze horse from Trastevere: Palazzo dei Conservatori Museum, Rome. See Chapter 1, n. 71; Chapter 3, nn. 19, 54. H. S. Jones 1926: pl. 61, bronze no. 4. This stylistic trait also occurs on many Roman equestrian statues. See, e.g., Bergemann 1990: pls. 4b, 11a–b, 17.

59. Fuchs 1959; Pollitt 1986: 164–75.

60. Xenophon refers to this practice in his work on horsemanship (*Eq.* 8.6).

61. Moreno 1994: 301.

62. Some of the effect of this modeling is lost in the present state of preservation, where corrosive products cover the surface and create a distracting multicolored effect.

63. Cf., e.g., the bronze statuette of an emaciated youth in the Dumbarton Oaks Collection, inv. no. 47.22 (Kozloff and Mitten 1988: 151–54).

64. Arvanitopoulos 1929; Bianchi Bandinelli 1950; Bieber 1961; Moreno 1994.

65. Cf. the fourth-century sculpture of a riding Amazon from the west pediment of the temple of Asklepios at Epidauros, in which the hips of the twisting figure are completely askew: Yalouris 1992: 35–38, no. 34, pls. 40–41. For another twisting equestrian figure from the Classical period whose hips are incorrectly rendered, see Museum of Fine Arts, Boston, inv. no. 03.751 (Comstock and Vermeule 1976: 32, no. 42).

66. Musée du Louvre, inv. no. MA 527. The statue has recently been conserved and restored slightly differently (Bourgeois and Pasquier 1997: fig. 24).

67. Other Hellenistic bronze statues, such as the Terme Boxer (see Fig. 56) and the

statue of a Hellenistic ruler (see Fig. 15) in Museo Nazionale Romano, Rome, have hairstyles that are more plastically rendered and in slightly higher relief (see Himmelmann 1989: 145–46, 170–71).

68. Ludger Alscher (1957: 122, pls. 50–51) compares the style of the drapery to a statue of Isis from Delos (dated by its inscription to 128/7 B.C.) and another draped female figure in Venice, which he dates to the last quarter of the second century B.C.

69. Moreno 1994: 296.

70. On realism in Hellenistic Greek sculpture, see Himmelmann 1980: 83–108; 1981; Laubscher 1982; Pollitt 1986: 141–47; Ridgway 1990: 332–40; Smith 1991: 136–40.

71. Rühfel 1984a: 283; Houser and Finn 1983: 87.

72. See Kallipolitis 1972: 424. Even earlier, a juxtaposition in scale between horse and rider occurs on reliefs in which the horse is smaller in proportion to the rider, thus emphasizing the rider and not the horse. See, e.g., the horses on the north frieze of the Parthenon (Fig. 52; Boardman and Finn 1985: 114–17, pls. 15–16) and many Classical grave reliefs. See, e.g., National Archaeological Museum, Athens, inv. no. 828 (Boardman 1985: pl. 162).

73. Onians 1979: 121–33.

74. For a discussion of these terms, see Stewart 1993b.

75. Alscher 1957: 122–23; Fuchs 1979: 143; Stewart 1990: 225.

76. Early studies of Hellenistic sculpture (e.g., Krahmer 1923–24) referred to open and closed compositions as indicative of early and later periods respectively; they also dated statues with a single viewpoint to the late second or early first century B.C. The Horse and Jockey Group does not fall neatly into any of these categories, and it is unlikely in any event that one can truly attach dates to sculptures based on these stylistic criteria alone.

77. Bieber 1961: 151.

78. Kallipolitis 1972: 424; Schuchhardt 1940; Lippold 1950; Bol 1970; Rolley 1983; Rühfel 1984a; Stewart 1990.

79. Aemilius Paullus monument: Smith 1991: 185, pl. 209. Amazonomachy frieze: Ridgway 1990: 155–56, pl. 73. See also a fourth-century relief-decorated base in the National Archaeological Museum, Athens, inv. no. 3708. For a discussion of this base and other battle images, see Cohen 1997: 24–50.

80. For several representations of this scene, see *LIMC,* vol. 7: s.v. Pegasos (C. Lochin), nos. 216, 217, 219.

81. For previous bibliography, see Todisco 1993: pl. 275.

82. For a discussion of the Krateros monument at Delphi, see Stewart 1993a: 270–77.

83. Roques de Maumont 1958: 26–29.

84. Saatsoglou-Paliadeli 1989: 100.

85. Most of the examples are gathered and discussed in Maul-Mandelartz 1990.

86. Klose and Stumpf 1996: 77–78, 80–83, nos. 138, 139, 148.

87. This convention can be seen on many Egyptian tomb paintings and reliefs of chariot hunting scenes and competitions. See, e.g., the much earlier "Archery Stela" of Amenophis II (ca. 1410 B.C.) (Schulz and Seidel 1998: 161, fig. 23). It is not common in Greek art, although our selection of preserved examples, especially in large-scale sculpture, is very small.

88. Erim 1970: 59, fig. 40. I am grateful to R. R. R. Smith for corresponding with

me about this statue group. See also Erim 1986: 98–101 for a brief discussion of the piece and a photograph of the horse lying upside down.

89. Mary Moore discusses the representations of brands in her dissertation on horses on black-figure vases (Moore 1971: 378–81). On brands in antiquity, see also C. P. Jones 1987: esp. 151, where he briefly discusses the brand on the Horse from Artemision.

90. Kerameikos: Braun 1970. Athenian Agora: Kroll 1977.

91. Braun 1970: 260.

92. Her wings are spread and she leans forward with her feet suspended in the air. On the iconography of Nike, see Shapiro 1993. See also *LIMC,* vol. 6: s.v. Nike (A. Moustaka, A. Goulaki-Voutira, and U. Grote), 852–904.

93. Moreno 1994: 298.

94. Canting devices were used in antiquity, as we know from grave stelai, such as the stele of Leon of Sinope (National Archaeological Museum, Athens, inv. no. 770), and many Greek coin types. I am grateful to Andrew Stewart for this suggestion. It is also conceivable that the brand refers instead to the horse's name. There is no compilation of the names of Greek racehorses; on the names of racehorses in the Roman period, see Darder Lissón 1996 and Heintz 1999.

95. See, e.g., Oleson 1975: no. 29.

96. Preventing the horse from sliding the bit out of its mouth was an important purpose of the cheek piece, so it had to be larger than the horse's mouth when it was opened to its greatest extent. Typical Greek cheek pieces attached to the mouthpiece perpendicularly and were long, with a T- or S-shape. See Anderson 1961: 64–78. There is no further evidence for the Artemision cheek pieces, and our corpus of extant Hellenistic cheek pieces is too small to hazard a guess at their design.

97. Since the inner bit was never rendered, it is only possible to speculate on its original form. It may have been a simple snaffle bit of the type found at many Greek sanctuaries, likely dedications by victors in horse races at the games, rather than the elaborate military bits with complex rollers in the mouth known from actual preserved specimens, iconography, and literary references. See Anderson 1961: 64–78. For an ancient reference to cavalry bits, see X. *Eq.* 10.6–14.

98. A small indentation beneath the area where the strap was on the right side of the Horse's head may also have served to fix the strap to the Horse's head.

99. A pair of scratches on the Horse's left cheek are noticeable because they contrast with the rest of the surface of the bronze. They may have been made by a throat lash of the bridle.

100. Compare the circular bosses that appear on the bridles of two bronze horse-and-rider statuettes believed to be copies of Lysippos's bronze Alexander from the Granikos battle monument. See Calcani 1989: esp. figs. 6, 62, 67. Review by B. S. Ridgway in *JRA* 4 (1991): 206–9.

101. The tuft of hair could have been knotted in a Persian fashion, with possible Persian association. See, e.g., *Die Pferde von San Marco,* cat. nos. 2–5, 51, 91, 93, 96, 97, 98. There are also examples of shaved-maned horses with unkempt tufts of hair on the forehead (see cat. no. 47). Also see Anderson 1961: pl. 21b.

102. The tail is a modern restoration, which seems incorrect to me.

103. Donder 1980.

104. Anderson 1961: 53.

105. For some Hellenistic horse trappings, see Pfrommer 1993: esp. 5–20. For a complete set of Roman horse trappings, see Jenkins 1985: 141–65.

106. See, e.g., Anderson 1961: pl. 19, a bronze statuette from Olympia. Many more are missing their bridles, which were attached separately or added in paint. For a discussion of many of the large-scale horse sculptures, including both Greek and Roman types, and their chronology, see Bergemann 1990: esp. 10–13. One remarkable exception is a colossal marble horse with a nearly intact bronze bridle from a chariot group that crowned the Mausoleum at Halikarnassos. See Waywell 1978: esp. pl. 5.

107. Anderson 1961: 59. On Attic black-figure representations of horse bridles, see Moore 1971: esp. 399–401; Donder 1980: 119–24, pls. 38–41.

108. Faklaris 1986: 1–58.

109. It is conceivable that horse trappings were one means of distinguishing the different contestants in horse races during the Hellenistic period.

110. Compare the missing sections of the Horse with the missing sections of the bronze horse from Trastevere (see Chapter 1, n. 71; Chapter 3, nn. 19, 54; Chapter 4, n. 58), which most likely did have a saddle blanket (Bergemann 1990: pl. 3b).

111. See Szeliga 1983 and Anderson 1961: 79–88. The horse and rider from Aphrodisias had a saddle blanket, to judge from attachment holes (Erim 1970: 59). On the saddles of Roman cavalry, see Connolly and Van Driel-Murray 1991.

112. The Hellenistic marble equestrian statue from Melos, for example, has a saddle blanket (Bergemann 1990: cat. no. P4, pl. 2a). Animal skins were also sometimes used as saddle blankets in the Hellenistic period. See, e.g., the relief of a horse and groom in the National Archaeological Museum in Athens (Fig. 53). Although animal skins do appear as saddle blankets in mythical scenes of the Archaic and Classical periods, Schuchhardt suggests that actual skins were first used in Greece in this manner after the conquests of Alexander the Great as a result of contact with the far east where the practice was more common (Schuchhardt 1978).

113. Kallipolitis 1971: 45, fig. 1.

114. On the proportions of Greek horses, see Markman 1943: 142–96. See also Azzaroli 1982: 155, table 1.

115. Anderson 1961: 20.

116. On Greek horse breeds, see Sakkas 1934; Hancar 1955; Anderson 1961: 15–39; and esp. Azzaroli 1985: 163–81. Different areas of Greece, such as the Argolid and Boeotia, were famous in antiquity for their horses. See also the discussion in Chapter 5. There is considerably more evidence for the Roman period when we know of hundreds of different breeds throughout the ancient world (Toynbee 1973: 167–85).

117. In the past, the idea that the boy could have been riding a dolphin circulated, and it can still occasionally be heard from tour guides in the National Archaeological Museum in Athens. This romantic theory was no doubt spawned in part by the fact that he was recovered from the sea, and by the myth of young Taras riding a dolphin, frequently depicted on Greek coins from Taras (see, e.g., Oleson 1975: no. 16). The Jockey even appeared in a 1957 film entitled *Boy on a Dolphin* (Mattusch 1988: 6). However, there is no evidence to support this theory. While sculptures of figures riding dolphins in antiquity are known (see, e.g., Ridgway 1970a), no dolphin rider adopts this same energetic stance, and the association with the Horse clearly disproves the dolphin rider theory in any case.

118. In my opinion, Rühfel's theory (Rühfel 1984a: 284) that the Horse and Jockey Group are about to make a left-hand turn is incorrect. Everything about the positions of the figures indicates that they are moving straight ahead.

119. Cleveland, Museum of Art, inv. no. 77.41. See Neils 1981; Kozloff and Mitten 1988: 99–101, no. 13. It is instructional to compare the upper body of this statuette with the Jockey from Artemision. The Cleveland figure does not have nearly as much torsion and turns his head downward in the opposite direction.

120. Morrow 1985: 121. Hellenistic examples of spurs as a feature of *krepides* in bronze include a foot from the sanctuary of Oropos in Attica (Petrakos 1968: pl. 27) and the leg from an equestrian statue from the Athenian Agora (Houser 1987a: 255–81).

121. Maul-Mandelartz 1990: 207, pl. 50.2. Two other fragmentary spur straps of different type were identified among the early Roman plaster casts from Baiae (Landwehr 1985: 63–64, nos. 32–33, pl. 30a–d; Morrow 1985: 121, pl. 110). The spur straps occur on female feet identified as belonging to a replica of the Lansdowne Amazon Sciarra type—the original statue is usually attributed to a sculptor of the fifth century B.C., perhaps fifty years later than the Onesimos fragment. However, it is not possible to establish whether or not this spur strap was a feature of the original statue or a later copy.

122. Metropolitan Museum of Art, New York, inv. no. 1971.11.11. See Mertens 1985: 64–66, no. 43.

123. Wojcik 1986: 120–27, no. D12, pl. 64; Morrow 1985: 214.

124. The way in which he leans forward with his left arm outstretched to let up on the reins indicates that he is allowing the Horse to go as fast as it can. This is also evident in the placement of the bridle in the Horse's mouth. Cf. the placement of the bridles in the horses on the north frieze of the Parthenon, where the mouths seem almost torn back as their riders pull up on their reins (Boardman and Finn 1985: 114–17).

125. For a discussion of this dress type, see Abrahams 1964: 52–53; Millington Evans 1964: 46–47. Artemis and Amazons are also known to have worn the *chiton exomis,* but, in these cases, the garment is usually longer than those worn by men (Abrahams 1964: 53). See, e.g., the Amazon of Lansdowne type in Metropolitan Museum of Art, New York, inv. no. 32.11.4 (Richter 1954: no. 37, pls. 34–35). The *exomis* was occasionally worn by male deities and mythical figures as well. The same garment is worn by Hephaistos in a classicizing bronze statuette of Roman date in the British Museum (Abrahams 1964: fig. 19). In Classical Greek vase painting, Charon is also depicted in this garment as he rows his ferryboat. See, e.g., Millington Evans 1964: fig. 40, a red-figure vase in the British Museum.

126. Fuchs 1979: 143–44. See, e.g., Cleveland Museum of Art, inv. no. 63.507, a Late Hellenistic statuette of an Ethiopian (Kozloff and Mitten 1988: 128–31, no. 20). The comparison is striking from the front, but side and back views demonstrate how different the garment really is.

127. See discussion of this type in Schuchhardt 1978: 89–90, figs. 11, 12, 21.

128. Millington Evans 1964: 46.

129. Laubscher 1982: 104, no. 5, pl. 12.

130. Ethiopian: Arvanitopoulos 1929: 146; Hausmann 1962: 270; Havelock 1981: 141; Stewart 1990: 225. Greek-Ethiopian mixture: Snowden 1970: 88. Non-Greek: Schuchhardt 1978: 91. East Greek: Moreno 1994: 296. Unknown ethnicity: Smith 1991: 54. See also Ridgway 2000: 312.

131. See Lacy 1976 and essays in Coleman and Walz 1997 and Cohen 2000.

132. See Snowden 1976: 133–212.

133. Snowden 1970: 1–29.

134. NFA Classical 1991: no. 123, a bronze portrait of an African "princess," also has a very similar nose to the Jockey from Artemision. The head has been dated to the Roman period, but unfortunately it has no archaeological context, so the date is highly debatable. It could even be Late Hellenistic.

135. Museum für Kunst und Gewerbe, Hamburg, inv. no. 1961.1 (Hoffman 1971: fig. 1).

136. For a discussion of this eastern Ethiopian or so-called Nilotic Ethiopian type, see Snowden 1970: 8.

137. Hdt. 7.70; Beardsley 1929: 5.

138. For a discussion of the literary and artistic evidence, see Lacy 1976: 163–300.

139. Under ten, Bertos 1926: 95; ten, Rühfel 1984a: 283; twelve, Moreno 1994: 296.

140. See, e.g., British Museum inv. no. 1755 (Smith 1991: pl. 171).

141. It is not likely that the Jockey represents an older person, such as a dwarf or pygmy. For a thorough discussion of dwarfs and pygmies and the way they were depicted in Greek art, see Dasen 1993: esp. 12–16, 163–74.

142. Chariot-racing scenes represented on tombs in eastern Greece and Etruria may have had a similar significance.

143. On personifications, see Shapiro 1993. Many other statues of personifications are known from antiquity, such as Kairos (Opportunity), Pothos (Longing), Eirene (Peace), Ploutos (Wealth), Demokratia (Democracy), and Tyche (Fortune).

144. The only certain examples are cited by Pausanias (5.20.2–3; 5.26.3). For a discussion and a list of other questionable representations in art, see *LIMC,* vol. 1, s.v. *agon* (F. Canciani) 303–5.

145. See also Mitropoulou 1977. Many sculptural examples of gods in disguise are known. See, e.g., Zeus as a swan with Leda (Boardman 1995: pl. 91) and Eros dressed as baby Herakles.

146. See, e.g., the Krateros monument dedicated at Delphi (Saatsoglou-Paliadeli 1989), which is possibly reflected in the Krateros relief from Messene (see Fig. 58). On Greek hunting, see Anderson 1985: 17–56; Butler 1930.

147. The way he turns his head to the left suggests that he is looking backwards, not forwards. The pose could be consistent if he was depicted as running away from an attacking animal or a wounded animal, not toward one.

148. Calcani 1989; Cohen 1997: 24–50. On military victor monuments, see also Rice 1993.

149. On a black-figure dinos from Gortyn attributed to Sophilos, a victor in a horse race turns his head in a similar way to see his competitors as he crosses the finish line: Herakleion Archaeological Museum, inv. no. 350098. See Beazley 1986: 18.14BIS; Bakir 1981: pl. 81, fig. 160.

CHAPTER 5. ANCIENT GREEK HORSE RACING

1. Considerably more scholarship has been devoted to chariot racing. See Raepsaet 1992; Olivovà 1989; Patrucco 1972: 373–403; Mercklin 1909. For chariot racing in the Roman period, see Landes 1990; Humphrey 1986; Harris 1972: 213–26.

2. On the Geometric period, see Coldstream 1977; Langdon 1993.

3. See Zimmerman 1989; Benson 1970. Maul-Mandelartz (1990: 32, pl. 2.1) collects examples of horse and rider images in Geometric art. There is great debate over the interpretation of Late Geometric figural scenes. See Ahlberg 1971a; Ahlberg 1971b; Boardman 1983; Langdon 1989.

4. Arist. *Pol.* 1274b claims that "[a]fter kingship the earliest governments among the Greeks gave political rights to the warrior class, and in the beginning were made up of the *hippeis,* for with the *hippeis* rested strength and superiority at war time." See Worley 1994: 21–56. For possible confirmation of this class system in Athens already in 850 B.C., see Smithson 1968.

5. In contrast to the rising importance of the ridden horse in warfare, it is apparent that chariots were practically obsolete in warfare by 700 B.C.

6. This passage brings up many interesting features of an ancient chariot race, such as the prizes awarded, the selection of positions, the dangers of the turn, and betting on the race. See Patrucco 1972: 373, 391, 399–402; Harris 1972: 153–57. The exact relationship of these mythic racing features to the games of ancient Greece is a matter of debate. For a discussion of Bronze Age chariots, see Crouwel 1981.

7. Many scholars have questioned this statement because of the apparent close association of chariot racing and the mythic origins of the games. For example, the myth of Pelops chariot-racing for the hand of Hippodameia is portrayed on the Early Classical east pediment of the temple of Zeus at Olympia (see Ashmole and Yalouris 1967: figs. 14–15, pls. 1–61). There is a mythic connection with the *keles* as well. Pausanias (5.8.4) relates a myth in which Iasos, an Arkadian, won the horse race on a riding horse in the games at Olympia established by Herakles.

8. Anderson 1961: 15–16. On the Orientalizing period, see Hurwitt 1985: 125–202; Payne 1931; Amyx 1988.

9. These scenes are catalogued and discussed by Elsbeth Maul-Mandelartz in her book on representations of Greek equestrian competitions (Maul-Mandelartz 1990: 39–48). See also reviews of Maul-Mandelartz 1990: J. Bergemann in *Gnomon* 66 (1994): 714–15; P. Stephanek in *Nikephoros* 5 (1992): 278–81.

10. Alcm. Fragment 1, *Papyrus Louvre E 3320,* lines 50–59. The text is metaphorical, but he refers to several different breeds of racehorses. See also the discussion of the horse breeds by scholiasts A and B of the text (*Greek Lyric* 1988: 371, 375).

11. Paus. 8.18.8; Moretti 1953: 91; Neils 1992: 20.

12. Paus. 10.7.5, 6.13.10; Neils 1992: 20.

13. Miller 1984: 184, pl. 41d.

14. Moretti 1957: no. 103.

15. On the early Panathenaia, see Kyle 1987; Neils 1992, 1996.

16. Royal Ontario Museum, Toronto, inv. no. 919.5.148 (*ABV* 395.2); Metropolitan Museum of Art, New York, inv. no. 07.286.80 (*ABV* 395.1). On panathenaic amphorae, see Frel 1973 and Hamilton 1996, with previous bibliography.

17. Some of the chariot-wheel votives discussed below may have been dedications by victors at local festivals, which may also have included riding events.

18. For a catalogue and discussion of these vases, see Maul-Mandelartz 1990: 81–104.

19. Hom. *Il.* 23.257–650; dinos fragment, National Archaeological Museum, Athens, inv. no. 15499. See *ABV* 39.16.

20. The fragmentary vase was excavated at Gortyn in central Crete in the 1950s. It has been restored and is currently on display in the Herakleion Museum. See Bakir 1981: 72, no. B.2, pls. 80–81, figs. 158–60; Moore 1971: 25, no. A.90, pl. 5.4. I am grateful to the Greek Ephoreia for permission to study this vase in the Herakleion Museum in 1994.

21. Tripods were a common prize at the games in the Archaic period, and they appear in great numbers as votives, especially at Olympia and Delphi (Morgan 1990).

22. The other customary dress of Greek jockeys was a short tunic.

23. Denoyelle 1994: 62. On horse-head amphorae, see also Birchall 1972.

24. British Museum, inv. no. B. 144. On the role of heralds at the games, see Crowther 1994b.

25. Nauplion Archaeological Museum, inv. no. 1 (*ABV* 260.27, 257; Carpenter 1989: 68; Rühfel 1984b: 63, fig. 35; Beazley 1986: 85, pl. 94.3).

26. Ex Graham Geddes Collection (Geddes Collection 1996: no. 234, p. 32, with associated plates; Schleiffenbaum 1991: 499, fig. 26).

27. See also a red-figure hydria in Munich, Antikensammlungen, inv. no. 2423 (Maul-Mandelartz 1990: 75, pl. 17.2) and a black-figure hydria in the Israel Museum, Jerusalem, inv. no. 74.9.8 (Maul-Mandelartz 1990: 87, pl. 21).

28. Metropolitan Museum of Art, New York, inv. no. 1989.281.71 (Muscarella 1974: no. 60; Muscarella 1992: 61, no. 67).

29. The sculptural examples are gathered and discussed in Schuchhardt 1978.

30. Hom. *Od.* 1.22–26. On the cults of Poseidon, especially Poseidon Hippios, see Farnell 1907: 1–55. Ethiopians were among the great charioteers of the Roman period. See Snowden 1970: 167–68.

31. Archaeological Institute of Heidelberg University, inv. no. B57 (*ARV2* 324.66; Maul-Mandelartz 1990: cat. no. KL 8, p. 201, pl. 50.2). For a discussion of ancient Greek spur straps, see Morrow 1985: 121; Maul-Mandelartz 1990: 129–31.

32. Moretti 1957: nos. 147, 152.

33. Paus. 6.13.9, trans. W. H. S. Jones (Pausanias [1918] 1988: 77–79).

34. See discussion under Hellenistic period later in this chapter.

35. See also discussion in Patrucco 1972: 395; Crowther 1994b: 146–47.

36. Empedokles of Akragas: Moretti 1957: no. 170. Krokon of Eretria: Paus. 6.14.4; Diogenes Laertius 8.51; Moretti 1957: no. 177.

37. Moretti 1957: no. 171.

38. For a depiction of the event on a didrachma from Himera of ca. 472 B.C., see Franke and Hirmer 1964: pl. 20. Later issues of the same coin occur as well. See, e.g., Cahn et al. 1988: no. 303.

39. According to Pausanias (5.9.1) the *apene* was added to the program in the 70th Olympiad (500 B.C.). The *apene* appears to be represented on several coin issues from Sicily and Magna Graecia. See Cahn et al. 1988: 67, nos. 220, 362, 364, 365, 367, 368, 372.

40. For large-scale stone equestrian statuary in the Archaic period, see Eaverly 1995. See also review of Eaverly by S. Hemingway in *BMCR* 7, 5 (1996): 403–5.

41. Hyde 1921: 279; Serwint 1987: 75.

42. Ebert 1972: 44–46. The victor is Pantares, son of Menekrates, from Gela. Unfortunately, the base is not preserved, nor is the identity of the contest. Joachim Ebert's reconstruction (ibid.: 46), however, is plausible. The bronze plaque from Nemea (Miller 1984: 184, pl. 41: d), mentioned above, may well have identified a small statue in the

same way that Ebert (1972: 44–46) suggests for the bronze plaque from Olympia. The plaque could also simply be a votive.

43. Paus. 6.14.4.

44. Two examples, one from Rhodes and the other from Lokris, are illustrated in Jeffery 1990: pls. 15.17 and 67.13.

45. Anderson 1961: 53.

46. Jeffery 1990: no. 5a, p. 449.

47. Paus. 6.13.9, 6.10.8, and 6.19.6; Kyle 1987: 208.

48. Pi. P. 3, title and lines 72–74, trans. William H. Race (Pindar 1997: 245, 253).

49. On the *periodos* and *periodonikes,* see Knab 1934: 4–15, esp. 8. See also Bell 1989: 169.

50. See discussion in Bell 1989: 169–70.

51. Paus. 6.13.9.

52. B. 5.37–49, trans. D. A. Campbell (*Greek Lyric* 1992: 141).

53. Scholars disagree on the numbers. Harris (1972: 186) believes as many as fifty to sixty chariots competed at once. Humphrey (1986: 6) estimates as many as forty-eight. Ebert (1989: 96–97) argues the numbers were smaller, only five to ten chariots. Crowther (1993: 47–48) summarizes the arguments but does not venture an opinion. The great Circus Maximus in Rome was built for a maximum of twelve four-horse chariots to compete at one time. See Harris 1972: 186.

54. Of particular importance is the list of winners from 776 B.C. to A.D. 217, drawn up by Julius Africanus and preserved for us by Eusebius. Moretti (1957) combines this information with other literary and epigraphic evidence to produce a list of Olympic victors, which is referred to frequently later in this chapter.

55. The numbers in parentheses refer to Moretti 1957: 476 B.C., Hieron of Syracuse wins *keles* (no. 221); 472 B.C., Hieron wins a second time at Olympia (no. 234); 468 B.C., Leophron of Athens wins *keles* (?) at Olympia (no. 247); 464 B.C., Echekratidas of Thessaly (no. 258); 456 B.C., Aigias of Na(upaktos) wins *keles* (no. 279); 452 B.C., Python of (H)I(mera) wins *keles* (no. 293); 420 B.C., Xenombrotos of Kos wins *keles* (no. 340); 400 B.C., Aisypos, son of Timon wins *keles* (no. 365); 388 B.C., Kleogenes son of Silenos of Elis wins *keles* (no. 387), date not secure; 356 B.C., Philip II of Macedon wins *keles* at Olympia (no. 434); 340 B.C., Kalliades wins an equestrian event at Olympia (no. 455).

56. *POxy.* II 222, line 6. The Argives also entered and won as a city in the four-horse chariot race at Olympia (*POxy.* II 222, line 31; Patrucco 1972: 389).

57. Patrucco 1972: 389–90.

58. Th. 6.12.2. Alcibiades also competed and won in the *keles* (Kyle 1987: 195–96).

59. A second-century A.D. inscription from Mysthia in Pisidia records a late rule at a local festival there that limited the number of horses or chariots a single contestant could enter in a given day (*SEG* VI, 449, lines 16–19; Patrucco 1972: 387). This is much later and of local significance. There is no indication that such rules were in effect at the panhellenic games of the Classical and Hellenistic periods.

60. The names of charioteers are only mentioned twice in Pindar's Odes (*O.* 6.22–25; *I.* 2.22) and jockeys not at all (Patrucco 1972: 386).

61. Gardiner asserts that jockeys were frequently paid servants (Gardiner 1910: 463), a reasonable assumption. Plato *Lys.* 205a refers to a paid charioteer (see also Kyle 1987: 199).

62. This is true of the local festivals, too, to judge from a similar, exceptional boast of the Spartan Damonon, who won many races as jockey and charioteer of his own horses at Lacedaimonian festivals in the third quarter of the fifth century B.C. (*IG V,* pt. 1, 213).

63. Ebert 1972: 263 gathers eight examples. Two others are mentioned in the *Anthologia Graeca* 9.19, 9.21.

64. Paus. 6.1.6.

65. See Moretti 1953: no. 17.

66. See, e.g., Patrucco 1972: 388. Lee (1988) argues from an inscription that a woman drove herself to victory in the four-horse chariot race at Isthmia. Raschke 1994 discusses the iconography of female charioteers in a scene on an Athenian red-figure kylix that may be related to an actual race.

67. Paus. 6.1.4–5, trans. W. H. S. Jones (Pausanias [1918] 1988: 5). The statue base that Pausanias saw has also been recovered (Moretti 1953: no. 19).

68. Bell 1989: 174; Paus. 5.9.1.

69. Paus. 5.8.10, 10.7.7.

70. On the Panathenaic Games, see Kyle 1987; Neils 1992.

71. *IG II*^{2} 2311. Several books discuss the Athenian cavalry; see Martin 1886; Bugh 1988; Worley 1994. Aristophanes (*Nu.* 22), a fifth-century source, albeit in a comic context, mentions that an Athenian, Pheidippides, paid 12 minae, or 1,200 drachmae—a tremendous sum—for a racehorse.

72. *IG II*^{2} 2311, line 58. Scholars differ on the interpretation of the terms in this inscription. Kyle (1987: 185–86) believes the chariot race is for four-horse chariots. Neils (1992: 16) takes it to mean a two-horse chariot race. A victor in the chariot race for adult horses received 140 amphorae of olive oil for first place and 40 amphorae for second place. In the same contest for foals, the prizes were 40 amphorae for first place and 8 amphorae for second place. In the warrior competitions, the prizes were much smaller. The first prize for the *keles* was 16 amphorae of olive oil and second prize was 4 amphorae. For the chariot race, the victors received 30 amphorae for first prize and 6 amphorae for second prize. For the chariot procession, they received 4 amphorae for first prize and 1 amphora for second prize. For the javelin throw on horseback, the first prize was 5 amphorae and second prize was 1 amphora.

73. See Neils 1992: 16, fig. 1, for a photograph of *IG II*^{2} 2311 with an English translation of the text. See also Kyle 1987: 186.

74. *IG II*^{2}, 3126 A73; Kyle 1987: 187.

75. Robert 1977b: 213 argues from a fragmentary Athenian inscription that a fourth-century B.C. festival of Eirene in Athens included equestrian games.

76. X. *Eq.* 3.10–13.

77. See discussion by Kyle 1987: 189–90. It may also have been undertaken in Boeotia. See *IG VII* 2087; Moretti 1953: 103. This base was found in the area of the Athenian Agora and is now in the National Archaeological Museum, Athens, inv. no. 1733 (Todisco 1993: 88, pl. 156, with previous bibliography; Ridgway 1997: 250).

78. Kyle 1987: 193 interprets the inclusion of this race in the Athenian games as a political concession to Thracians in Peiraeus, inasmuch as Bendis is the Thracian version of Artemis. The *aphippolampas* is attested in the Hellenistic period at Athens (*IG II–III*^{2} 958 line 67) and in Thessaly at Larissa (*SIG* 1059 II line 18; *SIG* 1069.2, line 19).

79. *SIG* 1059, lines 38–39.

80. Patrucco 1972: 184. On the *apobates,* see Kyle 1987: 188–89.

81. *IG VII* 4254; Petrakos 1968: no. 47, 196–98.

82. Patrucco (1972: 384) considers the Oropos program to be typical of a local festival of the Classical period. It must be recognized, however, that the extent of the military competitions found in Attica is not paralleled elsewhere and it is perhaps better to consider it as typical of an Attic local festival.

83. *IG V,* pt. 1, 213.

84. Ringwood 1927: 74–90; Bell 1989: 180.

85. Ringwood Arnold 1936: 435, 432. Further evidence for an interest in horse racing on the island of Rhodes is the victories of Rhodians at the panhellenic games. Moretti (1953: no. 23) suggests that one Rhodian victor ca. 370–360 B.C., whose name is preserved in an inscription, may have won in the equestrian events.

86. There is little to support Bell's argument (1989) that the *keles* should be seen as closely related to cavalry activities.

87. See Maul-Mandelartz 1990: 201–8, pls. 37, 43, 45, 47, 49, 50, for a catalogue of vases and many illustrations. Kyle (1987: 185) suggests the decline in representations may reflect a decrease in interest in the *keles* event at Athens. Hamilton (1996) challenges this assertion.

88. Bell 1989: 174. Lonrigg (1972: 12) suggests that the Sicilians owed their success to the use of breeds from North Africa, famous in antiquity for its racing stock.

89. Holloway 1978: 67–71; Holloway 1991: 130–34.

90. The best-published illustrated collections of these Tarentine coins are Evans 1889 and Ravel 1947. See also *BMC* Tarentum and Brauer 1986. The jockey in the coins has been interpreted as Taras or one of the Dioskouroi (Evans 1889: 12). The people of Taras are known to have competed at Athens in the greater Panathenaia. See Neils 1992: 49 for a discussion of the Tarantine tombs of victors in the panatheniac chariot races.

91. Cahn et al. 1988: no. 377; Franke and Hirmer 1964: pl. 194. There are several different related types. See American Numismatic Society, New York, inv. nos. 1967.152.487, 1957.172.1813, 1944.100.53200.

92. On these coins, the jockey is depicted as a nude youth riding without a saddle blanket, which was, as we have seen, a customary way of representing the jockeys in Greek horse races, but in another issue by Philip II, the king himself is shown bearded, wearing a *chlamys* and *petasos,* on a horse with a saddle blanket (Franke and Hirmer 1964: pl. 170). Also of interest is the fact that Philip II's silver tetradrachms commemorating his *keles* victory at Olympia appear to have inspired a number of related issues in Asia Minor. See, e.g., a silver coin of 350–300 B.C. from Ophrynion in the Troad, *BMC* Ophrynion no. 1, pl. XIV, 6. Other issues inspired by the same coin occur in Celtic regions of Europe as late as the end of the second century B.C. These coins, although highly stylized, point not only to the influence of the Macedonian empire, but also to the difficulties of interpreting coin imagery.

93. Serwint 1987; Rausa 1994.

94. Paus. 6.12.1, trans. J. J. Pollitt (Pollitt 1990: 46).

95. For ancient references to other works by Kalamis, see Pollitt 1990: 46–48. On the danger of attributing existing works to Kalamis on the basis of style, see Ridgway 1970b: 70. As we have seen, some early scholars even attributed the Artemision Horse to Kalamis (Arvanitopoulos 1929: 143; Buschor 1936: 70).

96. The Delphi charioteer statue group was set up by Polyzalos, ruler of Gela in

Sicily, in honor of a victory in the chariot races at the Pythian games in 478 B.C. On the group, see Rolley 1990; Jeffery 1990: 266, both with previous bibliography.

97. Paus. 6.2.8, trans. J. J. Pollitt (Pollitt 1990: 106).

98. On Aisypos's victory, see Herrmann 1988: 152.

99. Plin. *HN* 34.76; Pollitt 1990: 105–6.

100. Paus. 6.14.12, trans. W. H. S. Jones (Pausanias [1918] 1988: 89).

101. Dittenberger and Purgold 1896: no. 170.

102. Ebert 1972: no. 49, 154–57; Herrmann 1988: 169.

103. Arvanitopoulos 1929: 149; Kyle 1987: 222.

104. *ARV* 871, no. 91; Hesperia Art 1961–62: no. 216; Sotheby's 1998: 77, no. 134.

105. Hesperia Art 1961–62: no. 216.

106. Paus. 6.1.4.

107. Ebert suggests that a fragmentary inscription of the fifth century B.C. from Delphi is for a victor in a *keles* event there (Ebert 1972: no. 18). Another base from Delphi for a small bronze group of horses from the middle of the fourth century B.C. could refer to victories in the *keles* but is more likely to be in commemoration of chariot competitions (Moretti 1953: no. 27).

108. Hdt. 6.103, trans. A. D. Godley (Herodotus [1922] 1971: 255–57).

109. Alexander the Great's horse Boukephalos also received an elaborate burial and Alexander named a city after him (Green 1991: 402). Boukephalos was not a racehorse, however, but a charger used on Alexander's military campaigns.

110. On boy athletes in ancient Greece, see Papalas 1991; Frisch 1988.

111. There is some indication that there were age categories for jockeys in Greece during the Roman period. A recently discovered Tiberian decree from Messene in the Peloponnesos mentions equestrian games for youths in conjunction with gymnastic games for boys sponsored by the emperor. See *SEG* 39 (1989), no. 378.

112. For references to the above-named victors, see Moretti 1957: nos. 491, 523, 558, 577, 585, 498, and 508.

113. Paus. 6.4.10, 6.12.7.

114. Moretti 1957: no. 428.

115. Diogenes Laertius (4.30) preserves a poem by the early Hellenistic philosopher Arkesilaos (ca. 318–242 B.C.) regarding the horses of Pergamon: "Pergamos, not famous in arms alone, is often celebrated for its steeds in divine Pisa. And if a mortal may make bold to utter the will of heaven, it will be much more sung by bards in days to come" (Diogenes Laertius 1925: 407).

116. Moretti 1957: no. 574. On Aratos, see Plu. *Arat.;* Griffin 1982: 79–87.

117. Pantarkes won the *keles* at Olympia in 138 B.C. (Pausanias 6.15.2). For first-century B.C. victors, see Moretti 1957: nos. 670, 671, 680, 694, 698, 707, 711, and 720.

118. Harris 1972: 174.

119. *Anthologia Graeca* 9.20–21, trans. W. R. Paton (*Greek Anthology* 1917: 13).

120. Another poem of the same type (*Anthologia Graeca* 9.19) describes the similar plight of an old racehorse named Eagle (Aetos).

121. On hippodromes, see Lehndorff 1876; Smith and Marinden 1890; Romano 1981: 173–75; Ebert 1989. For the equally scanty evidence in Anatolia, see Roos 1994. For the hippodrome in Cyrene, see Laronde 1987: 76, fig. 20, no. 42. For a discussion of the second- or first-century B.C. hippodrome in Antioch, see Downey 1961: 647.

122. See Romano 1981: 173–75. Located up in a mountain plain, this hippodrome is not a typical site.

123. Paus. 6.20.10–21.1, trans. W. H. S. Jones (Pausanias [1918] 1988: 123–29).

124. Ebert 1989: 103. Ebert illustrates the document itself for the first time (pl. 12). See discussion by Patrucco (1972: 395). While the transcription is dated to the eleventh century A.D., Ebert argues that the wording in the text suggests that the original was either Late Hellenistic or Imperial Roman (Ebert 1989: 106–7). Prior to Ebert's reconstruction, Hirt's was considered the most accurate. For early reconstructions, see Lehndorff 1876: 19–38, figs. 1–5.

125. A similar *aphesis* has been suggested for the hippodrome at Delphi, but there is nothing to support this theory. See discussion in Patrucco 1972: 394.

126. *IG II/III* 1638; Harris 1972: 162–63. A recent theory put forth by Bruneau 1995: 35–41 identifies a long wall behind the palaestra at Delos as a feature of a renovated and more centrally located Hellenistic hippodrome for the Delian games.

127. Pausanias (6.16.4) records the hippodrome at Nemea as being two stades long.

128. Ebert 1989: 104.

129. Hom. *Iliad* 23.306–48, 391; S. *El.* 724–30, 743–48; Paus. 6.20.15.

130. A scene on the shoulder of a red-figure early Apulian volute krater in Munich illustrates one of the obvious dangers: several riders have just come around the turn and the last jockey, having lost his seat, is being dragged by his horse (Jahn 1854: no. 805; Patrucco 1972: fig. 190; Rühfel 1984b: 59, fig. 33).

131. Tracy and Habicht 1991; Tracy 1991.

132. Tracy and Habicht 1991: 199.

133. Ibid.: 216–17.

134. See restoration of *IG II*^{2} 2314 line 91 (Fig. 71) by Tracy and Habicht (1991: 222). On the relationship between Athens and the Attalids during the second century B.C., see Habicht 1990.

135. Tracy and Habicht 1991: 169–70, col. 2 lines 24 and 30; col. 3 line 14.

136. See discussion of the term by Tracy 1991: 142 n. 41.

137. The dates of the panathenaic victories discussed above follow the chronology proposed by Tracy and Habicht 1991: 217–21.

138. Theseia: Bugh 1990. Pythiad: *SIG* 697.H; *SIG* 711.H; *SIG* 728.H; Bell 1989: 186–87. Many Attic festivals do not appear to have included equestrian events; see Simon 1983.

139. *IG II*^{2} 956–65; Bugh 1990: 25; Simon 1996.

140. Bugh 1990: 24.

141. For discussion of the Pythiad, see Bell 1989: 186–87; Daux 1936: 521–83.

142. Frazer 1972: 230–32; Koenen 1977: 29–32 (which see also on the so-called Ptolemaic *Königsfeste*).

143. Antiochos IV: Downey 1961: 97. For ancient accounts of these games, see Athenaeus 5.194 and 10.439 and Polybius 30.25–27. Antiochos VIII: Athenaeus 5.210e and 12540b, who is quoting the Late Hellenistic historian Posidonios. Antiochos VIII, also known as Antiochos Grypos, ruled Antioch jointly with his mother Kleopatra from 125 to 121 B.C. (Downey 1961: 127) and, after killing his mother in 121/20 B.C., reigned alone until 96 B.C.

144. Downey 1961: 648.

145. *OGIS* 233.29. See also *SEG* XLIII, no. 1279; Sherwin-White and Kuhrt 1993: 163–65

146. *OGIS* 282.8, 319.9. Attalos I celebrated important games in honor of Athena in 220 B.C. (Polybius 4.49.3; Allen 1983: 122–23) and these are likely to have included equestrian events, as Moreno has suggested (1994: 296).

147. *IG IX*^{2}*1* 179.10; Daux 1936: 509–10; Allen 1983: 123.

148. On the Naia festival, see Cabanes 1988: 62. Preuner (1903: 370–82) gathers and discusses several second-century B.C. victor lists pertaining to games at Larissa that included equestrian events. Gallis (1988) discusses the games at Laris(s)a, including the equestrian events that included at least four single-horse races: a race for foals, a race for full-grown horses, the *aphippolampas,* or nocturnal torch race on horseback, and the *aphippodroma,* or mounting competitions, when the rider would dismount at several points in the course, run alongside the horse, and mount again (ibid.: 220). A victor list in Halikarnassos mentions the horse races at the games of the Heraia, or Hecatombaia, at the Argive Heraion. Cf. *IG IV* 611 and *IG XI,* pt. 4, 1164. The remarkable discovery of a Classical bronze tripod with the inscription "a prize from the Argive Heraion" in a Macedonian tomb of Late Classical or Early Hellenistic date may well have been an heirloom from a victory by a Macedonian ruler in the same equestrian games at the Argive Heraion. See Andronikos 1984: 164–66, figs. 133–34.

149. Basilea festival: *SEG* III, 367. Two *keles* victors, perhaps between 80 and 51 B.C., from Tyre are recorded on an inscription from the site (Moretti 1953: 110). The *keles* for colts is attested at the Theban Herakleia in a victor list of the second or first century B.C. (Roesch 1975: 1). There is some debate over when the equestrian games were instituted in the festival. Roesch sees them as a feature of the Classical Herakleia, but Robert (1977a: 209–210) argues that they were incorporated into the program in the Hellenistic period. Pamboeotia festival: *IG VII* 2871. See also Schachter 1978.

150. *SEG III* 367.16–27. On the relationship between the Greek world and Rome in the Hellenistic period, see Gruen 1984: 359–730.

151. Lykaion: Moretti 1953: no. 35, line 9. Delos: Bruneau 1970: 82; 1995: 37–41.

152. *SIG* 1063.20, 700.35; Ringwood 1927: 25–31.

153. Edwards 1957: 322, 330, pls. 79–80, nos. 19, 20.

154. See Cahn et al. 1988: nos. 85, 86, 88, 94, and 96. See also Evans 1889: pls. 2–10; Ravel 1947: pls. 1.2–3, 1.24, 9.271, 11.323–30, 12–15, 17–19, 21–22, and 24–33.

155. This is following the chronology of Evans 1889: 8–9.

156. On athletic sculpture, see Rausa 1994: 149–50. For a survey of art in the Hellenistic age, see Pollitt 1986. He does not even discuss athletic sculpture as a corpus in any detail. See also Smith 1991: 51–62. Examples of large-scale bronzes are discussed in Chapter 1 of this book. They include an athlete crowning himself, in the J. Paul Getty Museum, Malibu, inv. no. 77.AB.30 (see Fig. 20.1–2), and the "Terme Boxer" (see Fig. 56). See also the fourth-century (ca. 330 B.C.) head of a boxer from Olympia in the National Archaeological Museum, Athens, inv. no. Br. 6439 (Stewart 1990: pl. 514). The runner from Kyme in the Izmir Archaeological Museum, sometimes dated to the first century B.C., is probably a Roman work of the first century A.D. (Uçankus 1989: 155).

157. A large-scale marble equestrian statue group from Aphrodisias may be one example. This statue is not fully published and the excavators have not offered a date for

it as of yet. It could be Hellenistic, but is more likely an imperial Roman work. See Erim 1986: 99 and the discussion in Chapter 4.

158. Moretti 1953: no. 35.

159. Dittenberger and Purgold 1896: nos. 198–204. Luigi Moretti (1957: nos. 670–75) believes that the family members won during the course of a single Olympiad (the 174th, in 84 B.C.), while Dittenberger and Purgold suggest that the victories spanned several Olympiads. Herrmann (1988: 179) follows Moretti.

160. Moretti 1953: 34.

161. Herrmann 1988: 177.

162. Charops in 56 B.C.; Agilochos in 52 B.C.; Lycomedes in 36 B.C. (Herrmann 1988: 179).

163. Herrmann 1988: 181.

CHAPTER 6. CONCLUSIONS

1. While it is theoretically possible that the two fragments belong to two different horses from the same monument, there is no positive evidence to support this conclusion.

2. It was not possible to examine the interior of the hind hooves in great detail.

3. Serwint 1987.

4. On borrowed images and the difficulty of determining their use(s) beyond the image's original purpose, see Wollheim 1987: 188–90.

5. This can be seen in a number of Hellenistic baroque sculptures. For a discussion, see Stewart 1993b: esp. 143.

6. Snowden 1997: 105.

7. Possible fifth-century B.C. examples can be seen on a red-figure cup from Vulci, now in the Berlin Staatliche Museen, inv. no. F 2574. See Snowden 1976: 152, fig. 169; 1983: fig. 20. For the Hellenistic period, see a late fourth-century B.C. bronze head from the Temple of Apollo at Cyrene, now in London, British Museum, inv. no. GR 1861.11–27.13 (Snowden 1976: 184, fig. 230), which was found together with fragments of bronze horses and may well be from an equestrian victory monument (Walters 1899: 34, no. 268; 1915: pl. 15). See also a late fourth-century B.C. relief with a groom and horse in the Ny Carlsberg Glyptoteck, Copenhagen, inv. no. NCGl. I.N. 2807 (Schuchhardt 1978: fig. 12).

8. Museum of Fine Arts, Boston, J. H. and E. A. Payne Fund, acc. no. 59.11. Height 8.1 cm. Dated to ca. 150–50 B.C. See Comstock and Vermeule 1971: 78–79, no. 82; Kozloff and Mitten 1988: 124–27, no. 19.

9. Bodrum Archaeological Museum, inv. no. 756. See Chapter 1, n. 43, for references.

10. Hdt. 6.103.

11. For a survey of the Greek practice of burying animals, see Georgoudi 1984: 36–41. Greek funerary statuary is much more frequently executed in stone. One extant bronze statue, probably Late Hellenistic in date, that has been interpreted as funerary (Raftopoulou 1975: 28) is the so-called Ierapetra Youth in the Herakleion Museum.

12. For a discussion of political motivations for athletic statuary in the Classical period, see Raschke 1988: esp. 39–41.

13. The likelihood that the Horse and Jockey Group is a royal dedication is much greater if it is dated to ca. 150 B.C., as is argued below.

14. Antikythera: Svoronos 1908: 1–80 and Bol 1972; Mahdia: *Das Wrack*.

15. Palagia 1997: 178.

16. Baudoin, Liou, and Long 1994.

17. It has also been argued that the bronzes aboard were made on Delos. See Barr-Sharrar 1998: 185–98, with previous bibliography.

18. Herbig 1929: 637; Gelsdorf 1994: 765.

19. Demetrias: Beyen 1930: 51–52; Larissa: Rühfel 1984a: 286; for Rome as the probable destination, see Pedley 1993: 334.

20. Reinach 1930: 142–43.

21. On Dion, see Pandermalis 1997 and 1999, with previous bibliography.

22. Moreno 1994: 296.

23. Paus. 7.16.8–9; Pape 1975: 16–18. Pausanias states that Mummius gave works of lesser importance to Attalos. As an athletic monument, the Horse and Jockey could well fall into this category, given the remarkable statues that must have been available to Mummius at Corinth. The Artemision god is perhaps harder to reconcile with this designation. Pausanias's comment is likely to have been partially predicated on his own assessment of the booty that he saw, however, and he would not, of course, have seen the Artemision bronzes, since they would have sunk en route to Pergamon.

24. Schuchhardt 1974: 13–24 has identified a draped female statue in Early Classical style from Pergamon as part of the booty from Corinth.

25. This idea was first suggested to me by Anthony Raubitschek (personal communication), who examined the pottery from the Artemision wreck in 1930. He published the idea in a footnote in his monumental work on the dedications of the Athenian Acropolis (Raubitschek 1949: 507). Wünsche 1979: 105–6 supports this theory, as does Robertson 1981: 204.

26. Gruen 1984: 359–436.

27. Although the Ptolemaic dynasty continued well into the first century B.C., relatively little is known about the history of Egypt in the second half of the second century B.C., and nothing is known of Ptolemaic participation in the panhellenic games. See Turner 1984: 118–19.

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