ANIMALS IN THE ANCIENT WORLD FROM A TO Z

KENNETH F. KITCHELL JR.
ANIMALS IN THE ANCIENT WORLD
FROM A TO Z

The ancient Greeks and Romans lived in a world teeming with animals. Animals were integral to ancient commerce, war, love, literature, and art. Inside the city they were found as pets, pests, and parasites. They could be sacred, sacrificed, liminal, workers, or intruders from the wild. Beyond the city domesticated animals were herded and bred for profit and wild animals were hunted for pleasure and gain alike. Specialists like Aristotle, Aelian, Pliny and Seneca studied their anatomy and behavior. Geographers and travelers described new lands in terms of their animals. Animals are to be seen on every possible artistic medium, woven into cloth and inlaid into furniture. They are the subject of proverbs, oaths, and dreams. Magicians, physicians, and lovers turned to animals and their parts for their crafts. They paraded before kings, inhabited palaces, and entertained the poor in the arena. Quite literally, animals pervaded the ancient world from A–Z.

In entries ranging from short to long, Kenneth Kitchell offers insight into this commonly overlooked world, covering representative and intriguing examples of mammals, reptiles, amphibians and invertebrates. Familiar animals such as the cow, dog, fox, and donkey are treated along with more exotic animals such as the babirussa, pangolin, and dugong. The evidence adduced ranges from Minoan times to the Late Roman Empire and is taken from archaeology, ancient authors, inscriptions, papyri, coins, mosaics, and all other artistic media. Whenever possible, reasoned identifications are given for ancient animal names and the realities behind animal lore are brought forth. Why did the ancients think hippopotamuses practiced blood letting on themselves? How do you catch a monkey? Why were hyenas thought to be hermaphroditic? Was there really a vampire moth? Entries are accompanied by full citations to ancient authors and an extensive bibliography.

Of use to Classics students and scholars, but written in a style designed to engage anyone interested in Greco-Roman antiquity, this A-to-Z reveals the extent and importance of the animal world to the ancient Greeks and Romans. It answers many questions, asks several more, and seeks to stimulate further research in this important field.

Kenneth F. Kitchell, Jr. has been a Professor of Classics at University of Massachusetts Amherst for 15 years. Prior to this he was Professor of Classics at Louisiana State University and a high school Latin teacher. For years his research has focused on animals and animal lore of antiquity and from the Middle Ages, especially the works of Albertus Magnus. His other main area of interest is in Latin and Greek pedagogy and its history.
THE ANCIENT WORLD FROM A TO Z

What were the ancient fashions in men’s shoes? How did you cook a tunny or spice a dormouse? What did the Romans use for contraception?

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*Greek and Roman Dress from A to Z*
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To the memory of Tyler Chapin Rowland
November 17, 1989–February 1, 2012
And that is why it is necessary for us not to be childishly annoyed with the study of the lowlier animals. For there is something marvelous in all natural things.

Aristotle, *Parts of Animals*, 645a16–18

For, as Domitius Piso says, there should be storehouses (of information) not just books.

Pliny *HN* Praef. 17

Now, I know full well that others have labored long and hard on such matters, but I have gathered up as much as I could, casting it in plain language.

Aelian *NA* Prologue
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2 Babirusa. © Masteraah/Wikimedia Commons.

3 Barbary macaque. © Karyn Sig/Wikimedia Commons.


5 Butterfly. Reverse of a coin from Caria, ca. 205–188 BC, depicting a butterfly alighting on a rose. Photo courtesy of CNG Coins.

6 Crocodile. Coin of Octavian, 28 BC. The reverse depicts a crocodile with the caption “AEGVPTO CAPTA”. Photo courtesy of CNG Coins.

7 Cynocephalus. The hamadryas baboon. © LadyofHats/Wikimedia Commons.


9 Dolphin. Coin of Tarentum, ca. 480–470 BC, depicting the eponymous hero, Taras, riding a dolphin. Photo courtesy of CNG Coins.

10 Elephant. Gold stater of Ptolemy I Soter, ca. 298/7–295/4 BC. On the reverse, a charioteer (possibly Alexander the Great) holds a thunderbolt as he drives a quadriga of elephants. Photo courtesy of CNG Coins.

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<th>Description</th>
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</tr>
<tr>
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<td>Wolf. Roman denarius, 137 BC, depicting the she-wolf suckling Romulus and Remus on the reverse. Photo courtesy of CNG Coins.</td>
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</tbody>
</table>
Preface

There is no better way to determine the limits of a subject matter (and an author) than by trying to treat it within a limited number of pages. Even with “world enough and time,” as Marvell would have it, a fully definitive reference work on animals in the Greek and Roman world would probably never see fruition. It is simply too broad a subject to fit within the confines of most commercially published books and it is so fascinating a topic that a researcher finds each opened door, each answered question, leading to ten more. The sheer number of animals is astonishing. There are about 30,000 animal species in Greece today and 1,500 of them are endemic, while Italy hosts 58,000 species (European Environment Agency, 2010). When one adds to this the countries encountered in the expanding world opened by Alexander and conquered by Rome, the number of species to deal with is literally overwhelming.

A Manhattanite today can go a full work day encountering only one or two of the following: pigeons; dogs on leashes; a horse bearing a police officer or tourists in Central Park; a squirrel if one is near a park; and, with some bad luck, vermin such as rats and roaches. He or she may return home to a pet and turn on one of several cable channels devoted to animals, but the bulk of the day is decidedly animal free. Inside the city they were found as pets, pests, parasites, sacred animals, sacrificed animals, liminal animals (those which live both indoors and out), work animals, and intruders from beyond city walls. Thucydides even marvels that scavengers did not, as usual, invade the city for corpses during the plague (2.50). Outside the city they existed in flocks and nearby were those who would savage those flocks as well as the animals trained to prevent this. They accompanied their masters while they hunted (for still more animals), waged war or sought out love. So numerous and so close were they that Xenophon speaks of laws governing their hunting close to the polis (Cyn. 12.6–7; Anderson, 1985, 17–19). They served all the functions of today’s carbon fueled machines, such as hauling, transporting, turning mills, plowing and harvesting, and helping to maintain armies. Their images pervaded Mediterranean
civilizations from Neolithic times until the fall of the Roman Empire. We see them on vases, coins, frescoes, gems, furniture, tapestries, fountain houses, shields, house walls and grave monuments. They even served as tattooed images on neighboring barbarians, such as the Scythians.

They also pervade ancient literature. Greek and Roman authors knew, well in advance of Lévi-Strauss, that “animals are good to think with.” They are at the heart of Homeric similes and philosophers’ musings. They form the core of the fabulist tradition and lie at the heart of many proverbial sayings. They were used by logographers, historians, and geographers to help define cultures and places. They populate the comedies of Greece and Rome, either onstage as in Aristophanes’ *Wasps* or in dialogue as in the case of the monkey in Plautus’ *Miles Gloriosus*. They had poems composed in their honor, ranging from Catullus on Lesbia’s sparrow to the many poems on animals in the Greek *Anthology* (Douglas, 1928) and the animal epitaphs collected by Herrlinger (1930). Specialist authors wrote about animals, their lives, and their uses. Some were scholarly and/or descriptive in their approach such as Aristotle’s *Historia Animalium*, *De partibus animalium*, and *De motu animalium*. Others wrote handbooks for raising animals of special economic use, ranging from cows and pigs, through the dormouse, and on to the bee (Varro, Columella). Still others wrote veterinary tracts on how to heal these valuable assets (Pelagonius and Chiron, cf. Fischer, 1980 and Adams, 1995; Palladius, cf. Rodgers, 1976). Some wrote works devoted to specific animals such as Sostratos’ work *On Strikers and Bitters*, or his work *On Bears*. Others, such as Pliny, Athenaeus, and Aelian, mined others’ works on animals and happily reported the results of their research in unfiltered fashion. As the world expanded with Alexander the Great and the Roman Empire, exotic animals were increasingly imported to the Mediterranean where some, like the camel, were put to practical use and others, sadly, became the source of cruel entertainment.

Two previous books in this series have dealt with animals – W.G. Arnott dealt with birds (2007) and Andrew Dalby listed sea creatures in his work on food (2003). The remarkable D’Arcy Thompson had earlier devoted books to the same subjects (1936, 1947). To the current volume, therefore, fell mammals, reptiles, amphibians, insects, arachnids and myriad other invertebrates such as worms, snails, and centipedes. No book-length studies have been devoted to the mammals or reptiles of antiquity, and there is a need for a modern-day D’Arcy Thompson, or, more likely, the collaboration of classicists and zoological specialists, to fill in these voids. Surprisingly, three volumes have been devoted to insects in fairly recent times in the works of Gil Fernández (1959), Davies and Kathirithamby (1986), and Beavis (1988). Beavis also devotes space to certain invertebrates. Individual animals form the focus of excellent modern studies. Scullard’s classic work on the elephant (1974), Hyland’s on the Roman horse (1990), and McInerney’s on Greek cattle (2010) demonstrate both the wealth of information available and the vast scope of the field. The works of older scholars, such as those of Keller or Gossen and Steier, are out of date but preserve valuable references to ancient texts.
In the face of all this, difficult decisions had to be made in the writing of this book. Some animals sought by readers might not be present. The majority of animals treated here are mammals, with representative selections alone being offered for other types of animals. For the most part, the roles played by animals in mythology and religion have been left unmentioned. This book, then, serves not as a comprehensive study of all aspects of all animals in antiquity. It is rather a reference work which, it is hoped, will also serve as an introduction to a fascinating and wider field of study within which readers will find not just answers to questions but the opportunity for further study. It also hopes to interject some caution into these studies.

There has been a history of making facile identifications of Latin and Greek animal names. Many of these were first made in older reference books and lexicons, employing outmoded scientific names, and all too often based on flimsy or non-existent evidence. Yet they have been repeated as fact in subsequent translations, commentaries and articles. Other terms, such as “monkey” or “ape” are often used interchangeably. A reader of an ancient text should always check the Latin or Greek when animals are concerned. More tellingly, the majority of ancient authors or artists had little first-hand knowledge of the animals they describe. They received their information by word of mouth, commonly tinged with exaggeration and rife with geographical uncertainty. The result is a hodgepodge of zoological impossibility, not unlike the picture which adorns the cover of this book, where Old and New World animals are shown blissfully side by side, enchanted by the music of Orpheus, uninhibited by the limits either of geography or time.

In light of all this, exact identifications should be made with due caution.
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This book would have been impossible without the generosity of many people. My thanks, first, to my editors, who were so understanding as medical issues delayed the delivery of the manuscript. Special thanks to senior editor Matthew Gibbons and the ever-helpful Amy Poynter-Davis. The sharp eyes and stylistic sensibilities of Andy Platts prevented many potential infelicities in this book. Those that remain are, of course, my own. The University of Massachusetts Amherst generously helped support my research through research leave, a sabbatical and grants from the Graduate School and College of Humanities and Fine Arts. Thanks to the American Academy in Rome for my stay there as a visiting scholar with library access. The Center for Hellenic Studies in Washington, DC has been an invaluable friend, whose entire staff, at every level, has a single goal – making research into antiquity as easy as possible. Of these dedicated people, special thanks to Kurt Raaflaub, Deborah Boedeker, Greg Nagy and Temple Wright. Each of my colleagues at University of Massachusetts Amherst has patiently helped answer myriad questions and I am grateful to each. Likewise, dozens of scholars through the world, both in Classics and in animal-related fields, many of whom were previously unmet, have generously shared their knowledge through the wonder that is the Internet. I would love to inscribe each name here, but fear my faulty memory would inadvertently offend through omission. Trust that I remember your kindness and the gift of your time. Dr. Thomas Mann, Reference Librarian at the Library of Congress, has, for this project and for many before it, demonstrated authoritatively that there is nothing he cannot find. The hard working staff of the Inter Library Loan department of the DuBois Library at UMass have been a mainstay of this project. Through their efforts I have been able to obtain articles of great age and even greater obscurity. As ever, and forever, I am in debt to my wife Theresa who, so many times, has shared me with the likes of Megasthenes, Agatharchides, hedgehogs, babirusas, and pangolins, doing so simply because she knows how much joy it gives me. Finally, this book is dedicated to the memory of Tyler Chapin Rowland,
a budding scholar, taken from us long before he had the chance to do what he surely would have done – teach and write about Classics with equal parts skill and enthusiasm. He touched all he knew by radiating the sheer joy that the study of Greece and Rome can bring.
This book was written with the hope that it will be of interest to a wider audience than that comprised by professional classicists. To this end, whenever possible, sources are cited according to the Loeb Classical Library editions, which offer the Greek or Latin on the left-hand page and a translation on the right. This has certain consequences. The numbering of Aristotle’s works, for example, is based on the Greek, nineteenth century text of Bekker. The use of Loeb numbering does not correspond exactly with the Bekker numbers but scholars can readily address this. Likewise, there is doubt about the authorship of certain works attributed to Aristotle. I did not deem it necessary to refer to each citation from such a place as “Pseudo-Aristotle.” Citations from Pliny the Elder are given as book.chapter.section, to enable readers to use the edition of Bostock & Riley. The numbering of the text of Dio Cassius is notoriously difficult. To aid those seeking fast references, I have chosen to use the numbering of Cary (1927). Thus, “76.236–37” means Book 76, pages 236–37 in Cary’s edition. The traditional numbering, which Cary rearranged, can be deduced by his marginal numbering. Many similar choices have been made, always with an eye to making it easier for professionals and the general public alike to go to the original authors.

Transliteration

The normal equivalencies have been used, but have been abandoned when the resultant form would clash with normally recognized forms. The letter \( \upsilon \) is transliterated as either “u” or “y” accordingly.

Greek measurements

Specificity is impossible in rendering equivalents for ancient measurements based on body parts and based on differing standards, but what follows is generally
agreed upon as approximately correct (most ancient authors describing animals were using approximations anyway) and is based on OCD⁴, s.v. “Measures,” based on a “foot” of ca. 300 mm. Only terms used in this book are addressed. Values are rounded.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Greek name</th>
<th>Equal to</th>
<th>Metric equivalent</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>daktylos,</td>
<td>δάκτυλος</td>
<td></td>
<td>19 millimeters (mm)</td>
<td>¾ inch</td>
</tr>
<tr>
<td>“finger”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>palaistē,</td>
<td>παλαιστή</td>
<td>4 daktyloi, “fingers”</td>
<td>76 millimeters (mm)</td>
<td>3 inches</td>
</tr>
<tr>
<td>“palm”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pous,</td>
<td>πούς</td>
<td>16 daktyloi</td>
<td>305 millimeters (mm)</td>
<td>12 inches</td>
</tr>
<tr>
<td>“foot”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pēchus,</td>
<td>πήχυς</td>
<td>24 daktyloi</td>
<td>457 millimeters (mm)</td>
<td>1.5 feet</td>
</tr>
<tr>
<td>“cubit”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>orgyia,</td>
<td>ὄργυια</td>
<td>span of outstretched arms</td>
<td>1.8 meters (m)</td>
<td>6 feet</td>
</tr>
<tr>
<td>“fathom”</td>
<td></td>
<td></td>
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Roman measurements

<table>
<thead>
<tr>
<th>Unit</th>
<th>Equal to</th>
<th>Metric equivalent</th>
<th>English equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>digitus,</td>
<td>1/12 foot</td>
<td>25 millimeters (mm)</td>
<td>just under 1 inch</td>
</tr>
<tr>
<td>finger</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pēs, foot</td>
<td>296 millimeters (mm)</td>
<td></td>
<td>11.6 inches</td>
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</tbody>
</table>
Abbreviations and citation notes

For ancient authors and works I first follow *OCD* and then *LSJ* and *OLD*. Classical journal abbreviations follow *L’année philologique*. When necessary for clarity, they are written out in full.

Ad loc. Ad locum, “in connection with the passage just mentioned.”
Festus lived in the second century AD and made an epitome of the *De significatus verborum* of Verrius Flaccus, an Augustan grammarian. Festus’ work survived only partially but itself was epitomized by Paul the Deacon in the eighth century. Citing Festus is a challenge as several alternative approaches exist. Here the citation is always to the page number in the 1913 Teubner edition edited by Wallace M. Lindsay.

Festus


<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>RDB</td>
<td>Reptile Database, <a href="http://www.reptile-database.org">http://www.reptile-database.org</a>, a non-profit database supported by the German Herpetological Society and the European Union.</td>
</tr>
<tr>
<td>SEG</td>
<td><em>Supplementum epigraphicum graecum</em> (1923–) Amsterdam: J.C. Gieben.</td>
</tr>
<tr>
<td>Vegetius</td>
<td><em>Mulomedicina</em> References are given with the numbering of Lommatzsch (1903) and, whenever possible, with the equivalent numbering in the edition of Gesner (1735).</td>
</tr>
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</table>
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Abbreviations of ancient works

Abbreviations first follow *OCD* and then LSJ and *OLD*. As is customary, most titles are in Latin, fewer in Greek. To aid the non-specialist in tracking down references, I have, when it seemed needed, translated the Latin or Greek, giving the most common English titles. For most works I have given preference to the translation used by the Loeb series.

<table>
<thead>
<tr>
<th>Author</th>
<th>Abbreviation</th>
<th>Title</th>
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<tbody>
<tr>
<td>Aelian</td>
<td>NA</td>
<td><em>De natura animalium</em> (On the Nature of Animals)</td>
</tr>
<tr>
<td></td>
<td>VH</td>
<td><em>Vera Historia</em> (The True History)</td>
</tr>
<tr>
<td>Aeschylus</td>
<td>Ag.</td>
<td><em>Agamemnon</em></td>
</tr>
<tr>
<td></td>
<td>Prom.</td>
<td><em>Prometheus</em></td>
</tr>
<tr>
<td>Anth. Pal.</td>
<td></td>
<td><em>Anthologia Palatina</em> (Palatine Anthology)</td>
</tr>
<tr>
<td>Antoninus Liberalis</td>
<td>Met.</td>
<td><em>Metamorphoses</em></td>
</tr>
<tr>
<td>Apuleius</td>
<td>Met.</td>
<td><em>Metamorphoses</em></td>
</tr>
<tr>
<td>Aristophanes</td>
<td>Ach.</td>
<td><em>Acharnenses</em> (Acharnians)</td>
</tr>
<tr>
<td></td>
<td>Eq.</td>
<td><em>Equites</em> (Knights)</td>
</tr>
<tr>
<td></td>
<td>Lys.</td>
<td><em>Lysistrata</em></td>
</tr>
<tr>
<td></td>
<td>Plut.</td>
<td><em>Plutus</em> (Wealth)</td>
</tr>
<tr>
<td></td>
<td>Thesm.</td>
<td><em>Thesmophoriazusae</em> (Women at the Thesmophoria)</td>
</tr>
<tr>
<td>Aristotle</td>
<td>Ath.</td>
<td><em>Athenaion Politeia</em> (Athenian Constitution)</td>
</tr>
<tr>
<td></td>
<td><em>De motu an.</em></td>
<td><em>De motu animalium</em> (On the Movement of Animals)</td>
</tr>
<tr>
<td></td>
<td><em>Gen. an.</em></td>
<td><em>De generatione animalium</em> (On the Generation of Animals)</td>
</tr>
<tr>
<td></td>
<td><em>Hist. an.</em></td>
<td><em>Historia Animalium</em> (History of Animals)</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Work/Author</td>
<td>Title/Description</td>
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<tr>
<td>--------------</td>
<td>-------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Part. an.</td>
<td>De partibus animalium</td>
<td>(On the Parts of Animals)</td>
</tr>
<tr>
<td>Pol.</td>
<td>Politica</td>
<td>(Politics)</td>
</tr>
<tr>
<td>Resp.</td>
<td>De respiratione</td>
<td>(On Breath)</td>
</tr>
<tr>
<td>Athenaeus</td>
<td>Deipn.</td>
<td>Deipnosophistae (Learned Banqueters)</td>
</tr>
<tr>
<td>Ausonius</td>
<td>Epist.</td>
<td>Epistulae (Letters)</td>
</tr>
<tr>
<td>Mos.</td>
<td>Mosella</td>
<td>(The Moselle)</td>
</tr>
<tr>
<td>BGU</td>
<td></td>
<td>Papyrus collection, Berlin. See Staatliche Museen (Berlin) and Königliche Museen (Berlin) (1895–)</td>
</tr>
<tr>
<td>Caesar</td>
<td>BGall.</td>
<td>Bellum Gallicum (Gallic War)</td>
</tr>
<tr>
<td>Calpurnius Siculus</td>
<td>Ecl.</td>
<td>Eclogae (Eclogues)</td>
</tr>
<tr>
<td>Cato</td>
<td>Agr.</td>
<td>De agricultura (On Agriculture)</td>
</tr>
<tr>
<td>Cicero</td>
<td>Ac.</td>
<td>Academica (Academics)</td>
</tr>
<tr>
<td></td>
<td>Div.</td>
<td>De divinatione (On Divination)</td>
</tr>
<tr>
<td></td>
<td>Fam.</td>
<td>Epistulae ad familiares (Letters to Friends)</td>
</tr>
<tr>
<td></td>
<td>Har. resp.</td>
<td>De haruspicum responsis (On the Responses of Soothsayers)</td>
</tr>
<tr>
<td></td>
<td>Nat. d.</td>
<td>De natura deorum (On the Nature of the Gods)</td>
</tr>
<tr>
<td></td>
<td>Tusc.</td>
<td>Tusculanae disputationes (Tusculan Disputations)</td>
</tr>
<tr>
<td>Dio Chrysostom</td>
<td>Orat.</td>
<td>Orationes (Orations)</td>
</tr>
<tr>
<td>Donatus</td>
<td>Vita Verg.</td>
<td>Vita Vergilii (Life of Vergil)</td>
</tr>
<tr>
<td>Frontinus</td>
<td>Strat.</td>
<td>Strategemata (Stratagems)</td>
</tr>
<tr>
<td>Grattius</td>
<td>Cyn.</td>
<td>Cynegietica (Hunting with Hounds)</td>
</tr>
<tr>
<td>Herodianus</td>
<td>Epim.</td>
<td>Epimerismoi (Partitions)</td>
</tr>
<tr>
<td>Hesiod</td>
<td>Op.</td>
<td>Opera (Works and Days)</td>
</tr>
<tr>
<td>Homer</td>
<td>Il.</td>
<td>Iliad</td>
</tr>
<tr>
<td></td>
<td>Od.</td>
<td>Odyssey</td>
</tr>
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<td>Epist.</td>
<td>Epistulae (Letters)</td>
</tr>
<tr>
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<td>Etym.</td>
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Achlis See elk.

Addax Pliny (HN 8.79.214, 11.45.124) mentions the strepsiceros (from the Greek, “twisted-horn”) twice, saying it is an import into Italy, presumably for the games, and telling us that the African name for the animal is addax. This is almost surely the screwhorn antelope, or addax (Addax nasomaculatus). The addax is a desert antelope often found near the oryx. It is currently critically endangered and its fewer than 250 wild specimens are found scattered throughout south Algeria, Mauritania, Mali, Niger, and Chad. It once roamed all of northern Africa and would have been well known to the Romans. It has spectacular, curved horns that arch over its back, reaching 3.6 feet in a male. It has a pale body and a brown patch on its nose. Addax are currently preserved in zoos and hunting parks. Pliny also describes its horns and claims they are used to make lyres. This fact would seem to make the names orus and addax synonyms.


Agathodaemon Greek: ἀγαθοδαιμὼν (agathodaimōn); Latin: agathodaimon. Aelius Lampridius, the author of the Latin biography of Elagabalus (SHA 28.3, cf. Turcan, 219–20) relates that the emperor, who was especially fond of exotic animals, kept Egyptian dracunculi (small snakes) at Rome, which the Egyptians call agathodaemones, “good spirits.” Magie (2.160, ad loc.) identifies this as the healing snake of the god Knuphis (Dasen and Nagy). Pearn has suggested that the origin of Aesclepius’ healing serpent may be traced, at least in part, to this snake. At Greek symposia, a cup was passed around and, as each guest drank, he uttered “agathou daimonos,” “of the good daemon” (Tarn, 210). The agathodaemon appears on many Roman imperial coins issued in Egypt. Leitz (31–33) has collected the testimonia. Identifications include Telescopus fallax (G&St., 521) or a type of cobra (Bodson, 72). See also Philoumenos (29) (with the tephlias).

Bodson, 1986a; Dasen and Nagy, 2012; G&St., 521; Magie, 1921; Pearn, 2011; Tarn, 1928; Turcan, 1993.

Agrōstēs Greek: ἀγρόστης (agrosēs, “wild one”). Nicander (Th. 734–37) compares this spider to the shape of a wolf spider and lists its prey. Its bite, he says, is harmless. G&S (ad loc., p. 184) list proposed identifications of it as Aranea speciosa, Lycosa tarantula, and Linyphia triangularis. They also cite earlier scholars
Ailouros Greek: αἰλουρος Commonly translated as cat but, as Jennison (183–87) has demonstrated, this is not always accurate. He also hints that Aristotle (Hist. an. 6.580a.24–27) uses this word for what might be the pine marten (weasel).

Amphisbaena Greek: ἀμφίβαινα (amphis-baina, “Goes-both-ways”); Latin: amphisbaena. Alternative names: ἀμφίφωσις-φαίνα, ἀμφίσμαινα, ἀμφισθμαινά (G&S, 178 on 384). West points out a reference to this folkloric snake as early as 671 BC in a report by the Assyrian king Ershaddon and claims the snake may be the genus of sand boas (Eryx) which snake charmers often tried to pass off as having two heads. The Arabian sand boa (E. jayakari) would be the best candidate geographically, but its tail tapers too much to be mistaken for a head. This species is notable for having its eyes on top of its head. Her claims that Assyrians later passed on the folktale to credulous Greek troops is ingenious but unconvincing. In Aeschylus (Ag. 1232f.) it is a symbol of perfidy. Its connotation in Aristophanes’ Storks (Pelargoi F457) is unknown. Nicander (Th. 372–83) describes it as having a chin at each end, says it molts early, is speckled and shiny, and is good for those with skin problems (cf. Pliny HN 8.35.85). G&S (177 on 372) pass on G&St.’s identification as Typhlops vermicularis, the very small European blind snake (Kley; SSW, 124; Wick, 2.299–300). Its range extends
from Greece to Pakistan and it does, indeed, seem to have two identical ends, though neither really resembles a head. West rejects the identification since it tends to spend most of its time beneath ground, but Nicander (Th. 385f.) compares it specifically to earthworms. Philoumenos (27) specifies that it does not taper (true for Typhlops) and says it resembles the skylæ in all regards except that it can go in either direction, and gives antidotes for its bite. Pliny (ibid. and 30.43.128) also thinks it is poisonous but Typhlops is not. Such evidence indicates that the ancients had a real animal in mind. Another identification offered (West, G&S) is the genus Doliophis, more properly Calliophis, but these are located in the area of Malaysia. See also Lucan (9.719) and Ammianus Marcellinus 22.15.27, who both think it is venomous; Isidore (Etym. 12.4.20).


Ant Greek: μύρμηξ (myrmex); Latin: formica. On variants of the name see Beavis (198–201) and Gil Fernández (23–24).

Ants (family Formicidae) belong to the order Hymenoptera and are thus related to bees and wasps, also social insects. Their 8,000 species inhabit virtually the entire world and their diversity is stunning. AntWeb (http://www.antweb.org/ accessed June 6, 2013) lists 277 species in Greece and 41 genera in Italy. Hundreds of species and scores of genera may be found in areas as small as 250 square meters and the sheer numbers of individuals in a colony can reach into the millions (Hölldobler and Wilson, 1–3). They embrace a multitude of lifestyles, illustrated by names such as carpenter ants, fungus growers, leafcutters, honey pot ants, slave maker ants, aphid herding ants and weaver ants. A colony consists of a fertile, egg-laying winged queen, a very few fertile winged males called “drones,” and multitudes of sterile females who carry out the work of the colony. The colony’s lifecycle is as follows (Hölldobler and Wilson, 143f.). New colonies are founded by swarms of flying females and winged males. The males and most queens die following insemination, but a surviving inseminated queen will next construct the first phase of her nest and rear her first brood. Soon worker ants begin the business of running the colony and the female simply produces eggs which pass through larval and pupal stages before becoming adults.

The ancients speak about many varieties of ant, generally differentiating between those with and without wings (Arist. Hist. an. 523b20, Part. an. 643b2f.). The winged variety called the ἰππεύς μύρμηξ (hippeus myrmex “horseman ant”) was not found in Sicily (Arist. Hist. an. 606a6; Pliny NH 11.36.110; Beavis, 199, on the manuscripts). Other names refer to the ants’ occupations (e.g. farming, “mining,” harvesting flowers), size, or description (Beavis 199–200). Pausanias’ “rather white” ants in Laconia may refer to termites.

Ants and humans were among the Greeks’ “political” animals, meaning that they conduct themselves in an orderly manner designed for the common good, as if in a polis. Praise for this lifestyle is abundant (e.g. Arist. Hist. an. 488a10f., Plato Phaedo 82b; Plutarch Moralia 967d–68d; Aelian NA 2.25, 2.43; Pliny NH 11.36.108–11; Dio Chrysostom Orat. 40.32, 40) and extends to the military life (Sears). It follows, therefore, that ants became proverbial for good traits and are common in fables, most notably those stressing their providence in storing food (e.g. Babrius, 140; Perry, 443 no. 112). They were often thought of as portentous in reality and in dreams (e.g. Artemidorus, 1.24, 3.6, where winged and non-winged are differentiated; D&K, 43–44, Hünemörder).
The ants’ natural history was fairly well known. Aristotle observed them above ground (Hist. an. 622b 24–27) and apparently dug up nests and described the growth of the eggs into larvae (Hist. an. 555a19–22). The intricacy of their tunnels, the sharing of work and tireless industry are singled out for praise. Pliny (HN 11.36.108–10) praises their strength and has seen them “communicating.” See Beavis (201–07) for more. There is even an epitaph for an ant by Antipater of Sidon (Herrlinger, no. 5 = Anth. Pal. 7.209). The ancients also knew the ant could be a pest, robbing granary floors as well as sown seeds. They were used in folk medicine to cure everything from warts to poisonous bites. The ant appears on Greek coins and gems, e.g. crawling on an ear of grain on coins of Metapontum (IBK, 7.24–25).

See also INDIAN ANT, MYRMĒKEION, MYRMĒKOLEŌN.


Ant-lion See MYRMĒKOLEŌN.

Antelope The general name “antelope” technically refers to members of the order Artiodactyla, family Bovidae and subfamily Antilopinae, which itself contains seven (Atkins, 45–46) or 14 (WMW, 1134) genera and scores of species living in habitats ranging from forests to grasslands and desert plateaus. They are small to medium-sized horned herbivores with slender neck and limbs, tawny upper bodies and white underbellies, often with a dark stripe above the belly. They are found throughout northern Africa and east, through Arabia and the Levant up to the Black Sea area and are distinguished by speed, gracefulness of movement, and soft eyes. There was a great deal of confusion in antiquity, as today, over the difference between an “antelope” and a “gazelle.” Gazelles form their own genus (Gazella) within Antilopinae, with three subgenera and 16 species, distinct from the genus Antilope (WMW, 1199f.). Common ones today include Thomson’s gazelle (Gazella thomsonii/Eudorcas thomsonii) and the dorcas gazelle (G. dorcas) but WMW lists ten to 12 species which the ancients would have encountered if one merely considers geography. Other animals which can easily be taken as an antelope, do not, in fact, reside in the Antilopinae subfamily. Examples the ancients would have known include the Arabian Oryx (Oryx leucoryx), which barely escaped extinction, and the Nubian ibex (Capra nubiana). Thus, the term “antelope” should be taken as a fairly general term in antiquity. In general, the ancients did try to distinguish between DEER and antelopes, but they gathered many animals under these broad terms and at times confused the terms themselves. Toynbee (145–46) points to three types of antelopes that were in Ptolemy II’s famous procession (cf. Rice, 88–89). The first were pairs of κόλοι (sing. κόλος, κόλος) drawing chariots. Next came ὄρνιξ (sing. ὄρνιξ, oryx), also hitched to chariots. Then came βοῦβαλοι (sing. βοῦβαλος Bouvalos). Pliny and other Roman authors offer the following additional names of antelope-like animals: DAMMA, DORCAS, STREPISICEROS, PYGARGUS. A Roman mosaic from the Museum of Sousse shows a profusion of antelope and deer, differentiated by their horns, in an amphitheater setting (Blanchard-Lemée, 211, fig. 156).


Aoudad Aelian (NA 14.16) describes at length some “wild goats” of Libya. They are the size of oxen but are covered all
over with long, shaggy hair. They have short legs, yellow eyes, and long horns that turn downward as far as their shoulders. They dwell in mountains and are prodigious leapers. They are hunted by a number of means and both their skins and horns are put to human use, the latter serving as massive drinking horns. Scholfield (ad loc.) offers an identification of the “Udad, Ovis lervia.” The aoudad (less accurately “oudad”), also called the Barbary sheep, is today known as Ammotragus lervia (WMW, 1229–31) and is a good candidate for this animal. It is not as shaggy as Aelian would indicate, but possesses a striking “ventral mane,” i.e. thick, long, whitish hairs that hang downward from its throat to its front legs. Its horns are impressive, but do not reach downward as far as Aelian indicates. They have been hunted by natives for the uses outlined by Aelian and are listed as threatened by the IUCN. A number of subspecies have been identified, and all would have been known: A. l. lervia, Atlas aoudad; A. l. ornata, existed in Egypt but now near extinction; A. l. fassini is the Libyan aoudad; A. l. blainei (Kordofan aoudad), near the Red Sea; A. l. sahariensis (Saharan aoudad), the most commonly found today. Cassinello studies each in detail. They are popular in hunting parks in the United States.

Cassinello, 1998; Scholfield, 1958–89.

Ape The ancients were no clearer on the distinction between “ape” and “monkey” than is the average modern. Indeed, McDermott (v), trying to make sense of the confusion, stated, “Throughout this monograph ape has been used as a general term for all infra-human primates. The word monkey has been used for an ape with a tail, the word baboon for the hama-dryas baboon.” In fact no great clarity can be reasonably sought in the literature of the Greeks and Romans and any modern investigator should remain cautious when ascribing modern identifications.

Today, the general term “ape” is reserved for the members of the order Primates which demonstrate the highest mental capacities. These include the “great apes,” such as CHIMPANZEEs, bonobos, GORILLAS, and orangutans, and the “lesser apes,” Hylobatidae, such as gibbons and the siamang. The orangutan, found in Asia, is the only ape found outside of Africa. The so-called Barbary ape is in fact a monkey and is today called the BARBARY MACAQUE (Macaca sylvanus). It is notable for living on Gibraltar, currently the only monkey found in Europe, though it may have been brought there in more modern times. Since most references to “apes” in antiquity involve MONKEYs, see that article for further information as well as individual animal names.

The Greek πιθηκος (pithēkos, var. πιθάκος, πίθηξ, πίθων); cf. the Latin diminutive pithecium, is very commonly translated as either “ape” or “monkey.” The term is loosely used. Aristotle clearly states that a monkey (κήθος, cf. cebus) is a pithēkos with a tail. Was one without a tail a baboon or a chimpanzee? For a more in-depth discussion, see MONKEY. Apes were frequently used as points of comparisons with humans (Wuketits) and were used in shows, even being trained to dance (Lucian Piscator 36, Harmon et al., 3.54). They also had a presence in comedies (Lilja) and were frequently kept as pets (Lazenby, 246–48). Thus, the “ape” was fairly prevalent throughout antiquity, but whether these were true apes or monkeys will vary from case to case.

See also BARBARY MACAQUE.


Arimos Greek: ἀρίμος (arimos). Strabo 13.4.6 reports that ἀρίμος is the Etruscan word for πιθηκος (pithēkos, McDermott, 63–66; see APE). He is discussing the Pithecoussae islands, and their alternative names, one of which, in his opinion, is
connected to this Etruscan word (cf. also Servius on *Aen*. 9.715, and Hesychius s.v.; Bonfante, 71). Pithecousa(e) is an alternative name of the island Ischia, the home of the mischievous dwarves, the Cercopes, who gave their name to another type of monkey, the CERCOPS (Poccetti).

Bonfante and Bonfante, 2002; Poccetti, 1995.

Arktomys ἀρκτόμυς (arktomys, “bear-mouse”). Timotheus of Gaza (56, fifth century AD) mentions this animal. Its behavior (the fact that one is on watch while others feed) and its presumed status as a rodent (–*mys*) led some to identify it as a type of MARMOT. Bodenheimer and Rabinowitz suggest *Arcomys bobak* (= *Marmota bobak*, WMW, 1251–53). The bobak resembles a groundhog and has a range from Poland east through Romania and into Mongolia and eastern China.

Bodenheimer and Rabinowitz, 1949; Hünemörder, s.v. “Marmot.”

Asp Greek: ἀσπὶς (aspis); Latin: *aspis*. The term serves both as a generic term for poisonous snake (*viper*) and as the name for a specific snake. Philoumenos (16.1) says there are three kinds of *aspis*. The first are the χέρσαιαι (chersai, “terrestrial”), which are 3–4 cubits (4.5–6 feet) long and are ash-colored or green. Leitz (46) treats this as a separate species and reports identifications as *Naja haje* and *Vipera ammodytes*. The χελιδονίαι (chelidoniai, “swallow-colored,” i.e. rusty) only reach 1 cubit in length and are the same color as the chersai (G&S, 557; Leitz, 46–52). The πτυάδες (ptuades, “spitters”) reach 3 feet at most and are ashen, yellowish-green and golden (cf. COBRA, SPITTING; PURPLE SNAKE). All three kill quickly and he discusses cures for each. Nicander, a source for Philoumenos, treats the asp at length (*Th*. 157–189, G&S ad loc.). He says it is sluggish unless disturbed and reaches a fathom (ca. 6 feet) in length. It raises its body up from a coiled position and, over its forehead, it has two “tuloi,” which normally means cushion or mat. He claims it has four fangs (not true for any snake) and that death comes painlessly in a coma. Most agree that he is describing the Egyptian COBRA (*Naja haje*) which Keller (1.158f., 2.295ff.) seems to misname as *Vipera aspis*, the European VIPER.

Lucan (9.700–708; Wick, 2.285–86 and 347f., on the *serpens Nilotica*) tells us that the *aspis* was the first serpent to arise from Medusa’s blood dripping onto the sands of the Libyan desert and that it has by far the greatest concentration of poison in its body. Its range extends only as far as the Nile and Lucan laments the fact that the asp (or its poison?) was imported into Italy in his day. Pausanias (9.21.6) speaks of color variations in the asps of Egypt, Libya, and Ethiopia. Ammianus Marcellinus (22.15.27) says it never leaves the Nile. Scarborough offers an overview (7–8). It is therefore not prudent to restrict the identification of the *aspis* to a single species, such as the Egyptian COBRA (Hünemörder, 554) although there are clear times when this is the case.

Aelian (NA 9.61–2) relates the story of Pompeius Rufus, a contemporary of Sulla, who fancied himself a φαρμακοτρίβης (pharmakotribēs), or medicine man, and put an *aspis* to his arm to show that sucking out the poison helped alleviate the symptoms. He died nonetheless as someone removed the water by which he was supposed to have rinsed out his mouth. Whether credence should be given to his story of the asp enamored of a boy and serving as his protector is doubtful (NA 4.54). Celsus 5.27.4 tells of remedies for its bite. One of particular interest concerns the thirst caused by the bite, cured by drinking vinegar.
Ass For the wild ass, see ONAGER; for the domesticated ass see DONKEY.

Asterion Greek: ‘Αστέριον (asterion). This spider is classified by ancient writers as a type of PHALANGION. Beavis understandably translates its name as the “starry spider” (47), but Nicander’s description says it has gleaming “ῥάβδοι” (rhabdoi, “rods”) on its body (Tb. 725f.), a word usually indicating stripes. It may be well to remember that Asterion was also the name of an early king of Crete and that a lost aetiological story might have given rise to the spider’s name. Pliny’s account (HN 29.27.86) follows Nicander’s closely and the marks are again called rods (virgulis). G&S (ad loc., p. 184) cite identifications of the spider as Latrodectus conglobatus, Tetragnatha extensa or T. stellata. They also raise the possibility that many of Nicander’s spiders may just be color varieties of other spiders, i.e. the same genus and species, but differently marked. This fits Pliny’s statement that this spider is just like the rhox, differing only in markings. Beavis (47) opts for a color variety of Latrodectus mactans.

Axis Pliny (HN 8.31.76), following Ctesias, cites this as a wild animal that has the pelt of a hinnuleus, but with very white spots. It is, he says, sacred to Bacchus. Bostock and Riley (1.280) suggest that this is Linnaeus’ Cervus axis (= Axis axis, WMW, 1100–02) a fairly large deer that has striking white spots, known in India as the chital.

Bostock and Riley, 1855–57.
Babirusa The babirusa (*Babyrousa babyrussa*) is found on the Indonesian island of Sulawesi (formerly Celebese) and neighboring islands (WMW, 1062–63). This member of the pig family presents a most startling sight, as it has tusks which grow up through the top of its muzzle and curve back toward its head (Powell, 276 with illustration; MacKinnon, 287). Compare Pliny’s account (HN 8.78.213) of an Indian type of pig: “In India their tusks are curved and a cubit long, a pair come up from the jaw and the same number from the forehead like the horns of a calf.”

*See also* warthog, choirelaphos.


Baboon Baboons are Old World monkeys consisting of five species under the genus *Papio* (WMW, 588): hamadryas baboon (*Papio hamadryas*); olive baboon (*P. anubis*); western baboon (*P. papio*); yellow baboon (*P. cynocephalus*); chacma baboon (*P. ursinus*). The mandrill (*Mandrillus sphinx*) is sometimes considered a subgenus of *Papio* or as its own genus. Based on current ranges, the ancients would have best known *P. hamadryas, P. anubis* and perhaps *P. papio*.

Baboons were well known to the ancients and, since the animal was prominent in Egyptian life and art, both Minoan and Mycenaean traders and mercenaries must have encountered it (Houlihan, 94–108). The hamadryas baboon is most commonly identified as the κυνοκέφαλος (κυνοκέφαλος, “dog head,” cf. Bodson, 259) and had long been a sacred animal for the Egyptians (see cynocephalus). The olive baboon is found in Egyptian burials and thus was probably known as well, but the ancients did not apparently identify it as a separate species. There is evidence for trade in the animals in the second century BC (Goudsmit and Brandon-Jones). Some baboons have been reasonably identified on gemstones (IBK, 83, pl. xiv.1–3) and one may be on a Minoan sealstone (Boardman, pl. 4).

*See also* sphinx.

**Badger** Greek: μέλινη (melinē); Latin: meles. The European or Eurasian badger (*Meles meles*, the current name for Keller’s *Meles taxus*) is a fairly large (3–4.5 feet long, 25 pounds) relative of the weasel family (WMW, 728–29). It is found throughout Europe, including Italy, Greece, and Crete, although little is known of its numbers there (Griffiths and Thomas, 32–33). Unlike other badgers, it lives in social groups in burrows or dens called “setts.” Its head is marked with white stripes against a black background. It does not prey on domesticated fowl as much as weasels do but it is quite fond of honey and will attack bee hives. The honey badger (*Mellivora capensis*), also known as the ratel, is in its own genus (WMW, 727–28) and is found in Arabia, Palestine, and the west shore of the Red Sea. The ancients may very well have known of it, if only through pelts.

The badger appears not to be mentioned in the literature of Greece, although it is found there, with endemic populations on Crete and Rhodes (Griffiths and Thomas, 32). Varro (*Rust.* 3.12.3), using the form *maelis*, warns keepers of leporaria (game preserves) to make the walls smooth to keep out creatures like the badger. The Augustan poet Grattius mentions badger caps as suitable dress for the hunt (*Cynegetica* 340) and, by calling it “light-shunning,” he indicates his awareness of its nocturnal habits. He also tells us that dog collars were made of its skin (402). Pliny (*HN* 8.57.137) reports that badgers can defend themselves by inflating and deflating themselves at will. He also offers medicinal uses of the badger. Its boiled dung is taken internally when one is bitten by a rabid dog (*HN* 28.43.156) and badger liver in water is good for a sore throat (*HN* 28.51.190). Martial (10.37.18) mentions the badger as an animal that is hunted. Isidore (*Etym.* 12.2.40) offers two etymologies for the *melo*, one of which confirms its love of honey. The Edicts of Diocletian (8.29) mention unworked skins of the melinē, a Greek form based on the Latin. A *mellina* was a purse made of badger skin.

*See also* choiropitēkos, pyktis.


**Barbary macaque** Greek: πίθηκος (pithēkos); Latin: simia. Both terms generically can simply mean “monkey” or “ape” and in most cases no certainty is possible. But at times the terms must refer to the tailless (cf. Arist. *Hist. an.* 502a17–18) Barbary ape (*Macaca sylvanus*, McDermott, 55f. and passim). This monkey is notable for living on Gibraltar, and is currently the only monkey native to in Europe, though it may have been introduced to the area in later times (WMW, 580f.). In antiquity it was certainly found in northern Africa and was known to Phoenician and Greek settlers in the West. The earliest reference to these animals is in Herodotus (4.193) where tribes near Tunis are said to eat apes. The *pithēkos* described in great detail by Aristotle is a barbary ape according to McDermott, and D’Arcy Thompson and Peck routinely translate *pithēkos* as ape and κῆβος (*kēbos*) as monkey. The Pithecousae islands were so called because of the freedom given to the apes there – the animals were protected by law and lived with humans. McDermott (57–58) equates one such story with the Pithecusae near Carthage reported by Scylax (*Periplus* 3, *GGM* 90). If this is correct, the animals are certainly Barbary macaques. Goudsmit and Brandon-Jones trace an active trade in monkeys in the second century BC.
Its lack of a tail is alluded to in a fable in Perotti’s appendix (Appendix no. 1, = Perry 373) where the ape asks a fox for part of his tail to cover its buttocks (cf. Martial 14.202, where the tailless monkey is called a cercopithecus). Apes were a common pet in antiquity (Lazenby, 247–48) and the Barbary ape may well be represented whenever a monkey without a tail is seen. Unsurprisingly, “ape” could be used as an insult (e.g. Aristophanes Acb. 119f., cf. Dover, Olson, ad loc.) and to dream of one was an ill omen (Artemidorus, 2.12.103, 4.56.234 cf. Harris-McCoy, ad loc.)

It is logical, therefore (but not definitively proven) to see this macaque as depicted in the famous Arkesilaos vase of the mid-sixth century BC, found in Vulci, which shows King Arkesilaos II weighing silphium on a ship, on whose spars sits an ape wearing a collar. It may be assumed that most monkeys seen in Etruscan art were Barbary macaques, if for no reason other than proximity of the source and the fact that most of them lack tails (McDermott, 55–56).

See also monkey.


Basilisk Greek: βασιλίσκος (basiliskos); Latin: basiliscus. A poisonous serpent whose name evokes kingship. Philoumenos (31.1–3) offers the following: 3 palms (9 inches) long; most poisonous of all; yellowish. Nicander (Th. 396–410) adds that no other animal will feed on it and describes the grisly death of one bitten. This notorious snake figures prominently in Lucan’s account of Cato’s march across the Libyan Desert. It can kill before it bites and other snakes are afraid of it and keep their distance (9.724–26). A soldier named Murrus speared one and the poison spread up the spear into his body. Even amputating his own hand did not save Murrus (9.828–38; Wick, 2.353–55). Pliny (HN 8.33.78) describes this deadly snake of the province of Cyrenaica as no longer than 12 fingers long (just under a foot) and bearing white markings on its head that resemble a crown (L&S, s.v. basiliscus, incorrectly says this passage refers to a lizard). It drives other serpents before it, moves with the upper portion of its body erect, and is so poisonous that it burns nearby bushes. It is killed by the musky stench of the mustella (weasel). Elsewhere (29.66.19) he speaks of the congealed blood of the basilisk, alternatively called “Saturn’s blood,” and its use by the Magi. The fact that it has head markings, can raise its body up, and is attacked by a musk-telid makes it likely that this is a cobra. Although its name denotes kingliness, it probably is not what we call the king cobra (Ophiophagus hannah) for this animal is very long and is confined to Asia. Since the Egyptian cobra (Naja haje) is to be found in Libya and the area around Cyrene, it is an excellent candidate. The basilisk, with exaggerated abilities, became a staple of the medieval bestiary tradition. See also Ammianus Marcellinus 22.15.27; citations collected by Wellmann and by Morel, 367–69.

Alexander, 1963; Keller 2.293f.; Morel, 1928; Richter, DKP, 837–38;

**Bat** Greek: νυκτερίς (nykteris) φάλκη (phalkē, Hesychios); Latin: vespertilio (on name forms, Bruech). The bat is a nocturnal mammal of the order Chiroptera (“hand-wing”). While some mammals can glide for long distances, only the bat has true flight. It is widely distributed, existing in 18 or 19 families, 192 genera, and 1,057 species, making it second only to rodents as the most diverse group of mammals on earth (Fenton; WMW, 253f.). They are found from rainforests to deserts, and live on a wide variety of foods ranging from insects to fruits, reptiles, small fish, and, notoriously, blood. They readily take up their dwelling with humans. This interaction is not necessarily benign as bats can help to spread diseases such as rabies and histoplasmosis, a lung disease. On the other hand, the insectivorous bats play a major role in controlling insect populations.

The family Vespertilionidae is found throughout the area occupied by the ancient world. It exists in 30 genera and about 267 species (Kretschmann and Hayes; Owl). Stebbings and Griffith (16) list over 20 species found in Greece and almost 30 found in Italy, many listed as "vulnerable" or "endangered." The following major genera are found in Europe: the pipistrelles (Pipistrellus); noctule bats (Nyctalus); the big brown bats of the genus Eptesicus; long-eared bats (Plecotus); mouse-eared bats (Myotis spp.) (Mertz, WMW, 414f.). The noctule bat (Nyctalus noctula) would have been known to the inhabitants of Italy and is notable for the fact that it migrates. The brown long-eared bat (Plecotus auritus), known in Britain as the whispering bat, has long ears that it can fold. It too is found in Italy. The long-fingered bat (M. capaccinii) is found along the Mediterranean shore in Europe. The greater mouse-eared bat (M. myotis) is said to dwell in southern Europe.

The first mention of the bat in Classical antiquity is in the Odyssey where Odysseus escapes Charybdis by clinging to a fig tree like a bat (12.426f.) and where, in an extended simile, Hermes leads the souls of the suitors, gibbering like bats, to Hades (24.5f.). Herodotus (2.76), speaking of his famous Egyptian flying serpents, pointedly says that their wings are not avian, but membranous, like those of bats. Elsewhere (3.110), he describes strange flying creatures in Arabia which attack people harvesting casia and says they are very similar to bats. Aristotle mentions two types of creatures when describing animals with “dermatous” wings. One is the nykteris (Hist. an. 487b22f.) and the other is the alōpēx or “fox,” clearly different animals (Hist. an. 490a8–9). LSJ’s tentative identification of the alōpēx with the flying squirrel, Pteromys volans, is probably unjustified. Thompson, ad loc., translates this as “flying fox,” and today’s “flying fox,” is a very large type of fruit bat whose face is, in fact, canine. Its range, however, is largely confined to Asia, from India eastwards, and Peck (ad loc.) denies that this can be the animal in question. It is not inconceivable, however, that Aristotle heard of animals such as the Indian flying fox (Pteropus giganteus) from veterans of Alexander’s exploits in India. Its four-foot wingspan would have made it memorable. Other candidates might include the straw-colored fruit bat (Eidolon helvum), whose range includes Egypt, Ethiopia, and southwest Arabia. A tempting identification is the Egyptian rousett (Rousettus aegyptiacus), found from Egypt to Turkey and on Cyprus, whose German name, Ägyptischer Flughund, bespeaks its canine features.

It is clear that Aristotle studied the bat closely: it does have feet and can walk clumsily on them; is nocturnal; he is aware of the structure of its teeth and womb and that it is viviparous (Kraak). He stresses its dualizing nature, partaking in the nature of a terrestrial and a flying animal, while being
neither (cf. the riddle at Plato Republic 479c; Aesopica, Perry, 453). They have a tail that is neither avian nor that of a terrestrial animal and are four-footed, but “badly” so (Part. an. 697a29f.; De motu an. 714b7f.). When Aristophanes lists a number of Greeks with avian nicknames, the nickname of Chaerophon, “The Bat,” did not seem out of place (Av. 1296, 1564, cf. Dunbar and Sommerstein, ad loc.). The same ambivalence is found in Roman texts with a fragment of Varro’s Menippeans, where someone has become a bat and belongs “neither with the mice nor the birds.” Pliny (HN 10.81.168) describes it well and knows it feeds its young with milk and eats small insects, but he believes it carries its young as it flies. He elsewhere lists many medicinal uses for bats (Hünemörder; Tupinier; cf. Kaimakis, passim).

A Roman lamp handle is one of the rare representations of the bat in ancient art (Biers, 66, fig. 72). In myth, the daughter(s) of the Theban Minyas was changed into a bat for dishonoring the orgies of Bacchus (Antoninus Liberalis 10; Ovid Met. 4.410f.). In fable, the bat is tricky and cowardly (Perry, 453) and in dreams is a bad omen for business but good for pregnant women (Artemidorus, 3.65).

See also FLYING SERPENT.


See Flying serpent, Fox, strix.

Bear Greek: ἄρκτος, ἄρκος (arktos, arkos); Latin: ursus, ursa. The bear appears throughout all ages and areas of Greco-Roman antiquity. Most common was the brown bear (Ursus arctos), inhabiting northern and central Europe, Asia, the Atlas mountains of Morocco and Algeria (WMW, 681, 685–88). It is a large bear with a wide range of colors, ranging from light to dark brown, and occupies a wide variety of habitats. This bear is known to Americans as the grizzly or kodiak, and has many regional names including the smaller European brown bear. Jennison (189) and Toynbee (93–100) have collected references to wild bears in Italy (especially from Lucania), Greece (especially from Arcadia, but Attic bears are noted), Caledonia (Scotland), Germany, Thrace, Asia Minor, Syria, Libya, Mysia, Lebanon, and Spain. Douglas (12) claims that bears on Pindus in his day were said to toss rocks at wayfarers. Africa had bears in Numidia and Libya. As large omnivores bears posed a threat to agriculture, livestock, and even humans. The Romans probably encountered the polar bear but irrefutable evidence is hard to come by. The spectacled bear (Tremarctos ornatus), from Afghanistan and the sloth bear (U. ursinus), found in India, may also have been encountered or heard of (WMW, 680–81, 692–93).

Unfortunately, the work On Bears, by Sostratos of Alexandria (70 BC–AD 10) has been lost (EANS, 754). Aristotle (Hist. an. 579a18–30, 600a28f.) describes the hibernation and reproduction of bears well, along with many aspects of their behavior and anatomy. Pliny describes their behavior and habits in some detail (8.54.126–31) but includes many inaccuracies. He, like Aristotle, believed that young bears were born as a shapeless mass and were licked into shape by their mothers, a metaphor used later for the painstaking way in
which Vergil wrote the *Aeneid* (Donatus *Vita Verg.* 22, cf. Aelian NA 2.19). Oppian (Cyn. 3.154f.) stresses the she-bear’s lustfulness but Aelian (NA 6.9) praises the care that the she-bear takes of her young once grown and also describes the notorious battles between bulls and bears (cf. Arist. *Hist. an.* 611b33f.).

The bear’s ability to rise on its hind legs, its forward-placed eyes, and hand-like paws, has led to its role as a shape shifter (Pastoureau). Callisto and her son Arcas both turned into bears and the latter was the eponymous hero of Arkadia in Greece, where bears were known to roam. Achilles was fed on bear marrow and Antoninus Liberalis (*Met.* 21) speaks of Agrios and Oreios, the result of the coupling of a nymph of Artemis and a wild bear. The children were half human, half bear, with a taste for human flesh. Both Atalanta and Paris were reported to have been suckled by a bear and when Typhon fought Zeus he stole Zeus’ sinews, wrapped them in a bear skin and then hid them in a cave. Just as a large man today is sometimes called “a bear of a man,” so too in antiquity was the animal a source for names. Ursus was a contemporary of Domitian and a certain Ursus Togatus was a very popular juggler in the Roman Empire (Smith, 1890 s.v. *pila*, Schmidt).

The bear was hunted throughout antiquity for sport, meat, and pelts, and to protect agricultural investments such as beehives, herds, and flocks. Most were killed with spears, but Oppian details the procedures used to capture bears alive (Cyn. 4.354–424). Some of these were then hunted in the games, or were forced to fight other animals or to kill criminals. The bear is a common character in Martial’s *De Spectaculis* (cf. Rasmussen). Roman mosaics show bears with names such as *Crudelis* or *Omicida* (Auguet, 114). Others were exhibited in shows, drew chariots (*Martial* 1.104) or performed simple tricks. The life of Carinus, who served as “Augustus” in the late third century AD, tells of a skit where a bear chased a performer called a *toichobates* up a wall and of bears who acted in a farce (SHA *Caracalla* 19.2).

Seneca refers to bears kept as pets (*De Ira* 2.31.6) but the animals are notoriously hard to domesticate safely (Aelian NA 4.45). Pythagoras reportedly caused one to promise to cease its predation (Kahn, 5). Given the apparent ubiquity of the bear in Roman times, then, it is little wonder that the *OLD* cites two instances from the *CIL* (12.533.10; 13.5243) of the word *ursarius*, “one who cares for bears in captivity.”

In Greek art the bear is most commonly seen as small votives, on coins such as those of Mantinea, and on gemstones (IBK 2.3–4; Mottahedeh, 103, fig. 76). Votives are most commonly dedicated to Artemis, who is also connected to the bear in mythology and ritual. The young girls who were dedicated to the service of Artemis at Brauron, near Athens, were called *arktoi* and they assisted at the ritual called the *arkteia* (Bevan; Bodson; Perlman). In Roman art the bear is commonly depicted in reference to the games and hunting, although a few small finds also show it as a performing animal, commonly wearing a harness (Mottahedeh, 104, fig. 78). The *Palestrina Nile mosaic* depicts a bear with a nonsense inscription reading *APKOC* (*drkos*). Meyboom (26) would emend it to read *ARKO* (*arkos*). A gem in Leningrad shows a bear striding to the right. It has a true-to-life hump over its shoulders but another incongruously rises from its head (Boardman, pl. 910; Richter, 11–12, fig. 41).

Bearskins are mentioned frequently and one is identified on a battling giant on a vase by the Tyszkiewicz painter (BM E165 = BzAr no. 203036). They have their price controlled in the *Edict of Diocletian* (8.33). Pausanias tells us that bear cubs
were burnt in honor of Artemis and that bearskins were worn by Arcadians (Pausanias 4.11.3, 7.18.12 ff.). Pliny lists uses for its fat, bile, and organs and a bear tooth, probably talismanic, was found in the House of C. Julius Polybius in Pompeii (Ciarallo and De Carolis, 117).


Beaver Greek: καβστωρ (kastor); Latin: castor, fiber, beber (later Latin). The beaver is a dark-brown rodent with dense fur, leading a semi-aquatic life. It has webbed hind feet and a flat tail which is nearly hairless and comprises one-third of its body length. Its front paws are capable of grasping. A relatively large animal, it has been found to weigh up to 75 pounds. There are only two species of beaver, the North American beaver (Castor canadensis) and the Eurasian beaver (Castor fiber) and they are the largest rodents in the northern hemisphere. The Eurasian beaver once had a range from the British Isles to Siberia, but hunting for its fur has reduced its range. The ancients most commonly refer to those from the area of Pontus, along the Black Sea, but Strabo (3.4.15) mentions a type in Spain. C. fiber lives primarily in dens in river banks and constructs dams less commonly than C. canadensis. Its diet consists of a wide range of vegetation in warm months and bark and twigs (especially soft wood such as willow) during the winter. It is most active from dusk onward.

The earliest reference is in Herodotus (4.109), describing the tribes of Scythia. Here he states that in a lake otters are caught as are beavers “and other animals” that are square-faced and whose pelts trim cloaks and whose testicles cure illnesses of the womb. How and Wells, ad loc., cite one attempt to identify the “other animals” as an elk but choose to see some other aquatic mammal. Casson locates the Boudini near the Caspian Sea and would have the animals be seals, basing his evidence on skeletal remains. Asheri et al. (658, ad loc.) suggest martens or minks but these do not have squared muzzles. In light of the evidence from Pliny, below, it may be best to ignore “and other animals” and to take the specific information offered as referring to the beavers and not to the other animals. Aristotle carefully describes their habits (Hist. an. 487a22, 7.5.594b28f., cf. Pliny HN 8.47.109) and seems also to call them latax. Varro (Ling. 5.79) places the beaver in Latium and provides an etymology for the name fiber.

The beaver was hunted and trapped in antiquity. There is evidence for the use of its fur in more northerly climes in Greek times and in later Roman times. But generally it was hunted for its castoreum, the viscous, musky fluid that flows from its glands with its urine and from anal glands. This hunt gave rise to a pervasive, if fictitious belief. It was reported that when a beaver was pursued by a hunter intent on its testicles (falsely believed to be the source of the fluid) the beaver would castrate itself (the word play is clear). As Isidore says in the words of Cicero (Pro Scauro 2.7), “they deprive themselves of the very thing for which they were sought” (Etym. 12. 2.21, cf. Juvenal 12.34 with Larmour). Ovid (Nux 166) alludes to the tale only, but Aelian (NA 6.34) expands upon it, claiming that beavers who have already castrated themselves will do a handstand to show hunters that they lack testicles. The hunter, knowing his prize was lost, gave up the hunt. All such tales probably derive from the fact that the male beaver has internal sex organs that are not externally visible. Pliny (HN 32.13.26–31)
quotes Sextius Niger, “a most diligent student of medicine,” who debunks this belief and seems to describe the twin sacs that actually exude the fluid. Pliny then warns against adulterated castoreum and lists different brands—that from Pontus and Galatia being the best, followed by Africa (there are no beavers in Africa). Castoreum was used to make patients sneeze, to induce sleep, to wake people from comas and for many other things, including hiccups. Beaver urine counteracted poison, but worked best if kept in a beaver bladder. Bostock and Riley describe the true nature of the pouches and call the product a “viscous fetid substance.” In the Eurasian beaver the anal gland secretion is “a thick paste of a grayish color in females but oily with a whitish or pale straw color in males” (Schulte and Rosell, 183).

While the pelt of the animal was mostly used for clothing, Pliny lists beaver skin as a magical tool to help prevent illness when pruning grape vines (Pliny HN 17.47.265) and burned, it was used against burns (Pliny HN 32.36.119), nasal discharge and more (HN 32.13.27–33, 42.124). The Cyranides (2.19.1f.) gives the alternative name kynopotamos (“river-dog”) and recommends shoes made of beaver skin to remedy gout (32.36.110). Dyed beaver pelt prices are controlled in the Edict of Diocletian (8.31) and later authors, such as Claudian (ca. 370–ca. 404 AD, writing in Italy) and Sidonius Apollinaris (fifth century, Gaul) both mention cloaks with beaver pelts (Claudian De birro castoreo; Sid. 32.40.119 Ep. 5.7).

See also latax, pyktis, satherion.


**Bed bug** Greek: κόρις (koris); Latin: cimex. The bed bug (Cimex lectularius) was the bane of an age that had no effective means of exterminating the pest. As a recent outbreak has shown, it is resistant to many modern methods as well. It is extremely small (0.16–0.19 in.) and lives in bedclothes, where it hides by day and comes out at night to seek human blood. They can ingest four to five times their body weight and yet can fast for up to a year. The actual bite is painless but subsequent itching can be maddening (e.g. Aristophanes Clouds 634). Aristotle (Hist. an. 556 b25f.) thought that they, and other small insects such as fleas and lice, arose by spontaneous generation.

In Latin, there is a tendency to translate cimex simply as “bug.” The evidence seems to argue for a narrower translation as “bed bug,” unless this is specifically ruled out. Livius Andronicus, in his comedy Gladiolus (Warmington, 2.20–21) offers “Pulicesne an cimices an pedes?” “Fleas, cimices or lice?” Later, Plautus (Curc. 500) uses the same three bugs in a list of derogatory names for pimps. Since all three bugs were found in the house, “bed bug” seems best here. Varro (Rust. 1.2.25–26) quotes a work by Saserna that suggests controlling them by soaking a wild cucumber in water and sprinkling the water about the house. Another method is to smear your bed with bubulus bile mixed with vinegar. Columella recommends their use to rid cattle of leeches (6.18.2). Pliny notes that cimices are a good antidote against snake poisons, even in chickens. His various remedies call for the bugs to be dried, ground and administered topically or in a drink. Some have special applications. For example, those found in mallows in fields are good for the ears. It is thus clear that Pliny’s use of the term cimex is rather generic, meaning any small bug that resembled a bed bug (29.17.61–64, cf. 30.44.132, 32.10.47). Catullus jibes a man for being so poor he does not even posses cimices (23.2) in his house.
(cf. Martial 11.32). Horace (Epist. 1.10.78) calls a harsh critic a *cimex*.

A final note on Petronius is needed. In a vivid passage (98.1) Giton is hiding under a bed while someone pokes around with a stick. He clings to the underside of the bed so tightly that he touches the *sciniphes* with his mouth. These clearly must be bed bugs, but the word, found only here in Latin, is based on the Greek σκνίψ (sknips, cf. LSJ s.v. and Supplement; Beavis, 245–46) which is used for a variety of small insects.


Bee Greek: μελισσα (melissa); Latin: *apis*. Humans have robbed bee colonies in the wild from Neolithic times (Morse and Hooper, 167). Organized bee-keeping is at least as old as the Egyptians and was common throughout the Aegean bronze age (Davaras; Woudhuizen) and the bee was so common in antiquity that even D&K say that they must be “brutally selective” in their presentation (47). The present entry will attempt only to give a sense of the scope of the bee throughout Greco-Roman antiquity and readers interested in greater details are referred to the citations collected by D&K (47f.) and Beavis (187f.) as well as the longer works by Crane, Fraser, Ransome, and Royds and the articles cited below.

Aristotle studied the bee closely and reports in detail on its life cycle, though often erroneously (*Hist. an.* 623b5f.). As is frequently the case, many apiform insects are classed together and Aristotle lists nine types, six of which live socially. Notable is the bumblebee (*bombylios*). He knew of the basic division of labor and has terms for the queen (*basileus*), drone (*kēphēn*), and worker bee (*melissa*). The social life of the bee caused it to be a symbol of ideal political structure and its industriousness was constantly praised. Book 4 of Vergil’s *Georgics* is a compendium of this sort of praise and of the practical information repeated by agricultural authors such as Hesiod, Varro, and Columella. These authors devote much space to preventing loss in the hives from a very long list of pests, ranging from lizards to moths. Full details of handling the bees, swarming, relocation of hives, tanging (attracting swarms by clanging brass together), harvesting the honey and wax, and more are given in such authors. Bees figured heavily in mythology (Zeus was fed by them as an infant), omens (especially in swarms), dreams, and folk medicine. The *bougonia* represented a belief that swarms could be created out of the battered corpse of a bull (Kitchell, 1989). There is even an epitaph for a bee written by Martial (4.3.2 = Herrlinger, 38–39). They are a constant in ancient art from earliest times onward (Sekal), especially on gems and coins (IBK, passim). Bee products were ubiquitous. Honey served as a sweetener and a preservative (Dalby, 179–80). Wax was used so commonly (in writing tablets, lost wax method of bronze casting, lubricants,
sealings, encaustic painting, etc.) that an impressive apiary industry can be assumed. Ancient clay beehives have been found that were tubular in form, designed to lie horizontally (Crane; Jones; Jones et al.). Sources tell us others could be made of bark, wood, and wicker. Solon even saw fit to put in his laws the stricture that beehives had to be at least 300 feet apart (Plutarch Solon 23.6).

The bee was fairly common in ancient art, often appearing on coins and gems (IBK, viii.17f.; Nivaille; Richter, 40). Beavis and D&K display many examples but noteworthy are examples where bees seem to attack humans, such as the dancing man on a black-figure (BF) amphora in the Pergamon Museum (BzAr no. 16901) or in a scene referring to the bees that guarded the birth-cave of Zeus (Kitchell, 1989).

See also BELBUS, Wasp.


Belbus See hyena.

Bembix/bombyx, bombykion (diminutive). An insect with an onomatopoeic name meant to imitate its buzz.

(1) The βέμβις (bembix) is clearly a stinging insect but the usage is too broad to give specificity of identification since some authors depict it as a wasp and others apparently as a mason bee. The diminutive bombykion also exists. G&S (193, on Al. 182f., cf. Th. 806) think it might be the same as the bombylios, which is probably a bumble bee (Aristophanes Wasps, 107, Arist. Hist. an. 623b12). Pliny (HN 11.25.75) mentions Assyrian bombyces which, in the Rackham and Jones translation are rendered as “silk moths,” (see moth) but which D&K (72–73) identify as a bee or wasp.

(2) Bombyx is the generic term referring to the silkworm moth, known in antiquity in two forms. The first was cultivated on Cos (Alciphron 1.39) and is generally identified as Pachypasa otus or perhaps as Saturnia pyri (Beavis, 140). The second is the Chinese silk moth (Bombyx mori), first-hand knowledge of which was not possible before AD 550 (D&K, 113). Aristotle, therefore, describes the Coan variety, tracing the following stages of the life of the bombyx: skółex, young larva; kampê, mature larva; bombylis, cocoon; nekydalos, adult moth (Arist. Hist. an. 551b10f.; Pliny HN 11.27.76–78; Pausanias 6.26.6–9; cf. Athenaeus 8.352f.; Beavis 141–45). The silk trade with the East in Roman times and the famous Silk Road are well studied (e.g. Thorley and Liu).

See also CATERPILLAR, MOTH.

Liu, 2010; Rackham and Jones, 1940f.; Thorley, 1971.

Bestiality A great deal of thought was given in antiquity to what separated humans from other animals, and among the various answers was the fact that humans and animals do not have sexual relations, and that to do so was unnatural. In the Bible, for example, it was punishable by death for man and animal alike (Exodus 22:10, Leviticus 18:23). Women are expressly forbidden from having relations with animals (Leviticus 18:15–16) and similar laws existed among the
Hittites. Yet Mélèze-Modrzejewski claims to know of no law from Greece or Rome expressly forbidding such acts and the myths are full of zoomorphic gods impregnating mortal females. True bestiality, sexual congress between human and animal, is depicted fairly often in Greek and Roman art and is discussed in their texts. Some authors tried to account for hybrid creatures, such as satyrs and centaurs, as the result of bestial encounters (Plutarch Moralia 990f–91a) and many scenes on Greek pottery show satyrs sexually involved with animals. Aelian (NA 7.19) relates that Pindar was astonished to hear of baboons (Cynocephalus) sexually assaulting women and adds that in Rome a woman was accused of adultery with a dog. In art, a variety of scenes are depicted, involving both men and women and such animals as monkeys/baboons, horses, mules, and donkeys. Scenes involving female humans and equids are quite commonly seen on Roman lamps (e.g. Johns, 109, fig. 90, 111, fig. 92) perhaps reflecting scenes from Apuleius (Met. 7.21, 10.19–22), Juvenal (6.329f.), or even life (Luppe). Martial (De Spect. S) reports that the Pasiphae scene was reenacted in the arena (cf. Suetonius Nero 12.5 and Licht, 157–58). Such a public fascination with what is today a taboo subject may jar our preconceptions, but, as Plato tells us in the Republic (9.571 c–d) the wild, animal part of the soul is freed in sleep to allow dreams of matricide, incest, and bestiality. For some, that animal part was seen as nearer to the surface than in others.

Boa See Python.

Blister beetle Greek: κανθαρίς (kantharis); Latin: cantharis. Several strikingly colored beetles, which released an irritant when threatened, were known in antiquity. The OLD’s identification as the bright green Spanish fly (Cantharis vesicatoria) is more correctly Lytta vesicatoria (Evans). Beavis (168–73) claims that the yellow and black banded members of the genus Mylabris were better known in antiquity and collects evidence of their widespread use in medicine, a practice that continues today. Aristotle (Gen. an. 721a8f.; Hist. an. 542a9, 552b1f., on which see Janssens) studied their life cycle closely but concluded they were the product of spontaneous generation (cf. Aelian NA 9.39). Dioscorides devotes a chapter to it (2.61). Pliny (HN 29.29.76, 92f.) describes five types, including a clear description of Mylabris and treats cantharides as both a poison (cf. Cicero Fam. 9.21.3, Tusc. 5.117; Ovid Ibis 308) and a cure.


Boar See Pig.

Bouba [O.E. from Arabic "bawbālā"] A. buselaphus (bouba, boubal). Most uses of these words indicate an antelope. Toynbee (146) suggests the tora hartebeest (Alcelaphus buselaphus tora). Keller (1.294–96, cf. Dalby, 114) identifies it with the “kuhantelope,” or hartebeest (Bubalis mauretanica = today’s A. buselaphus), found from Morocco to Egypt, and perhaps in Israel (MWM, 2.1181–83). An extinct subspecies, A. b. buseleaphus, which died out in the late 1920s (Taylor, 33) once roamed the entire northern African coast and would surely have been known. Dio Cassius (48.23.3) places it in Numidia, well within the extinct hartebeest’s range (Herodotus 4.192; Strabo 17.3.4; Polybius 12.3.5; Diod. Sic. 2.51). Oppian (Cyn. 2.300–14) discusses it as a creature of the forest and claims it is smaller than the “broad-horn”
(eukerōs, cf. DEER, FALLOW) but larger than the DORKAS. He describes its capture vividly and says that its horns are straight where they come from the head but curve toward the back with curved points. This description fits the hartebeest very well.

In Roman times, bubalus began to be used for a bison or wild ox (cf. oxen, wild). Pliny (HN 8.15.38) speaks of wild German oxen, among which are aurochs (uri), remarkable for their strength and speed. He says the masses call these bubali for they do not know the bubalus is African and resembles a calf and a stag (cf. Solinus 20.5). This equation of bubalus and aurochs seems clear (contra, Wiener 75f.). Yet, at 8.14.37, Pliny himself speaks of large snakes draining milk from bubali, which Bostock and Riley (ad loc. 2.262) are probably correct in taking as a bovid. At 11.90.222 Pliny simply says its blood barely coagulates, which means it is not that of a bull (Kitchell and Parker) but does not help to further identify it. When Josephus (AJ 8.2.4) puts them in the area of Syria he may have either wild bison/oxen or an antelope in mind. Martial (De Spect. 22.10 = 23.4) notes that a bubalus fought alongside a vison in the games. The context allows of no clear identification, but slightly favors a bigger, stronger animal (perhaps an aurochs). Aelian (NA 13.25) speaks of an Indian species of bubali which is not really identifiable from context.

Is the bubalus a buffalo? By medieval times, and probably in late antiquity, the term bufalus and probably also bubalus referred to the domesticated water buffalo (Bubalus bubalis). Originally domesticated in India or China, this animal was imported and bred to be smaller and tamer (Clutton-Brock, 172f.; Kierstein et al.) The exact date is tenuous. Dalby (347) cites Agathias 1.4 as referring to the water buffalo, but this is unlikely. Agathias’ description is of a wild living, enormous bovid and is surely an aurochs, not a water buffalo. Likewise, Venantius Fortunatus (Carmina 7.4.21) describes the capture of bubali as that of wild animals, and must therefore refer to the aurochs. Thus, while the water buffalo may have been in Germany as early as 874 (Bökonyi, 297–98) and in Italy as early as the 590s AD (Paulus Diaconus 4.10), existing passages cannot demonstrate its earliest arrival and we must rely on context to separate out references to aurochs and water buffalo. On the Medieval buf(ﬂ)etus, see Kitchell and Resnick (1.299 n. 63). The confusion of the animals surrounding the term bubalus continued and even affected Vulgate studies (Wiener, 1–10).


**Butterfly**

Greek: ψυχή (psyche, soul), νυμφή (nymphae, “young woman, bride”); Latin: papilio. The term “butterfly” today refers to insects which are members of the family Lepidoptera (as are moths). In antiquity, the same words were often used for both animals. Identification of ancient descriptions with modern species is made difficult by the sheer number of butterfly species (280 in Italy alone, Balletto et al.), the fact that fewer species can now be identified as endemic to Greece and Italy, and that diversity among butterfly species is dwindling (Dennis et al.; Grill and Cleary). Thus, Gossen’s identification of 86 species is to be taken with caution (572–85, cf. Hünemörder). In fact, references in Classical literature to the adult butterfly are fairly rare, whereas many references refer to the destructive larval stages. Beavis (121) makes an excellent case for identifying two species that prey on cabbages,
lettuces and the like, *Pieris brassicae* and *P. rapae*. Aristotle (*Hist. an.* 551a14f.) says the “so called *psychai* (pl.)” arise out of *kampai* (caterpillars), found on these types of plants, and goes on to describe their various developmental phases. Most believed that these caterpillars arose on the plants by spontaneous generation and the subsequent pupal/chrysalis stage was well known (*Gen. an.* 723b5f., 733b11f., 758b15f.). Other names for caterpillars include Greek *σκολῆς* (*skōlēs*) and Latin *eruca, uruca, vermis, vermiculus*. There are many discussions in antiquity on how to defeat these pests (Beavis, 128).

Butterflies appear frequently on Minoan and Mycenean art, and may symbolize the human soul (Dietrich, 25f., cf. Gimbutas, 185–86). The so-called “Ring of Nestor” may even show pupae (but cf. Nilsson, 43f.). A chous in the New York Metropolitan museum (06.1021.197) shows a child chasing a butterfly (Hoorn, fig. 455, no. 748). Butterflies are found on Greek coins from Rhodes (IBK, 7.25–26) and Roman coins, alone or with crabs (IBK, 7.28–29; Deonna). They are frequently carved into gemstones (e.g., IBK, 23.19–28 et passim; Richter, 75, fig. 222) and one is found on the wall of the House of the Golden Bracelet in Pompeii (Ciarallo and De Carolis, 58; cf. Larew, 319–22 for others at Pompeii). For other representations, D&K 99–107.

*See also cerastes.*

Callit(h)rix This Latin was borrowed from a Greek adjective meaning “beautiful-haired.” Pliny (HN 8.80.216, cf. Isidore Etym. 12.2.33) describes these animals as having a beard and a tail that flattens out at the end. He says they can only live in their native Ethiopia. McDermott identifies it as one of the guerezas, perhaps \textit{Colobus abyssinicus}, a striking monkey whose face is framed with a white fringe that does resemble a beard. Today this is better known as the mantled guereza (\textit{Colobus guereza}, Martin, 178) and its range extends to eastern Africa at the base of the Red Sea in modern Ethiopia. It was certainly known to the ancients. In today’s nomenclature the family \textit{Callithricodae} contains four genera and 22 species of marmosets, found in South America.


Camel Greek: κάμηλος (\textit{kamēlos}), βιζάριον (\textit{bizarion}) she-camel or suckling camel (PLond.ined.1821); Latin: \textit{came-lus}, \textit{dromas}, \textit{dromeda}. The ancients knew both the single-humped dromedary camel (\textit{Camelus dromedarius}), found in northern Africa, Arabia, and far western Asia, and the Bactrian camel (\textit{Camelus bactrianus}), with a double hump, today living in Mongolia and parts of China (cf. Solinus, 50, who confuses them). Both animals may have been domesticated early by humans (Potts; Walz 1951, 1954, but cf. Midant-Reynes and Braunstein-Silvestre) to help transport items across landscape unsuitable for other draught animals. Their ability to endure extremes of temperature, to go for days without water, and to subsist on the roughest sort of fodder made them invaluable for these peoples. Each stands about 7 feet at the hump but the Bactrian weighs a bit more. Today’s domesticated Bactrian camel is significantly larger than the wild ones. There is some evidence that the two were cross-bred in antiquity (Potts; cf. WMW, 1078).

Herodotus (3.103) discusses the animal but states that he does not have to describe one since they were familiar to Greeks. He only adds that their hindlegs have four thighbones and four knee-joints and that their genitals extend backward through their legs. The former is based on a misobservation (How and Wells, 1.280–90) and the latter is true. If one looks at the front legs of a dromedary, it does seem that each leg has two joints. This is vividly depicted on a Classical ring (Boardman, 1970, pl. 901; cf. Richter, 1930). He also describes the use the Persians made of the camel in their marches toward Greece and describes lions attacking Xerxes’ camels in
far northern Greece (7.125, cf. 1.80 for the fear they engender in horses).

Aristotle was fascinated by camel anatomy (Hist. an. 499a 13f.; Part. an. 676b26f.; 688b24f.). He gives their life span as 30 years, knows they can last a long time without water, and claims they prefer muddy water to clear (Hist. an. 595b 22–96a9). He knows both kinds and tells us that they were equipped with leather shoes when footsore and that they are subject to rabies (604a4–13). Aelian refers to their longevity, claiming that Bactrians can live up to 100 years old and that those used in battle are castrated (4.55). He notes camel races (12.34) held each year by the “Sagaraeans” in honor of Athena.

Strabo (16.4.2) mentions the camel herds of Arabia Felix and he knows of nomads that ride, milk, and eat camels (16.4.18, 23f.). Antiochus Grypus used to give presents to his dinner guests of fully laden camels, complete with attendants (Athenaeus 5.210e). In the fabulist tradition, the camel is variously good tempered (Perry, 458, no. 195, 464, no. 220), a clumsy dancer (Babrius 80; Perry, 436, no. 83), envious of a bull’s horns (Perry, 444, no. 117) and defecating in a river (Babrius 40).

The Greek for the dromedary is “running camel” (dromas kamēlos) (Diod. Sic. 19.37.6, Strabo 15.2.10, Plutarch Alexander 31.3). Latin tends to say “camels they call dromedaries” (Livy 37.40.12; SHA Aurelian 28.3). Its speed receives special notice (Quintus Curtius 5.2.10) and Isidore (Etym. 12.1.36), after dutifully noting that it is smaller than its two-humped cousin, derives its name from the Greek word “to run.”

The camel is readily found in ancient art (Schauenburg, 1955–56, 65 passim; Richter, 14, fig. 42, 1968, 32, 168; 1971, 20, 25, 43). One of the earliest representations is on an vase of eastern Greece dating 540–530 BC showing a dromedary being led by a man in foreign dress (Cook, 123–24; cf. Schauenburg, 1955–56, 65). A BF skyphos dated to 525–475 BC may depict a camel in a theatrical scene (Louvre, F410) and Dionysus is shown riding a camel (London, British Museum: E695, compare E685). A sixth century BF skyphos by the Camel painter (Munich, Antikensammlungen 2008) clearly shows a Bactrian being led on a rope by youths (Morin, 130, fig. 144). Compare to this Louvre, F372BIS (Schauenburg, 1955–56, pl. 2.1, BzAr no. 351658) and a red-figure (RF) pelike by the Argos painter (ca. 480 BC) depicts a similar scene with a frankly comic camel with spindly legs, a figure-S neck and the rear hump placed securely over its hind legs (St. Petersburg, Hermitage, 614/ST1603; Boardman, 1975, 113, fig. 183). A Roman intaglio shows the odd scene of a camel carrying a basket in its mouth (Biers, 64, fig. 69). An RF pelike from Nola shows a youth in oriental costume riding a Bactrian (Wurzburg, Universität, Martin von Wagner Mus., H4803, BzAr no. 216607). A well-drawn Bactrian is engraved on a Greco-Persian gem in London (Boardman, 1970, pl. 901, cf. Boardman and Vollenweider, 24, pl. 104). Compare this to a recumbent Bactrian (ibid., pl. 917) whose rear hump is much thinner than the front hump (cf. Richter, 428–30), perhaps indicating that the camel had been drawing on the fat supplies stored in its humps (cf. Boardman and Vollenweider, 26, pl. 117). A Classical gem shows a lion attacking a camel (Boardman, 1970, 309), reminiscent of those that attacked Xerxes’ camels. Toynbee (137–40) lists several works of art depicting camels. Bronze coins from Bostra, Arabia, and Decapolis, issued under Trajan show a camel on the reverse (Blanchet; IBK, 31–32). The Boston Museum of Fine Arts possesses two terra-cotta camels from Naukratis. One is a fine head (88.1029) and the other is quite fragmentary, but shows a fully laden camel.
complete with saddle and saddle bags (88.927, cf. the mosaic from El Djem, Blanchard-Lemée, 90–91, fig. 57). The famous PALESTRINA NILE MOSAIC shows a dromedary with the name ΒΑΒΟΥΣ (NABOUS) above it. Compare this to Pliny’s nabun (presumably the accusative of nabus), which he identifies as a GIRAFFE (HN 8.27.69). Cf. NABUS.

Throughout antiquity the camel was put to many uses, especially by the Romans, and remains are found as far east as France (Clutton-Brock, 159), Slovenia (Bartosiewicz and Dirjec) and Hungary where it may have been sacrificed (Bökönyi). We have a record of a camel sale from Egypt (Callender) and even a camel tax (Daniel and Siipsteijn). Such was its pervasiveness that lexicons hold such Greek terms as kamēloboskos (camel herder), kamēlotropheō (to raise camels) and kamēlarios (camel driver). Inscriptions speak of a dromedarios (Latin dromadar-ius), a cavalryman who rides a dromedary (POxy.1652a6, BGU 827v, CIL 3.93.10 and L&S s.v.) and the Roman army even had the position of magister camelorum (cf. Kolendo). Its main function was always as a beast of burden, especially useful in the spice trade, but also accompanying armies and even delivering water (Ast and Bagnall; Westermann). Pigière and Henrotay show that both types were present in the northern provinces of the Roman Empire throughout its existence. It was even depicted pulling plows, carrying swordsmen and archers into battle, and, of course, as objects of sport and show. An all-black Bactrian camel was paraded in Egypt by Ptolemy I (Lucian Prometheus in verbis 4 = Harmon et al., 6.422) and Ptolemy II showed two sets of camels in his procession (Rice, 92–93). Pliny devotes significant space to the camel and is aware of both sorts, Claudius used them in games in the Circus, Nero showed camels drawing quadrigae, and Elegabalus showed camels taught to draw a chariot and also dined on camel hocks. Finally, Pliny HN 28.26.91 lists numerous medicinal and magical uses for a camel. Pseudo-Aristotle (Mir. ausc. 2) tells a strange story of the camel’s inherent morality. Camels will not mate with their mothers and once, when a herder tricked one into doing so, it bit him to death.


Capreolus See DEER (ROE).

Caracal Greek: λύγξ (lynx); Latin: lynx. The caracal (Caracal or Felis caracal) bears a strong resemblance to the lynx, but only has spots on its underside. Its pelage is solid and from tawny to brick red in color and its tall, pointed ears have black tufts and backs (Toon; WMW, 810–11). Its range is from sub-Saharan Africa into Arabia and from there to northern India and into Russia. It was therefore surely known to the Greeks and Romans but was confused with the lynx (cf. LSJ s.v. λύγξ). Its modern name is ultimately from Turkish, meaning “black ear.” Oppian (Cyn. 3.84f.) states that there are two species of lynx, one large and one small (the caracal is slightly smaller than the lynx). Caution is needed in identifying the cats in media such as gems, which do not allow the spots to be shown readily (IBK, 93, no. 16). Although the caracal was once trained
in India and Persia to catch game birds and deer and we may see this activity in ancient Egyptian art, there is no evidence for this in the Greco-Roman world.


Cat Greek: αἰλουρος, αἰλουρος/αἰέλουρος (ai(e)louros); Latin: f(a)elis, f(a)elis, cat(t)us (late). Gow discusses the alternative form malouris. The invention of agriculture spurred the establishment of storage of grain and, ultimately, the city. These, in turn, attracted a large mouse and rat population and this inevitably attracted the feral cat into closer proximity to humans (Clutton-Brock, 133f.). While some cats in antiquity may well have been household pets, most were probably liminal or feral, relying on their skills to obtain food. Today’s barn cat would be a parallel. Engels (1–2) reports that feral cats, living close to humans but not necessarily fed by them, can kill over 1,000 rodents annually. The domestic cat (Felis sylvestris catus) did not evolve from the European wildcat (Felis sylvestris sylvestris), but from the Egyptian and Libyan wildcat (F. s. libyca) (Engels, 9). Skeletal remains are infrequently found in urban settings and it is often difficult to determine whether they are those of a wild cat or a truly domesticated animal. But it is probably safe to say that by 2,000 BC the cat was truly domesticated in Egypt.

As Herodotus reports at length (2.66f.), the Egyptians were quite devoted to their cats, which they called the miu, and often embalmed them. From Egypt, the cat made its way to other countries, not infrequently as a ship’s cat. Minoan-Mycenean art depicts cats hunting water birds but these are most likely wild cats (e.g. Kenna, no. 174, face a). Mid-fifth century coins of Rhegium and Tarentum bear images of cats interacting (playing?) with humans, but this is not solid evidence for positing the existence of the animal in the colonies as early as the city’s archaic foundings (Engels, 55f.; IBK, 7). There are several indisputable cases of artistic representations of domesticated cats in a Greek context (cf. Donalson, Keller, Toynbee). The most famous is on the base of a stele in the National Museum of Athens (ca. 510 BC) where a dog and a cat, both on leashes, are preparing to fight (Richter, 34, fig. 175). A well known funeral monument from Athens dating to the mid-fifth century depicts a domestic cat whose head is sadly missing, seated beneath what is probably a bird cage (Richter, 34, fig. 179). Southern Italy has some fine examples, including the coins listed above. Interestingly, Apulian vases repeat the coins’ motif of a human holding something out with which to entice the cat into play, in several instances a bird (e.g. Keller, 78).

Many “cats” have been identified in Greek art, but we must be cautious in identifying every feline near a human as a domesticated cat. They may be larger, more exotic felines not drawn to scale, the young of wild animals such as cheetahs, or they may be wild animals placed in the scene to indicate an exotic location. The latter is surely the case in the famous Laconian vase showing Arkesilas weighing sylphium. The cat under his chair in no way resembles a domesticated cat and yet it is sometimes so identified (Engels, 58). Likewise, although “cat” is the common translation of ailouros, it can also refer to weasels who were also kept by the Greeks for rodent control. The later Etymologicon Magnum, takes the name ailouros to mean “tail twitcher,” which clearly implies a cat. Jennison (19) makes a case for identification of the aielouros brought to market by the Boeotian in Aristophanes’ Acharnians (879–80) as a pine marten (weasel). Mair (106, on Oppian Cyn. 572) collects much evidence and Benton studies the controversy
surrounding the translation of *ailouros* with some fervor.

The Ptolemies continued the Egyptian devotion to the cat and by Roman times the domesticated cat had become a common associate of humans. The evidence amassed by Donalson and Toynbee argues strongly that the cat became increasingly involved in all aspects of Roman life, ranging from its role as mouser to that of trained performer and beloved pet allowed to play with balls of yarn. Isidore (*Etym.* 12.2.38) implausibly derives the form *catus* from a Greek verb meaning to illuminate, a reference to its night vision. Pliny notes that its tongue is rough and that its eyes glow in the dark (*HN* 11.55.151, 65.172). A mosaic from Volubilis (Morocco) shows us a cat named Vincentius wearing a red collar and having slain a mouse named “Luxurius” (Engels, 120; Blázquez, 4, fig. 7). The cat on a Roman tombstone of Calupurnia Felicla is a punning allusion to her name. See Jashemski (103–04) for cat remains at Pompeii. The presence of a cat in the fables of Babrius (17) is noteworthy in that it is depicted as a raider of domestic fowl (cf. Varro *Rust.* 3.11.3 and 12.3 (*faelis*); Columella 8.3.6, 8.14.9, 8.15.1). An interesting parallel to this is the epitaph of a pet partridge by Agathias Scholasticus (*Ath. Pal.* 7.205) in which the owner of the dead partridge vows revenge on the “house-cat” (*oikoenēs ailouros*) which killed it. The next poem in the series is by a student of Agathias and accuses the cat of neglecting its proper duties – catching mice.

Benton, 1969; Blázquez, 2007; Bodson, 1987; Clutton-Brock, 1981; Donalson, 1999; Engelman, 1899; Engels, 1999; Gow, 1967; Hünemörder, s.v. “Cat”; Jashemski, 1979; Keller, 1.67–81; Kenna, 1960; Lentacker and De Cupere, 1994; Limet, 1994; Mair, 1987; Málek, 1993; Richter, 1930; Toynbee, 87–90.

**Cebus**

Greek: κηφός (*kēbos*), κηπος (*kēpos*); Latin: *cebus*. McDermott (67) notes that there were four main kinds of monkey known from Ethiopia – SPHINX, KALLITHRIX, CERCOPITHECUS, and *kēbos/kēpos*. But the words are often used interchangeably and exactitude in identification is impossible. Aristotle (*Hist. an.* 502a18) states that a *kēbos* is a *pithēkos* (cf. BARBARY MACAQUE) with a tail, and one wishes the matter were this simple. When authors begin to talk of specific animals of this name, the descriptions vary wildly. Strabo (17.1.40) says the *kēbos* was sacred at Babylon and elsewhere (16.4.16) locates it around the Arabian Gulf. He is citing here one Artemidorus who describes them as lion faced, with the bodies of leopards and the size of deer. Elsewhere (17.40.1) he says it is like a cross between a dog and a bear. Agatharchides (frag. 76 = Burstein, 122) offers virtually the same description as Strabo’s Artemidorus. Aelian (*NA* 17.8), quoting Pythagoras on the Red Sea, offers a detailed description and likens it to the BABOON (*Cynocephalus*). It was as big as an Eretrian hound, had very colorful markings, and full breasts like a female human. Pliny (*HN* 8.28.70) describes creatures called *cepi* as being part of the games celebrated by Pompey and his description is evocative: rear feet resembled human feet; front legs and forefeet like hands. He stresses that the animal was never seen again at Rome. Such rarity does not evoke a baboon, for example, as identified by Keller (1.9). Given the rarity of the animal, there is some slight chance it was a CHIMPANZEE. Other identifications are quite varied. LSJ suggests that the animal may be the long-tailed “nisnas monkey, *Cercopithecus pyrrhonotus,*” a position defended by Burstein (122, n. 2). McDermott (69) says that this is “undoubtedly one of the highly-colored guenons,” but admits that a more precise identification is difficult. Guenons, a tribe of the Cercopithecin monkeys, tend to be smaller than a large dog, however, and their heads are not dog-like as Aelian
Cenchris

See kenchrias.

Cerastes

Greek: κεράστης (kerastēs, “horned”); Latin: cerastes. (1) As its name indicates, this viper was known for the two “horns” on its head. Some authors incorrectly cite four and Pliny’s (HN 11.45.125) one horn may be Vipera ammodytes (viper; SSW, 1.390–92). Ancient descriptions make identification of it as the horned viper (Cerastes cerastes, less correctly C. cornutus; SSW, 1.367–698) fairly certain. This snake ranges all along the Mediterranean countries of Africa, southward down the Red Sea to Sudan, and east to Israel. It attains a maximum size of 2.5 feet but averages between 1 and 2. Its coloration varies, but a sandy color is very common. It is toxic, but not generally lethal. It is first mentioned by Herodotus (2.74, 4.192). Aristotle (Hist. an. 500a3–6) is at pains to show that the protuberances are not true horns. Philoumenos 18.1 (cf. Aelian NA 1.57) describes it carefully, stating that its scales emit a rustling sound as it slithers along. Nicander (Th. 272 f.) stresses the sidewinding movement of the snake (cf. Lucan 9.716; Wick, 2.295–96) but attributes the rustling noise to the haemorrhhois. Both the effects of the bite and treatments (including amputation, cf. Pliny HN 8.35.85 for the asp) are discussed by Philoumenos and Nicander. Celsus (5.27.7) offers various herbal cures for its bite, many of which are the same as those for dìpsas and haemorrhhois, and at 5.27.8 he equates cures for the Cerastes and the chelydros. Pliny reports the belief that the cerastes moved its horns, like worms, to attract birds to their doom (HN 8.35.85).

(2) Theophrastus (HP 4.14.5, 5.4.5) and Pliny (HN 16.80.220, 17.37.221) use kerastēs/cerastes to refer to a two-horned, harmful “worm,” clearly a caterpillar, which inhabits trees and draws out their sap (cf. butterfly).


Cercalopis

Festus (p. 47) glosses the cercolopis as a type of monkey (simiam), the end of whose tail is fluffy (villosam). This may be a form of either cercopithecus or cercops, but the description of the tail is reminiscent of the kallithrix.

Cercopithecus

Greek: κέρκοπιθηκος (kerkopithēkos), cf. κέρκοψ (kerkōps), a tailed monkey of unknown identification despite Hünemörder’s identification of it as a “tailed guenon.” The name is somehow connected to the Cercopes (sing. kérkōps, kerkōps), a mischievous pair of dwarves overcome by Heracles and, in later myths, turned into monkeys. Since monkeys were always known for getting into trouble, the source of the etymology is clear. Toynbee (56) claims that this is the “tailed Barbary ape” (not to be confused with the tailless BARBARY MACAQUE) which she does not identify and evidence for which, this author cannot locate. In fact, Martial (14.202) specifies that it is tailless (cf. below). The only macaque living in Africa is the Barbary and all others, though widely spread, are in Asia and beyond.

Burstain, 1989; Hünemörder, s.v. “Monkey”; Toynbee, 55.
Pliny (8.30.72) lists a *cercopithecus* in Ethiopia with a tail, a black head, the hair of an ass, and an odd pattern of vocalization (cf. Isidore (12.2.31). Strabo (15.1.56), quoting Megasthenes, mentions that the monkeys inhabiting the Caucuses are “stone-rollers.” Elsewhere (15.1.29) he locates the *cercopithecus* in India, in the land of Porus. He says that their numbers and their size were so extraordinary that Alexander’s troops thought they were an army of men. He stresses their mental acuity and describes how the animals are caught through trickery. Juvenal (15.4) claims the *cercopithecus* was sacred to the Egyptians, but this is generally taken to be a confusion of terms with the *cynocephalus* (cf. McDermott, 33).

In other citations the word seems to be a generic word for “monkey,” and not specifying a distinct species. Martial (7.87) makes it clear that this variety of monkey could be a beloved pet and elsewhere (14.202) that they could be trained to toss spears. Having seen the latter, he is impressed by how human monkeys can be and retorts: *si mihi cauda foret, cercopithecus eram,* “If I should have a tail, I would be a monkey.” His reference to the same animal and a cloak (14.128) is more difficult to fathom. Suetonius (Nero 30.2) compares the face of a money lender to that of a *cercopithecus.*

*See also* CLURA.


**Cercops** Greek: κερκόπσ (kerkōps); Latin: *cercops.* The name of this monkey is linked to the tale of the Cercopes who, in some versions, are turned into monkeys (Connors, 185f.). McDermott (62–63) argues that the Latin term is often merely a variant for SIMIA but others think it may be a variant of *CERCOPITHECUS.*

**Chama** See LYNX.

**Chameleon** Greek: χαμαίλεως (chamaileōn, “ground lion”) χαμαῖλεος (Nicander); Latin: *chamaeleon.* The chameleon is a lizard notable for its bent legs and strong claws, large bulging eyes which can move independently of one another, long incurving prehensile tail, an extremely long, projectile tongue, and an ability to change color. The RDB lists ten genera and 197 species or subspecies. The most common species in this area is *Chamaeleo chamaeleon,* found throughout the Mediterranean area, from southern Spain to the Near East, including populations on many islands. Other species would have been encountered as far east as India (see Pliny below). *C. chamaeleon* ranges between 8 and 15 inches in length and can have varied colorations. Its excellent eyesight and long, projectile tongue allow it to eat insects, and other small vertebrates and invertebrates. It is currently protected in Greece and has probably been extirpated in Chios and Crete. The ancients may also have encountered the veiled chameleon (*Chamaeleo calyptratus*) in Yemen, *C. arabicus* along the southern shore of the Arabian Peninsula, and *C. africanus,* which is found in Greece today.

Aristotle (Hist. an. 503a15–b28), has a lengthy and careful description of the animal which seems based on study of live specimens as well as dissection and vivisection. Note that some of this selection may be an interpolation (Peck, ad loc.). His description of its odd (zygodactylic) feet, each of which is split into two sections with each section having two “toes,” is very accurate. Curiously, he does not describe the action or shape of the tongue. Elsewhere (Part. an. 692a20–25) he stresses its lack of flesh and blood compared to other oviparous animals. He says that it changes color
out of fear. In the *Nichomachean Ethics* (1.10.8) he evokes the chameleon as a symbol of changefulness. Pliny (*HN* 8.51.120–22) is indebted to Aristotle's description but adds some interesting information: Africa has chameleons, but India has more; its eyes never close; it lives entirely on air. In fact, the chameleon's eye has eyelids that are fused to allow only a small round hole for the animal to see through. He claims that it is harmless (*innoxius*) but elsewhere (8.41.101) he says that if an elephant eats a chameleon accidentally because it is the same color as a leaf, it uses wild olive as a remedy; and after a raven has killed a chameleon it seeks bay leaves to counteract the poison in the chameleon's body. Yet another passage (28.112–18) is devoted to a book written on the chameleon by Democritus. Pliny excoriates the author and enumerates, one by one, examples of what he calls “Greek foolishness” (cf. also *HN* 10.73.143). Aulus Gellius (10.12.1–5) repeats much of this with some changes and gives us the name of the work: “On the Power and Nature of the Chameleon.”

Plutarch (Alcibiades 23.4) compares Alcibiades’ talent for being able to adapt himself to any surroundings or circumstances to the color-shifting of a chameleon and adds that it is a well known fact that the chameleon can be any color but white (cf. Plutarch *Moria 53d*). Plutarch (Moria 978e–f) claims that the chameleon does not change color from a desire to hide, but out of pure fear.

Alexander of Myndus (cited by Aelian NA 4.33) relates that the chameleon’s hide is too thick to be bitten through by a snake. When a snake tries to swallow it whole, however, the chameleon grasps in its mouth a piece of wood large enough to prevent the snake from putting its mouth around it and escapes. Seneca (*QNat.* 1.5.7) offers some thoughts on the mechanism by which animals like the chameleon change color and offers an opinion that it may be related to the refraction of light. To dream of a chameleon was inauspicious (Artemidorus *Oneirocritica* 2.13).


Chamois Latin: *rupicapra* (cliff-goat). The Alpine or northern chamois (*Rupicapra rupicapra*) is a smaller type of mountain goat which was well known to the ancients, and is found today from the Alps eastward into Turkey and Asia Minor. Another species, *R. pyrenaica*, is found in Spain and in the Apennines (*WMW*, 1213–14). Pliny (*HN* 8.79.214) differentiates it from the ibex. Its horns are short (6–8 inches) and slender, more resembling a domestic goat’s than an ibex. They curve backward at the top (Pliny *HN* 11.45.124 “in dorsum adunca”). The animal was too small to be useful in the games but Pliny assures us that *rupicapra* fat, mixed with an equal amount of milk, cured consumption (*HN* 28.67.231). Franz has identified one on Roman pottery from Tschugg, Austria.

Cf. also deer.


Cheetah For the names in Greek and Latin and their associated difficulties, see panther. The cheetah (*Acinonyx jubatus*) was undoubtedly known to Greeks and Romans. Only recently has it become extinct in India, Iraq, Syria, Jordan, Sinai, and the Arabian peninsula (*WMW*, 834; Saleh, 178). Today, however, the cheetah is no longer found in northern Africa (Meyers, 11) although a few individuals may exist in the northern Egyptian desert (Saleh). The *WMW* recognizes only a
single species, although the IUCN names a subspecies *A. j. venaticus* (Asian or hunting cheetah). It is commonly said that the ancient Egyptians hunted with cheetahs, but Houlihan disputes that there is hard evidence for the hunting and that proof of tamed cheetahs is limited (69, 199–200). The cheetah is marked with spots, has longer legs than most cats, and is known for its speed.

The Greeks and Romans had no clearly defined terms for the various spotted cats (especially cheetahs and leopards) they encountered (Jennison, 183–87). This is complicated by the fact that the word *tiger* was apparently used on occasion to indicate “cheetah” (Meyboom, 26) and that Arrian (9.15.3) calls a spotted hunting dog a “tiger.” Meyboom (Appendix 4, “Tigris,” 122–24) believes that these are all references to the cheetah.

Moreover, to the untrained eye, the leopard and cheetah are rather similar and there was limited opportunity for ancient writers on animals to observe them in the wild. There is, for example, no description of a cat that runs as fast as an antelope. Artists suffered the same difficulties and while spotted cats are depicted on vases, they often look alike with no regard for the subtle differences between the spots of a cheetah and a leopard (q.v. for details). Ashmead has studied eight vase representations of large spotted cats, several with collars and leashes, on Attic vases and argues that these are cheetahs, kept by aristocratic youths as a sort of status symbol. (contra, Brown, 172–73, who sees leopards). No literary evidence seems to back this up but, given the fact that the cheetah is far more readily domesticated than the leopard and that the animals depicted are certainly felines and not the domesticated cat, the argument is persuasive. The Greeks from earliest times would have known of domesticated cheetahs through contact with Egypt. Roman cheetahs are less easy to identify with certainty (King, 407). Most of the representations are formulaic or represent the spotted feline being hunted or presented in games. Since the leopard is a more combative animal, discussion of these representations will be reserved for that entry. Tresidder has studied how this sort of confusion between leopards and cheetahs lasted until the Renaissance.


Chelydros See Dryinas.

Chersydros Greek: χέρσυδρος (chersydros); Latin: chersydros. An amphibious snake that possessed two names, being called *chersydros* (“land-water”) when on land and *υδόρος* (HYDROS) when in the water (cf. Isidore, *Etym.* 12.4.24). Philoumenos (24.1–2) says it resembles a small asp, but does not have its wide neck. Nicander (*Th.* 359–71) specifies that it lives on frogs until the summer heat dries up the water, whereupon it becomes more intensely venomous. Later, in a line seen as spurious by some editors (414), he gives *hydros* as a synonym for the *chelydros*. G&S (177, on 359) list several misguided identifications and compare this description to that of the unnamed Calabrian snake of Vergil (*G.* 3.425f.). Lucan (9.710–11) says it dwells in the Syrtis. Pliny (*HN* 22.8.18) lists the plant *erynge* as an antidote to its bite. Wick (2.288–91) discusses the confusion existing concerning the *chersydros*, HYDROS, and Dryinas (cf. Morel, 380–81).

Curiel Ramírez del Prado; G&St., 555–56; Morel, 1928; Wick, 2004.

Chimpanzee There are two species of chimpanzee, the familiar *Pan troglodytes* and the less familiar pygmy chimpanzee or
bonobo (*P. paniscus*). Both are listed as “endangered” by the IUCN. The latter is found only in the inland Democratic Republic of the Congo. *P. troglodytes* is the familiar chimpanzee of media and zoos and is found today in the forests of central and western Africa (WMW, 622–26; IUCN). Based on these ranges, it is unlikely that either animal was well known to the ancients. Nevertheless, McDermott identifies one on the *P. paniscus* (65). He also suggests that the creatures called *Hylophagi* in Agatharchides (frag. 5.52 = Burstein, 92–94) are chimpanzees (cf. also 69–71, 108). There is some chance that the chimpanzee lies behind Hanno’s “GORILLA.” For other attempted identifications see CEBUS, GORILLA, SATYROS, SPHINX.

Montagu, 1940.

**Choirelaphos** A partial inscription on the *P. paniscus* reads ΕΦΛΛΟSC (EPHILLOS), which Meyboom tentatively expands and emends to “choirelaphos,” or “pig-deer” (25, 237–38 n. 55, 242 n. 68). The only other attestation of the word is in Cosmas Indicopleustes, a sixth century merchant/explorer who traveled to India, but Agatharchides (frag. 79 = Burstein, 125) notes that pigs in Ethiopia have horns. Based on the evidence of Cosmas, some have thus identified the choirelaphos with the babirusa. It may also be a WARTHOG, as is a nearby creature in the mosaic. Another reconstruction of the inscription would yield the word CYNOCEPHALUS.

Burststein, 1989; Keller, 1.405.

**Choirepithēkos** In describing the chameleon, Aristotle (*Hist. an. 503a19*) says its snout is like that of the χοιροπθηκος (choirepithēkos, “pig-ape”). Peck translates this as “pig-faced baboon” without explanation. The name is known elsewhere only from the *P. paniscus* MOSAIC where a quadruped with an elongated snout has the inscription ΧΟΙΡΟΠΘΗΚ (CHOIREPITHIK). The mosaic’s animal is somewhat similar to a baboon, but the snout is almost canine. Keller (1.10) refuses to identify it and McDermott insists it is really a pig (285). Montagu (102), after dismissing an earlier identification with the hamadryas BABOON, refutes McDermott and states with certainty that the animal is the chacma, known in his day as *Papio p-orcarius*. It is a baboon found in arid climates in extreme southern Africa and would not have been readily known to antiquity. Curiously, its scientific name today, *Papio ursinus*, recalls bears, not pigs. Meyboom (125–26) notes various identifications: (1) a BADGER, but since the badger is not found in the area and all the other animals in the mosaic are, this is unlikely; (2) a monkey of some sort; (3) the potto (*Perodicticus potto*) which is an arboreal, slow-moving animal related to the loris, but whose range, habitat and appearance rule it out. Meyboom opts for an identification as a kind of hog, rendering the name as “hog with a monkey’s head.” He chooses the bush pig or river hog (*Potomochoerus larvatus*) which is very close in appearance to the animal on the mosaic. Yet the chameleon comparison can only have been made by someone who knew the bush pig and, Meyboom, concludes, the bush pig would not have been encountered until Ptolemaic times. This forces him to conclude that the Aristotle passage is a later insertion. Another solution is that Aristotle’s intent is unknown but the artist of the mosaic, which may date as late as the third century AD (Meyboom, 16–19) was using a contemporary, local use of the name.

Montagu, 1940; Peck, 1965–70.

**Cicada** Greek: τήττιξ (tettix); Latin: *cicada*. The cicada was as omnipresent in the art and literature of antiquity as their
song is today in any Greek olive grove. The ancients studied its anatomy, the production of its song and its life cycle. Cicada lore was woven into many of their beliefs and customs. Unlike the confusion that surrounds the terms for grasshoppers, locusts, and crickets the cicada’s shape and song are distinctive. Yet many ancients confused them (Beavis, 91) and translators often mistranslate “cicada” as “locust.” Cicadas are Hemiptera, members the family Cicadidae. Quartau and Simões (489) list six main species in Greece and Italy, with Cicada orni being the most prevalent. Beavis collects evidence for other species and also lists the myriad synonyms and variant names found in antiquity (92–96, cf. Alessio; Willemse).

Aristotle clearly studied the cicada and reports accurately about it (Hist. an. 535b7f., 556a14f., cf. Pliny HN 11.32.92f, Aelian NA 1.20). The male cicada’s distinctive chirping (the female is mute) is caused not by rubbing body parts together (stridulation), as is the case for crickets and grasshoppers, but by the rapid contraction of a membrane on its abdomen (Bodson). Aristotle and, especially, Pliny speak of this membrane and Aristotle contrasts it with the rubbing motion of the akris. The life cycle of the cicada is complex. Females lay eggs in the bark of trees. When they hatch, the larvae drop to the earth and burrow in, where they become nymphs and spend 2–5 years sucking sap from rootlets. When the time comes, the nymph tunnels out and climbs a plant where it molts, leaving its shed skin behind, still a common sight. Pliny (largely following Aristotle) offers a version quite close to this reality, separating the stages into the mute kind and the singers, which he divides into two types: the larger achetae (“shrill”) which may be the Cicada plebeia, common in Greece, and smaller tettigonia (“cicada-offspring”), which may be Cicada orni. He calls the nymph that sheds its skin the tettigomētra (cicada-mother) and adds that they are the best eating at this stage. He knows that its abdomen is hollow and of the liquid a shedding nymph leaves behind on its tree. He lists other names for cicadas based on where they are found: surcularia (twigs), frumentaria (fruit), avenaria (oat).

Various aspects of the cicada’s behavior are reflected in folklore. The nymph emerging from the ground caused the insect to become a symbol of autochthony and the Athenians proudly wore golden images of the insect in their hair (Thucydides 1.6.3) and placed its image on some of their tetradrachms. The shedding of the cicada skin, so often seen adhering to trees in the Mediterranean, encouraged its use as a symbol of immortality. Thus, when Tithonus was granted immortality but continued to age, Eos was said to have turned him into a cicada. Plato has Socrates (Phaedrus 259a–c) describe a race of men before the birth of the Muses. When the Muses were born, the men sang without ceasing, forgetful even of food and drink until they died and gave rise to the race of cicadas. The link to the Muses was strong and poets constantly refer to the song, generally calling it sweet and pleasing. The fact that they do not have a prominent chewing-type mouth (they suck sap through a tube), their hollow abdomen, and the droplets the nymphs leave on trees when they molt led to the constant belief that they did not eat food but existed on dew (Borthwick, 107f.).

Despite the fact that Gow (91, n. 4) claims that “no sane person would want a cicada rattling in the house,” there is some evidence that cicadas, like crickets and grasshoppers were kept as pets, as evidenced by epigrams written on their deaths (e.g. Anyte, Anth. Pal. 7.190 cf. Pliny HN 34.57; Borthwick, 1966; Gow). Since cicadas live on sap and not by chewing grasses, they would quickly starve in
civet

Civets are members of the family Viverridae and are small to medium-sized animals related to the weasel. Both the civet and its close relative, the genet, have long, ringed tails and spots on their elongated bodies. Their heads can appear rather feline, leading to the inaccurate popular name of “civet cat.” If the ancients knew the animal it would have been the African civet (Civettictis civetta), but its current range is largely sub-Saharan, extending into Somalia (WMW, 750–51). Its body is 27–33 inches in length with a tail 13–19 inches long. It is omnivorous and easily tamed. The musk of the civet (itself called “civet”) comes from its perineal glands and is used in perfumes, but was unknown in antiquity (Dannenfeldt). Some have argued that the ancient animal called the thōs is used by some authors to indicate the civet. In general, when one sees a depiction of a weasel-like, spotted animal with a long, ringed tail, it is better to take it as a genet or a marten rather than a civet, based simply on geographic distribution. Cf. the animal in the Tarquinian “Tomb of the Black Sow” (genet).


Clura A Latin term denoting a sort of monkey. Plautus uses the term clurinum pecus, “clura tribe,” in the Truculentus, 269. Festus (p. 48) says that the clura is named for its clunibus tritis, “worn rump.” If this impossible etymology is based on having seen the animal, it may refer to the pads many monkeys have on their hindquarters. Exact identification of this animal is impossible, however.

Isidore of Seville’s information (Etym. 12.2.32) is difficult to evaluate. The Latin reads, “Horum genera quinque sunt, ex quibus cercopitheci caudas habent; simia enim cum cauda est, quam quidam cluram vocant.” Throop translates: “There are five kinds. Monkeys, cercopithecus, have tails; the ape which certain people call a clura, has a tail.” This translation involves many problems. To take the clura as a separate type means that Isidore’s five kinds become six (Etym. 12.2.31–33): cercopithecus, clura, sphingae, cynocephali, satyri, and callitriches. Throop attempts to solve this issue by making cercopithecus a synonym for monkey, which the Latin really does not support. It seems best to render the passage as follows: “There are five kinds of these [monkeys]. Of these, cercopithecus have tails; the ape which certain people call a clura, has a tail.” Throop’s five kinds become six (Etym. 12.2.31–33): cercopithecus, clura, sphingae, cynocephali, satyri, and callitriches. Throop attempts to solve this issue by making cercopithecus a synonym for monkey, which the Latin really does not support. It seems best to render the passage as follows: “There are five kinds of these [monkeys]. Of these, cercopithecus have tails; the ape which certain people call a clura, has a tail.” Throop’s five kinds become six (Etym. 12.2.31–33): cercopithecus, clura, sphingae, cynocephali, satyri, and callitriches. This rendering also has some problems but at least keeps Isidore’s five monkeys at five. Barney et al. follow this sense: “There are five kinds of apes. Of these the cercopithecus have tails, for it is the ape with a tail.” If this
is correct, then “clura,” for Isidore, is a synonym of *simia*, “monkey,” as McDermott (100, 104–05) takes it.

Barney et al., 2006; Throop, 2005.

**Cobra**
Greek: *ἀσπίς* (*aspis*)
Latin: *aspis*.

The cobra was well known to Greeks and Romans alike through contact with it, mostly and earliest in Egypt. Since *aspis* means “shield” in Greek, the name probably refers to the cobra’s ability to spread the ribs and skin around its head into what is called today a “hood” (Bodson, 2005, 461–62). Cobras are found in all of Africa and the Middle East, and all of southern Asia (Keogh, 484). For this reason, we should go beyond the usual identification of the *aspis* as the Egyptian cobra (*Naja haje L.*) to include virtually any hooded cobra found in the areas known to the ancients. This would include any of the many species and subspecies of *Naja* such as the Egyptian banded cobra (*Naja naja annulifera*) and spitting cobras (cf. following). The ancients may even have known the Indian king cobra, *Ophiophagus hannah*, which regularly reaches 9–10 feet in length. *Naja haje arabica* would have been well known. Aelian (NA 10.31) tells us that the Egyptians call this snake the *Thermouthis* (actually a goddess merged with Isis) and hold it as sacred. Indeed, a hooded cobra appears on the sacred symbol of Egyptian pharaohs, the Uraeus. Cobra venom attacks the nervous system and, depending on species and size, can be quite lethal to humans, causing death by preventing the lungs from functioning. The bite of some species is less toxic.

In antiquity the cobra is known for two main reasons. The first is its complete antipathy toward the *mongoose* (Aymard). In this context artworks clearly show a hooded cobra as the serpent in question. The second instance is the cobra’s role in the death of Cleopatra VII. Although it is generally stated that Cleopatra killed herself with the bite of a *Naja haje*, this is far from certain. The snake is far too large for facile concealment, its venom is relatively slow acting (Warrell et al., cf. Aelian NA 9.61), and good arguments can be made for *Naja nigricollis* (Griffiths, 1961, 113). In fact, several issues cloud the story and are often debated (cf. Baldwin, Griffiths 1965 and Kostuch to name but a few). Moreover, since the generic word *aspis* is used for Cleopatra’s snake, certainty is elusive. Bodson (2003, 181) suggests that the snake Aelian mentions as kept by a snake charmer was a cobra (Aelian NA 9.62). The ancients who had contact with India certainly knew of the Indian spectacled cobra (*Naja naja = Naja tripudians*, Keller, 2.292), a favorite of snake charmers today along with *Naja haje*, but details are lacking.

*See also* **Purple Snake**.


**Cobra, spitting**
Philoumenos (16.1) speaks of a spitting snake, *πτῦας* (*ptuas*) which reaches a maximum of 3 feet in length and is ashen, yellowish-green and golden in color. This clearly refers to the group of spitting cobras which can project venom from their fangs in an attempt to blind their opponents (Warrell and Ormerod, 1976). They can also inject venom into prey (Warrell et al., 1975). The red spitting cobra (*Naja pallida = Naja mossambica pallida*, Leitz, 46) is found in the south of Egypt, along the Red Sea, and was certainly known. It is probably Aelian’s *Purple Snake*. *N. nubiae* (Nubian spitting cobra) inhabits much the same territory. *N. nigricollis* (black-necked spitting cobra) is found along the Red Sea, from modern Sudan south to Somalia and
ranges from 4 to 7 feet in length. *N. ashei* (Ashe’s spitting cobra) is found today in Ethiopia and Somalia and would probably have been known, if only by reputation. The Mosambique spitting cobra (*N. mosambica*) is also listed by the RDB as being found in Somalia.

G&St., 552; Warrell and Ormerod, 1976; Warrell, et al., 1975.

**Cockroach** Greek: σιλφή (*silphē*); Latin: *blatta*. The cockroach was as much a pest in antiquity as it is today. These insects, of the order *Blattodea*, have thousands of species, most of which live in the wild. It is uncertain which species existed in antiquity, since the most common species today, *Blatta germanica* and *B. orientalis*, are imports into Europe. Although the date is unsure, they probably arrived via ship. It is mentioned but little in Aristotle, but many varietal names are preserved in the lexicographers (Beavis, 80–83). They are known for living in damp, dark places (e.g. baths, Pliny *HN* 11.34.99) and avoiding the light (Vergil *G.* 4.243). They were widely used in medicine and magic (Beavis, 84–85).


**Coluber** and *colubra*.

See snake, viper.

**Corocotta** Greek: κροκόττας (*krokkotas*) κροκουττας (*krokouttas*); Latin: *corocotta* *crocuta* and *crocuta*. Confusion reigned in antiquity over the identity of this beast (Ball, 1885, 312, 346; 1889, 2–3). According to some authors it was the same as a hyena, an African animal. According to others it was a hybrid animal of India, the result of the mating between a wolf and a dog. Agatharchides’ (frag. 78a,b = Burstein 124–25) says it lives in Ethiopia, is fierce and strong, and can crush bones with its jaws. It can imitate human speech and some believe that it calls to humans at night to lure them out (Diod. Sic. 3.35.10). Agatharchides rejects this story. Ctesias (*Indika* frag. 76 = Nichols 90–91) adds that it is commonly called the κυνόλυχος (*kunolykos*, “dog-wolf,” cf. Bodson, 464–65). Pliny (*HN* 8.44.105–07) claims that the *corocotta* is the product of a male hyena and an Ethiopian lioness and gives it many of the hyena’s traits. Aelian (NA 7.22) follows Pliny in making this animal separate from the hyena and adds that it can actually call people by name, luring them to their death. Strabo (16.4.16), quoting Artemidorus, accepts it as the hybrid of a wolf and a dog. Dio Cassius (76.1.3–4) reports that Severius had a *corocotta* slain in the games (= Cary and Foster, 77.1.3–4). He says it is an Indian species and believes that this was the first time it was shown in Rome (AD 202). In the mock last will and testament of a pig (*Testamentum Porcelli*) written in the fourth century AD (*OCD*), the pig, who is about to be cooked, makes his will. His name is M. Grunnius Corocotta (Anderson). A notorious bandit in Spain had the nickname Corocotta (Braund).

It seems clear that the animal is a hyena and would be either the spotted hyena (*Crocuta crocuta*) or the striped hyena (*Hyaena hyaena*). On the PALESTRINA NILE MOSAIC an animal is labeled KPOKOTTAC. Since the animal is striped, Meyboom (23 with notes) and others see this as a clear identification point of the *corocotta* with the striped hyena. Elsewhere on the mosaic an animal that may be a spotted hyena is labeled ΘΩΣ (see θήσ).
Cow Greek: βοῦς (bous); Latin: bos. There are currently about 800 breeds of modern cattle, generally divided into the western Bos taurus and the eastern B. indicus (Bradley and Magee, 317). All western modern cattle are descended from the now extinct aurochs (oxen, wild). They were first domesticated perhaps 10,500 years ago and first used for milking in the fourth millennium BC (Bollongino et al.; Clutton-Brock, 62–68; Shackleton and Harestad, 15). Modern cattle are in the family Bovidae and the genus Bos. WMW lists four subgenera and gives Bos taurus as the one under which the aurochs and modern cattle should be classified. Yet other nomenclature and classifications exist and some classify modern cattle and the aurochs as Bos primigenius (see summary of issues in WMW, 1153–54). Throughout the field of Classics, terms such as cattle, cow, bull, and ox are loosely used. Here, the following usages will be followed. “Cattle” is a collective noun referring to domesticated herds of members of the genus Bos. “Cow” refers to a mature, female member of the genus Bos. Yet, since English does not have a facile way of referring to one “cattle,” it is also used as a generic term for Bos taurus. “Bull” refers to a male member of B. taurus. An ox is technically an adult bull that has been castrated to render it more trainable (Aristotle Hist. an. 632a14ff. describes the process) and is used here to refer to a B. taurus in its role as draft animal.

Cattle provided many benefits to those who kept them: meat, milk; hides; leather; manure (for fertilizer or fuel); muscle power; entertainment. Milk drinking was rare in Greco-Roman antiquity and while cow’s milk cheese was known (Aristotle Hist. an. 522a25ff.) the cheese of goats and sheep was preferred (Dalby, 80–81, 217–18). Neolithic finds attest to domestic cattle, and the importance of the bull in Minoan culture is clear, especially in scenes of bull leaping. Cattle herds were carefully tended by the Mycenean Greeks although they are much less frequently mentioned on Linear B tablets than are sheep and goats (DOCS², 131–32, 198; Enegren, 14–15; McInerney, 48–73). Beef was a dietary staple for Homer’s heroes and warriors, whose arms and shields made extensive use of leather (McInerney, 74ff., 81ff.).

In subsequent periods of Greek history, cattle were kept less for dietary needs than as draught and sacrificial animals. Burford studies oxen as draught animals and the effectiveness and history of ancient harnessing methods. Cf. Pettergrew’s (561ff.) view on oxen and the Corinthian diolkos. In this role, oxen hauled loads ranging from large blocks of stone for public buildings, to trade goods to and from the harbor, and foodstuffs. It was also an essential animal for plowing. There is evidence for Mycenean ox plows (Pullen) and Hesiod lists three essentials for anyone: house, wife, ox (Op. 405). The ox was so vital to farming that Aristotle says that it was a poor man’s slave (Pol. 1252b). Cattle became very important in ostentatious public sacrifices often with hundreds of head of cattle sacrificed (Howey, passim; Osborne, 178ff.). After the events the meat and hides were often available to the priests and/or the public. When work animals outlived their usefulness, they were undoubtedly killed and their parts put to good use. This high demand for cattle implies a thriving cattle breeding program and Osborne (182) offers excellent data on the numbers of oxen needed at Athens alone and on herds kept by the city state (cf. Jameson on Greek cattle herding). The very names Boeotia and Euboea speak of their suitability for cattle. Aristotle (Hist. an. 595b5ff.) discusses caring for horns and hooves and mentions a rare, reddish breed kept by the people of Epirus.

The Roman world was equally dependent on cattle, and their husbandry was treated
in depth by writers such as Varro (Rust. 2.5.1–18), Columella (6.praef.–26.4) and Pliny (HN 8.70.176.–71.186). References are collected and well studied by White (275–88). Varro’s list of terms indicates the complexity and precision of cattle husbandry (Rust. 2.5.6). Each of four stages of the life of a bubalus has a name: (1) vitulus or vitula, calf; (2) iuvencus or iuvenca, yearling; (3) bos novellus, a “newling cow,” indicating tenderness; (4) vetulus, old. A male of groups three and four is a taurus and female a vacca. A sterile vacca is a taura and a pregnant one is a horda. Bulls (at a ratio of 2 per 60 cows) were kept for breeding and were exhibited in beast fights in the amphitheater (Toynbee, 149f.; Jennison, 26f.). There were established processes for training oxen to pull plows, for their feeding regimen, and for branding and herding. Cattle were bred, but the evidence is rather non-specific and White claims that less attention was paid to cattle breeds than to those of horses (278). Still, Columella (6.1.1–2) lists seven: the Apennine (strong but unattractive); the Campanian (small and white, cf. King, 210); Etruscan; Latin; large whites (vasti et albi); red (smallish); Ligurian (cf. Strabo 4.6.2). Varro (Rust. 2.5.9–11) compares types from around the empire. Lepetz and Audoin-Rouzeau trace breeding programs in the provinces, noting selection for larger size. Not all cattle were to be found in the country. King (408–10) notes that oxen died in their stalls at Pompeii.

Cattle pervaded all aspects of life. Mythology is filled with stories of special herds of cattle (e.g. the Sun’s or Geryon’s) and cattle raiding (e.g. Hermes and Apollo), and the Zeus-Pasiphae-Europa-Minotaur connection is well known. Aeschylus’ “ox on the tongue” (Ag. 35–36) and Seneca’s reference to the Augean stables would have been known to all (Apocol. 7). To dream of cattle could variously indicate good luck or death (Artemidorus, 1.39; 2.12; 5.56). Cattle are found in art from earliest times. Minoan/Mycenean bulls abound as rhytons and in a variety of media depicting bull-leaping. Notable is a Minoan sealstone (Boston 27.657) with a cow licking her calf while it suckles (Beazley, no. 5) and the Vapheio cups famously depict the capture of (wild?) bulls. The bull appears frequently in Greek mythological scenes and the ox is depicted on vases pulling a plow (e.g. Paris, Musee du Louvre, F77 = BzA 164; Berlin, Schloss Charlottenburg/Antike Sammlung F1806 = BzA 302815) or a cart (BzA 9023254). Richter (19–22, figs. 86–106) offers a nice selection of calves, bulls, and cows in various sculpted media, including a fifth century BC sealstone (fig. 92) also in Boston and very similar to the Minoan one mentioned above. Hoffmann’s books contain many images of bovine rhyta. The famous Moschophorus (Richter, fig. 87) and the cow on the Parthenon Frieze (Richter, fig. 94) that inspired Keats’ “heifer lowing at the skies” make us long for Myron’s lost statue of a cow that was so life-like it attracted a bull (Mattusch, 144). Greek coins from places such as Phokis, Thourion, Gortyn, Apollonia, and Dyrrachium bore images of cows, bulls, and calves and one of the first things seen by one walking the Sacred Way at Delphi was a statue of a bronze bull dedicated by the people of Corcyra (Pausanias, 10.9.2). Toynbee (152–62), King (408–10), and Raepsaet offer representative examples of cattle throughout Roman art. Notable too is a coin from the Social Wars with an Oscan inscription, showing the Italian bull trampling the Roman wolf (British Museum, 1851-5-3-14).

See also yak, zebu.


Cricket Greek: τροξαλλίς (trōxallis); Latin: gryllus/grillus. The above terms probably refer to crickets. The superfamily Grylloidea (crickets) contains over 500 genera and 3,500 species (Naskrecki, 201). Crickets were often confused with grasshoppers (q.v. for more on the confusion; Gow, 92–94) and roaches (Beavis, 78–80; D&K, 136–38) in antiquity. They differ from grasshoppers by living in the ground (Pliny *HN* 29.39.138), under rocks and logs, associating with human dwellings, and in being largely nocturnal (cf, grasshopper). They make their distinctive chirping by rubbing their wings together. On this cf. Alcaeus (frag. 347b, Campbell) where the insect making its noise “from beneath its wings” (in one reading) may be a cricket despite being a called a τέττιξ by Demetrius (*De eloc.* 142), (tettix = akris, cf. grasshopper). The house cricket, *Acheta domesticus*, originated in Asia but is now worldwide and was probably known. But field, bush, and cave crickets would surely have been known as well. They were probably kept in cages, as were cicadas and grasshoppers (Beavis, 76).

The τροξαλλίς could be a locust if we take the etymology from τροφύω (trōgō, “eat”) but Gow (92, n. 6) suggests it is a cricket. Pliny (*HN* 30.16.49) says the Greek trixaallis is similar to a locusta and that it has no Latin equivalent name, adding that many authors think this is the grillus. This, then, is the best candidate for the Greek word for “cricket.” Γρύλλος (gryllos) can refer to a comic dance (cf. Pliny *HN* 35.37.114). See also Aelian (NA 6.19).


Crocodile Greek: κροκόδειλος (ποταμάμιος) [krokodeilos (potamios), “river crocodile”]; Latin: crocodilus Egyptian: champsa (Herodotus 2.69). The crocodile is a well known aquatic reptile marked by large, well-toothed jaws, a long tail, and dorsal plates. It is found in three genera and 14 species throughout the Americas, Africa, and India. The smallest specimens (West African dwarf crocodile *Osteolaemus tetraspis*) can be as small as 5 feet long while the saltwater crocodile (*Crocodylus porosus*) can reach 20 feet in length. The crocodile is capable of quick bursts of great speed and takes its prey in the water or at its edge. They can live to the age of 70 and beyond. Generally nocturnal hunters, the ancients would mostly have seen them along rivers during the day, basking in the sun, or as an ominous pair of eyes protruding from the water. Strabo gives many locations where the crocodile was found. He claims that small ones were bred in a spring in Bithynia (12.4.2), but this must have been some other animal. Alexander saw them in the Hydaspes River in India (15.1.25) and Aristobulus saw them in the Indus River (15.1.45, cf. Herodotus 4.44). Quoting Artemidorus, and using Nicolaus of Damascus for support, Strabo places crocodiles in the Oedanes River, a tributary of the Indus in India (15.1.72); in a lake near Cape Deire in Aethiopia (16.4.14); cites Tentyra, Egypt (17.1.44) as a source of crocodiles for Roman games; claims that “Krokodeilon Polis” reveres crocodiles and that Apollonopolis (Edfu) wages war against them (17.1.47); and places them in rivers in Mauretania in Libya (17.3.4).

(1) Most reports refer to the Nile crocodile (*Crocodylus niloticus*). Herodotus gives the maximum length of a
crocodile as 17 cubits (25.5 feet) but Aelian (NA 17.6) gives a more realistic 11 cubits (16.5 feet). Herodotus (2.69) says the Greek name comes from the Ionians by comparison with little lizards that walk on walls (Garcia), which Bodson says means the lizard “living in dry stone walls,” and which would explain the frequent addition of “river” to its name (Bodson, 2005, 460–61). Isidore (Etym. 12.6.19) derives it from croceus, “saffron colored.”

The Mycenean Greeks and Minoans would have encountered the Nile crocodile through trade with Egypt. The Egyptians knew the animal intimately and their artwork indicates close study of its habits (for this and what follows, Houlihan, 113–19). It posed a threat to humans, and Egyptians had numerous spells to ward it off. Yet the Egyptians also held the animal sacred and kept it in specially designed sanctuaries, probably associated with the god Sobek. Herodotus was the first Greek to record his encounters with these animals (2.68–70) and reports that some Egyptians hold them sacred and others do not. His descriptions had a powerful impact on later authors (Arnould). Near Thebes and Lake Moeris the animal was revered, even to the point of being adorned with jewelry and embalmed. Special burial rites attended those carried off by Nile crocodiles (Herodotus 2.90) and Aelian claims that mothers of children carried off by crocodiles are happy that their child was chosen by the god (NA 10.21). Compare this to the logic problem/riddle surrounding the crocodile, a stolen child, and its mother (Quintilian 1.10.4–5).

Where not held sacred, the crocodile was hunted aggressively. Herodotus (2.70) admits there are many ways to do this but concentrates on hunting them with a pole and hook baited with pork (cf. Diod. Sic. 1.35). An accomplice on land then beats a pig and its squeals lure the reptile to the hook. Once on land the crocodile’s eyes are smeared with mud to calm it, a technique (employing a cloth) still used today. Diodorus Siculus (1.35.1–7) reports that they are captured with hooks, nets (cf. Aelian NA 10.24), and harpoons. Pliny (HN 8.38.92–93) also tells of the dwarf/pygmy race of people on the Nile island named Tentyrus. These brave Tentyritae dive into the river, mount the crocodile’s back and, when it yawns, insert a stick into its mouth and use it like a bridle to drive the animal to shore. They do this to retrieve the bodies of recently devoured humans. A fresco from Pompeii vividly illustrates this scene, even showing one pygmy riding a crocodile using reins (McDaniels, pl. XI).

Aristotle seems to have known the animal relatively well. He reports the common belief that the crocodile can only move its upper jaw (Hist. an. 492b 23f.), claiming that the reason is that the crocodile’s front feet are too small to assist in eating (Part. an. 691b5f.). In fact it can move both jaws, but if one sees the animal on land with an open maw, it does seem that the upper jaw moves more than the lower. Elsewhere (Hist. an. 487a19–24) he knows that they breathe air and lay their eggs away from the water. In a discussion of tongues (Part. an. 660b 27–29) he reiterates his belief about the jaws and, in a tortured way, explains the positioning of the tongue, which, he says, is unusual. In fact, the tongue is rooted in the lower jaw and lacks mobility. He also studies its plated armor (Part. an. 691a17–20).

Plutarch (Moralia 381b–c) claims the animal has no tongue whatsoever, and mentions the crocodile’s nictitating membrane. He says that the female, with a sort of divine prescience, lays her eggs exactly at the spot where the Nile will crest. He says they lay 60 eggs which hatch after the same number of days (the actual numbers are
50–80 eggs and 80–90 days of incubation (Whitaker and Whitaker, 186). Pliny (HN 8.37.89–94, 11.60.159) stresses the animal’s danger to humans and repeats much of what has been said before him. He adds more information on the crocodile’s teeth, sight, and hibernation. See below for its enemies. He also states that males and females “incubate” in shifts (HN 10.82.170). They do not sit on their eggs, of course. The female builds a nest and deposits eggs in it. The temperature of the nest (provided in part by rotting vegetation) helps to determine the young’s gender, with higher temperatures producing males. Since the nest is at the edge of the water’s highest point, the young can scurry to the river on leaving the eggs (cf. Cicero Nat. d. 2.124). Cicero claims the mother abandons the nest (Nat. d. 2.129) but the mother stays close to the nest and responds to the sounds of the new hatchlings. Both parents, in fact, guard the nest (Whitaker and Whitaker, 181). Aelian (NA 10.21) adds new information about various cities in Egypt that either worship or hate the crocodile and says that everything about it (from the number of its teeth and sinews to its maximum age) comes in units of 60. Plutarch (Moralia 976b–c) tells tales of tamed crocodiles. Ammianus Marcellinus (22.15) offers a distillation of common lore.

As might be expected, such a fierce creature intrigued the Romans. The first crocodiles in Rome were five individuals shown in a tank at the games of Scaurus in 58 BC, the same games that exhibited a hippopotamus in Rome (Pliny HN 8.24.64, 8.40.96). In 2 BC games given by Augustus saw 36 crocodiles slaughtered in a pool in the Circus Flaminius (Dio Cassius 55.10.8). Suetonius (Nero 37. 2) says that Nero used to throw living men to a polyphagus. There is debate over whether the word refers to a hippopotamus or a crocodile (Littman; Woods). The enthusiasm for crocodiles in the games lasted at least until the fourth century AD when Symmachus reports the difficulty of getting enough crocodiles to satisfy demand (Toynbee 20–21, 219). The crocodile also played a major role in the tourist trade, especially at Arsinoe in Egypt, also known as Krokodilopolis. A papyrus of 112 BC even lays out preparations for the visit of the senator Lucius Mummius to Arsinoe. Tidbits were to be on hand so that the senator could watch the feeding of the named crocodile named Petesuchos (Toynbee 218–19). Compare this to Strabo’s account (17.1.38) of the pampered crocodile named Souchos which he saw on his visit there (cf. Plutarch Moralia 976b; Aelian NA 8.4.2).

Strabo (17.1.44) gives a detailed picture of how crocodiles came from Egypt to be displayed in specially made pits staffed by people from Tentyra (see zoos). Antoninus Pius exhibited the animals at his games (SHA Antoninus Pius 10.9) and both elephants and crocodiles appear on his coins (Jennison, 84). Elagabalus (SHA Elagabalus 28.3) obtained crocodiles for this purpose as well (Jennison, 95–97).

In fables, Phaedrus (1.25) relates that dogs drinking from the Nile keep running as they drink lest they be seized by crocodiles. The story also appears in Aelian (VH 1.4). Perry (424, no. 20) summarizes a fable in which a fox mocks the crocodile’s rough skin.

Many stories surround the crocodile and its enmity with the ichneumon. Likewise, the symbiotic relationship between the crocodile and the trochilos, a bird that picked its teeth clean, was widely reported (Arnott, 248, “Trochilos (3”)’). A less well known story, which nonetheless enjoyed great popularity in the Middle Ages, spoke of a Nile dolphin possessing a serrated dorsal fin with which it cut open the crocodile’s soft underbelly (Pliny HN 8.38.91, Solinus 32.26, and Isidore Etym. 12.6.11). With the typical India/Africa confusion, this is undoubtedly a reference to the Indus or Ganges dolphin.
The crocodile is fairly common in Greek art and ubiquitous in Roman art. The Sotades painter (mid-fifth century BC) has a series of rhyta (e.g. Munich 6203, Paris, Musée du Petit Palais: 360) showing a crocodile devouring a Negro (Salviat), one of which is enigmatically engraved with “ho krokodeilos erasth(eis),” “the crocodile in love” (Hoffmann). IBK list an engraved gem with a baboon sitting above/on a crocodile (83, pl. 14.1), a lion with a crocodile (91, pl. 15.4), in Nilotic scenes (138, pl. 45–46), with the trochilos and being hunted (138, pl. 22.46–47).

Roman coins often bear a crocodile, many referring to Augustus’ conquest of Egypt. Coins from Nemausus, modern Nîmes, often show a crocodile chained to a palm tree on the reverse and Augustan coins bear the inscription Aegypto capta (“Captive Egypt”) with a full crocodile on obverse with jaws agape (IBK, pl. 6.29–31). The crocodile also appears on coins of Hadrian and Marcus Aurelius. The crocodile is also a staple of Nilotic scenes and notably appears in the tomb paintings from Marisa and, unlabeled, in the PALESTRINA NILE MOSAIC (Jacobson, 32 pl. xii; Meyboom, 31–32, 45–46, fig. 19). A fresco from Pompeii illustrating Pliny’s story of the Tentyritae was mentioned above but see also Bodson (2002, 348–50). An engraved gem showing an Eros leaning out of a boat, holding a stick while a crocodile swims by, is a definite allusion to it (unpublished, no. 2359 in the Beazley Archive).

Parts of the crocodile were used for many cures and treatments. Ovid (Ars Amatoria 3.267–72, cf. Horace Epodes 12.11) famously suggests an ointment containing crocodile dung as a sort of face cream. The text has problems and Hendry studies the matter closely. It is noteworthy, however, that as late as Albertus Magnus (De animalibus 24.24(32) = Kitchell and Resnick, 1676) it was reported that prostitutes used just such a cream to hide wrinkles, only to have them return worse than before. Cf. Pliny (HN 28.28.107–11).

It is sometimes thought that the term “crocodile tears” arose in an author such as Pliny. The idea behind the phrase is that the crocodile would hypocritically weep while devouring a human. In fact, the concept is not found in Classical antiquity. Seckersen, writing the introduction for Bogorad’s article (74–75), claims that the earliest mention of the phenomenon is in Photius (Bekker, 503). Photius names his source as the Arian Asterios (fl. AD 340). Asterios is dealing with the concept of fasting and says the crocodile weeps, not out of remorse, but simply because he has nothing more to eat. The belief in real crocodile tears was solid until the 1700s but was then attacked as a fallacy. Through a controlled experiment, Shaner and Vliet have demonstrated that crocodiles do produce “prandial lacrimal ebullition” (616) upon eating or just before eating and the animals have been filmed undergoing this reaction (Murube,
The amount of liquid in the eye is not profuse, but it is evident in the form of bubbling.

(2) Pliny (HN 5.1.9–10) relates that Scipio Aemilianus, during his service in Africa during the Third Punic War, gave a fleet to the historian Polybius who set sail along the western coast of Africa outside the Pillars of Hercules on a voyage devoted to pure discovery. A study and map of the route is in König and Winkler (ad loc.). He reports crocodiles in the river named Darat, the Drâa or Oued-dra of modern Morocco, and in the Bambotum which Rackham and Jones translate as the “Non” whereas Tozer (106) identifies it as the Senegal River. Hünemörder suggests that this might be the slender-snouted crocodile (C. cataphractus), which is smaller than the Nile crocodile. Its current range seems to match Pliny’s locations.

(3) Some Indian crocodiles mentioned are probably the freshwater mopper crocodile (C. palustris) found throughout all of India. Once ubiquitous, they have been heavily hunted and are listed as “vulnerable” on the IUCN Red List. Males reach about 10 feet in length. The gharial or gavial (Gavialis gangeticus) is another possibility, for it is quite large (see below at no. 4). Cf. Herodotus 4.44, Aelian NA 12.41, Pliny HN 6.23.75 Quintus Curtius 8.9.9, and perhaps Pausanias 4.34.3.

(4) The gharial (Gavialis gangeticus) of the Ganges river was considered sacred in India according to Aelian NA 12.41. The identity is assured by his mention of the bulbous growth on the end of its nose, a feature found only in the males and used to produce a buzzing sound. It is among the longest crocodiles, with an average male length of between 13 and 15 feet and a record of 19.7 feet (Whitaker and Whitaker, 167–68). Its diet consists solely of fish (see above at no. 1). It is listed as “endangered” on the IUCN Red List, with an estimated 1,500–2,500 gharials left in the wild.

(5) It is possible that a few ancients saw, or heard of, the saltwater crocodile (C. porosus) which is the world’s largest crocodile, reaching over 20 feet in length and weighing over 2,200 pounds. This may have been the source of certain sea monster tales. Ctesias’ wondrous worm (skōlēx) of the Indus (46 = Nichols, 57; Photius Bibliothèke 45a 20f.; Aelian NA 5.3) displays certain behaviors that are characteristic of a crocodile, but, despite Ball’s identification (1885, 326–28; 1886, 4) of it as a crocodile or gharial, it has more of the fabulous than the factual about it. The story of this worm changed and morphed as it was told again and again until coming to rest in unidentifiable form in Albertus Magnus’ De animalibus (Kitchell).

(6) “Land crocodile” Greek: κροκόδιλος χερσαίος (krokodilos cherasiaos). On variant spellings see Asheri et al., on 2.62. Herodotus (4.192) says that in the land of the nomads (northern Africa) there are land crocodiles, very closely resembling lizards, which are 3 cubits (7.5 feet) long. Aristotle, as quoted by Apollonius the Paradoxographer, mentions a snake in Paphos that has two feet like those of the land crocodile (Historia Mirabilium, 39 = Keller, 1877, 52). Pliny (HN 28.28.108–09) notes the two kinds of crocodile but does not assign a name to this one, simply saying that it lives on land and eats fragrant flowers. As a result, a fragrant material from its intestines called crocodilea was used medicinally to treat eye ailments, such as cataracts or skin imperfections.
Aelian (NA 1.58) implying that they are like a lizard, says they prey on bees and (NA 16.6) uses it as a point of comparison with the phataggē (see pangolin). Pausanias (2.28.1) says that only Ethiopia has land crocodiles and these reach 2 cubits (3 feet) long. The palestrina Nile mosaic depicts a lizard with a canine head labeled ΚΡΟΚΟΔΙΛΟΣ ΧΕΡΜΑΣΙΟΣ (Meyboom, pl. 14) and one might think here of Varanus niloticus (Lenz).

How and Wells (1.367, on 4.192) suggest the animal is the Psammosaurus griseus, a land lizard which reaches this length and is today called the Varanus griseus griseus, the desert monitor lizard. Meyboom (27, 241, n. 63) agrees (cf. Keller, 1909, 2.277, Asheri et al., 725, V. arenarius). This lizard belongs to the Varanidae family, which also includes the giant Komodo dragon. Desert monitors have three subspecies but the range implied for the land crocodile would seem to describe V. g. griseus, which is found all across northern Africa. Stanner (107) lists the average total length of wild specimens as between 75 and 91 cm (2.5–3 feet), confirming the ancient estimates. They are carnivorous, hunting a wide variety of small animals, such as rodents and other lizards. It would be too large to prey on beehives and Aelian’s lizard is probably not V. g. griseus. The ancients may have had some contact with the other two subspecies, V. g. caspius, which is found from the south-eastern shores of the Caspian Sea to the modern Central Asian area, and V. g. koniecznyi, which is known in Pakistan and northwest India.

7 Krokodilopardalis (“leopard-crocodile”). The palestrina Nile mosaic is the sole evidence for this animal, depicting another lizard labeled ΚΡΟΚΟΔΙΛΟΠΑΡΑΛΙΣ, which Meyboom (27) identifies as the Nile monitor (Varanus niloticus, cf. Keller, 2. 275–76). This lizard is found further south than V. g. griseus, but would be known to the ancients from its presence along the Nile and Red Sea. This is a very large lizard with a total length up to 7.5 ft and weighing over 20 pounds. It is terrestrial, arboreal and aquatic with an omnivorous diet, meaning that they eat almost any animal they can kill, especially aquatic species. Through intentional releases and as escaped pets they have established a breeding population in south Florida (United States Geological Survey).
The hamadryas baboon. © LadyofHats/Wikimedia Commons.

sacred ape of ancient Egypt. Today it is found in upper Egypt and on both sides of the Red Sea, in Yemen and Arabia to the east and in Somalia and Ethiopia to the west (WMW, 588). The male baboons weigh up to 40 pounds and possess silver manes (Martin, 202). Strabo (17.1.40) says the *cebus* was sacred at Babylon, perhaps mistaking it for this animal. As McDermott points out (36), there is great flexibility in the terminology. Aelian (6.10; 7.19; 10.30) gives us several bits of information, including the fact that baboons were taught their letters under the Ptolemies and could be led to adopt human traits, such as wearing clothes, drinking wine, or suckling at a woman’s breast when very young. IBK (83.1–3, pl. XIV) identify this animal on three gems.

*See also* *choirelaphos.*

D

**Dam(m)a** Latin: *dama*. This Latin term seems to have been a non-specific term for any sort of *deer* and was occasionally misused to apply to animals such as gazelles. L&S s.v. shows the range of possible definitions of this word: “fallow deer, buck, doe, antelope, chamois.” The *OLD* lists “red or fallow deer, gazelle, antelope, etc.” The actual uses can be put into a few categories. First, it is a deer-like animal. Vergil (*G.,* 1.308) says it is hunted with slings during winter and hunted with dogs (3.410). Seneca (*Hippolytus* 62) lists it as generic prey. Horace (*Odes* 1.2.12) relates that, during Deucalion’s flood, a *damma* had to swim in a raging river, a Greek scene that would seem to evoke a deer. Ovid uses the word often, but always in a Greek or Roman context (*Met.* 1.442; 10, 539; 13.832; *Fasti* 3, 646 (Polyphemus lists them as types of wild pets (*deliciae*) he could give Galatea). Such uses seem best translated as “deer,” with the same non-specificity that the English word evokes. Juvenal (11, 121) says that in their current opulence people get no joy from dining and that *damma* has lost its appeal (*nil damma sapit*). This use is generally taken as referring to venison (Dalby, 114)

A few other uses open the possibility that *damma* was occasionally used for a gazelle-like animal. Columella (9.1.pref. and 1) lists them as kept in rich Romans’ *vivaria* (see zoo) where they were kept for pleasure, profit, and dining. Pliny (*HN* 8.79.214) lists them with the *pygargus* and *strepsiceros*. Elsewhere (11.45.124) he states that the *rupicapra* (chamois) has horns bent over its back, while the *damma*’s are just the opposite. This forward thrust of the horns certainly sounds like a gazelle. Martial’s report of *dammae* in the arena (*De Spec.* 30 (=33); 4.35, 74) could describe either deer or gazelles. The same is true for the emperor Gordian’s 200 *dammae* (*SHA* *The Three Gordians* 3.7) and for those in Probus’ games (*SHA* *Probus* 19.4; on all, see Jennison 75, 78, 89, 93).

See also *gazelle*.

Dalby, 2003; Hünemörder, s.v. “Deer, red”; IBK, passim, see index s.v. “gazelle”.

**Deer** Greek: ἐλάφος (*elaphos*), δορκάς (*dorkas*), πρόξ (*prox*); Latin: *cervus/cerca, dam(m)a*. Deer were among the most common animals in Greece and Italy and are to be found throughout the literature and art of the region. They have been hunted by humans since prehistoric times. Deer are members of the family *Cervidae* and consist of 17 genera and 41 species (*WMW*, 1091). The deer known to the ancients belong to the sub-family *Cervinae*. Deer are notable in possessing antlers.
instead of horns, which they commonly shed and which, with the exception of the reindeer, are only borne by males (WMW, 1091). Their habitat in ancient times would have mostly have been forests and the grasslands near them.

(1) **Red deer** (*Cervus elaphus*) is also known as the wapiti or elk and its distribution is worldwide. The North American version is sometimes classified as a separate species (*C. Canadensis*) from the Old World type (*C. elaphus*) (WMW, 1103–04, 1110–13). It is even found in the Atlas mountains of northern Africa and subspecies inhabit Mediterranean islands. Its antlers are less palmate than those of the fallow deer but it is a larger animal, with the largest varieties reaching over 50 inches at the shoulder and weighing over 400 pounds (European varieties are smaller than North American ones). They were very populous near Pompeii, where antlers are found (Ciarallo and De Carolis, 63).

(2) **Fallow deer** (*Dama dama dama*) were once widespread throughout Europe. They stand about 3 feet high at the shoulder and weigh up to 220 pounds. The males’ antlers are flattened, palmate with many points and, especially in the spring and summer, these deer are marked with white spots. Cf. Oppian’s *eукероς* (“broad-horn,” *Cyn.* 2.300–14) and *Cyrandies πλατώνις* (platōnis, 2.11.2). This deer was introduced in early times to areas such as Rhodes, where its statue today greets ships entering its harbor (Marco et al.; Masseti 1999, 2002, 2008) and was widely introduced to areas as far flung as Britain, by the Romans, where it was brought as gifts for local aristocracy and almost attained managed herd status (Davis; Halstead, 75; Sykes et al., 2006, 2011; WMW, 1098–90). A subspecies *D. d. mesopotamica* lived from Palestine to Iran but is now nearing extinction. Fallow deer were also found throughout Pompeii (Ciarallo and De Carolis, 63).

(3) **Roe deer** (*Capreolus capreolus*) is the smallest of the three common varieties, reaching a maximum of 3 feet at the shoulder and a maximum weight of ca. 100 pounds. Its horns are proportionally smaller, rarely more than three tined (WMW, 1131–32). Coloration is seasonal, but they are marked with white patches at the throat and rump.

Aristotle (*Hist. an.* 506a23; *Part. an.* 676b27) has the *prox* distinct from the *elaphos* which has caused lexicographers to identify *elaphus* as *Cervus elaphus* and *prox* as *Capreolus capreolus*. For other citations, see LSJ. Yet identification of casual literary mentions of deer should be undertaken cautiously since authors use the terms loosely and interchangeably. For example, in a simile, Homer depicts an *elaphos* surrounded by dogs (*Il.* 11.475) and as a hunter’s prey (*Od.* 10.158). Elsewhere, a *prox* is hunted by dogs (*Od.* 17.295). None of these animals is described, yet Voultsiadou (2005) feels comfortable identifying *elaphos as Cervus elaphus* and *prox as Capreolus capreolus*. Some exceptions may apply. Nimbleness and speed might evoke the smaller roe deer (or a fawn). Artistic representations showing broad horns would imply the fallow deer. In sum, though, the three animals were surely confused and antelope were commonly seen as a type of deer (*hippelaphos, tragelaphos*).

Aristotle studied the deer carefully and got many things correct: it is a ruminant (*Hist. an.* 632b1–4); it lacks a gall bladder (*Hist. an.* 506a23, 32f.; cf. WMW, 1091); the complete cycle of the growth and molting of antlers (*Hist. an.* 611a 25–b 17). Cf. Pliny *HN* (8.49.112–19) for further beliefs, including their ability to migrate by swimming.
In imagery, the deer most commonly stood for swiftness, fearfulness (evinced in its large heart, Aristotle Part. an. 667a 15f.; cf. Plin. HN 11.70.183) and defenselessness. The deer was widely hunted in Greece and Rome and this is a frequent theme in art (e.g., Richter, 1930, 28–29, with plates. Hull (76–83, 86–89) treats the three types of deer and methods of their capture, which included use of hounds, on foot or horseback, with or without nets. All parts were used: meat; pelt (cf. Maenads’ fawn skins); antlers for tools and musical instruments; parts for medicine and magic (Pliny HN 8.49.116–18; 28.49.178, 59.211). The Romans commonly depict deer hunts on their mosaics, kept them in hunting parks (Varro, Rust. 3.13.2–3; Starr), and exported them throughout the empire. Fawns are commonly shown with children on Attic choes, even yoked to small carts, and other representations, both Greek and Roman, indicate they may have been pets, as was Sylvia’s stag (Vergil Aen. 7.483–502; Lazenby; Toynbee, 143; Hoorn, 46). Deer appeared in the shows, either performing tricks or as prey (Jennison, passim; Toynbee, 144–45). The presence of various species of deer in Pompeian life and art is discussed by King (416–19).

**Varia**

The plethora of names surrounding the deer attests to its pervasiveness in society. The word ἁχαῖνης (achaïne) is often taken to mean a two-year stag (Arist. Hist. an. 611b18), but may merely mean “Achaian” (Keller, 1.278). Aristotle’s statement that its gall bladder is in its tail (Hist. an. 506a 23f.) is of interest. A proper name, Ἐλαφόστικτος (Elaphostiktos) indicated a foreigner tattooed with the image of a deer (Lys. 13.19).

Several words indicate a fawn: (a) νεβρός (nebros) is common. (b) ἐλαφινῆς (elaphinēs) is attested in Hesychius. (c) A spotted ἐλλός (bellos) appears on a broach, attacked by a dog in Homer (Od. 19.228). Eustathius (1863.40 ad loc.) confirms the identification. Antoninus Liberalis (28.3) uses the word with no explanation as the animal into which Hercules changed to escape Typhon. LSJ defines σπαθίνης (spathinēs) as a young deer “from the shape of its horns” and cites lexicographers on the word. Yet the stem indicates a broad, flat surface, and the fallow deer is called to mind. Their well-known longevity was exaggerated in Plin. HN 8,119 (100 years). (d) LSJ defines a κεμάς (kemas) as a “pricket, midway between νεβρός and ἐλαφοφός.” A pricket is a male deer in its second year, with straight horns. Yet Aelian (NA 14.14) seems to treat it as a distinct, Libyan antelope-like creature.

See also BOUBALOS (for euβerōs), DAMMA, ELK, GAZELLE.


**Diktyς** Greek: δίκτυς (diktyς). Herodotus (4.192) lists animals living in the desert areas of Libya. He specifically lists foxes and hyenas and then the diktyς and the τῆθος, which is almost surely a jackal. This has led How and Wells (ad loc., cf. Asheri et al., ad loc.) to identify the diktyς as another sort of jackal. Hesychios equates it with the ıktnos, which is a bird or a type of wolf (LSJ).

Asheri et al., 2007; How and Wells, 1967.

**Dipsas** Greek: δίψας Latin: dipsas. This snake is among Lucan’s (9.718, 737–62)
deadly Libyan snakes. They are found, he says, near pools of water (9.609–10) and, as its name indicates, its bite causes excruciating thirst (Wick, 2.312–13). Nicander (Th. 334–58) says it resembles the *echidna* and that its thin tail is black. Aelian (NA 6.51) says it is smaller than the ἔχις (echis) and that Sostratos claims it is white with two black stripes on its tail. He also lists alternative names: πρηστῆρ (prēstēr, “inflator”); καύσων (καυσόν, “burner”); μελανοῦρος (melanouros, “black tail”, cf. Bodson, 117–18); ἀμμοβάτης (ammobatēs, “sand crawler”); κεντρίς (kentris, “stinger”, cf. Bodson, 115–17). Although he states definitively that he knows all these names refer to the same snake, this is not necessarily the case. Philoumenos (20), a contemporary of Aelian, says it is about 1 cubit in length, has a markedly tapered body spotted black and yellow, and a very narrow head. He also lists καυσόν as a synonym. Scarborough offers an overview of evidence (6).

Antipater of Sidon (second century BC, *Anth. Pal.* 7.172) writes an epitaph for Alcimenes, who, trying to scare cranes and starlings away from his crops, was bitten by a *dipsas echidna*. The same name for the snake is used at Argos in Roman times (*IG* 4.620.4). Pliny (HN 23.80.152) lists bay leaves as a cure for its bite and seems to differentiate it from the *vipera*. Compare the cures offered by Celsius (5.27.7). Aelian (NA 6.51) relates a charming story about how the *dipsas* was involved with the origin of all snakes’ ability to slough off their skin, citing Sophocles as a source.

It seems fairly clear that “dipsas” refers to a poisonous viper, but that the name was applied to more than one species. For example, thirst is a common side effect of snake bite and is not confined to a single species (cf. *asp, séps*). Martial (3.44.7) and Silius Italicus (3.313) each seem to use it simply to mean “poisonous snake,” but at other times an individual species is meant. G&S (on Nicander Th. 334, cf. Wick, 2.299) list two identifications: *Cerastes vipera* and *Vipera prester*. *Cerastes vipera* (= *Coluber vipera* of L&S; SSW, 369–70) is the Sahara or Avicenna viper, which is found throughout all of northern Africa, through the Sinai Peninsula and up to Israel. Moreover, it is a desert dweller, more often found in sand than near a pool. For further identifications, see Leitz (94–103) and Bodson. The effects of its venom have not been widely studied (Lifsicht et al., Zimmerman), but seem mostly to involve bleeding at the site of the bite and urine retention. These latter symptoms parallel those described by Philoumenos. Lifsicht et al. also point out that the female of the species has a black-tipped tail (Lifsicht et al., 1593). Thus, *ammobatēs* and *melanouros* seem apt synonyms. The Northern viper, *V. berus* (= *Vipera prester*, SSW, 398–403) is found from Western Europe across the northern portions of Italy and Greece. See also Ovid (*Amores* 1.8) and Ammianus Marcellinus 22.15.27.


**Dog** Greek: κυών (kyōn); Latin: *canis*.

### Dogs and humans

The relationship between humans and dogs is as complicated as it is old (Clutton-Brock, 49–61; Wayne et al.). No other animal in antiquity had a closer relationship with their human masters and fulfilled so many different functions. Mycenaean art abounds with scenes of dogs at the hunt and the Linear B tablets preserve the word *kunagetai*, “dog drivers,” or hunters (DOCS², 132). Hamilakis reports the ritual slaying of dogs at gravesides. We can be sure that dogs helped to guard Minoan-Mycenean...
flocks. The earlier Classical Greeks seem never to have forgotten that the dog could revert to a wild animal quickly. Homer’s dogs devour wartime corpses (e.g. *Il.* 1.4–5) and at the end of the same work, Priam fears that dogs will eat his corpse (*Il.* 22.66–76). Savage dogs guard the swineherd Eumaios’ pigs in the *Odyssey* and Eumaios throws rocks at them to quiet their barking (*Od.* 14.29ff.). The dog’s reputation was also one of sneakiness and bad temper (Kitchell). Achilles insults Agamemnon with animal comparisons, claiming he has the eyes of a dog and the heart of deer (*Il.* 1.159, 225). Helen notoriously degrades herself by calling herself a dog (*Il.* 6.344) and there are multiple cases of similar uses throughout Homer (Graver). Semonides’ disparaging description of the woman “from a dog” is a shopping list of the dog’s worst traits: foul-tempered, sneaky, yapping all the time even if beaten (7.12–20, Gerber, 306).

Yet the *Odyssey* also gives us the paradigm of a faithful dog in the story of Argos, who first recognizes the disguised Odysseus and then dies. Odysseus asks his companion whether his dog is a fast dog that can hunt or just a table dog that men keep around for their amusement (*Od.* 17.306–310). He thus establishes the long-lasting distinction between work dogs (e.g. guard dogs and hunters) and dogs kept for pleasure. That the bond between human and canine was strong is indicated by the fact that from the Bronze Age to the Geometric period, dogs were often interred with their masters (*Il.* 23.171–77; Day).

By the fifth century BC, the emotional attachment to dogs is solidified. We see dogs on *stelai* bidding their masters farewell and the stock scene of arming a warrior as he goes off to war includes the family dog (Ridgway, 45–70). Epitaphs were written for dogs (Herrlinger, passim, cf. index, “Hund”) and dog burials are not uncommon. Plutarch relates that, during the evacuation to Salamis in 480, the dog belonging to Pericles’ father “could not bear to be left by his master” so he swam after the ships, only to die when arriving at the opposite shore. The Greeks, struck by the dog’s devotion, buried the dog on the spot (*Themistocles* 10.5). An excellent rhyton attributed to the Brygos painter and residing in the Jérôme Carcopino Museum in Aléria has the head of a sleek hunting dog. Above it, on the neck, a youth at a symposium lies on a couch and plays the lyre, cleverly mimicking the common scene on vases showing dogs beneath their masters’ couches. A later version is in the Metropolitan Museum (06.1021.260). Hoffmann (1962, 1981) shows many canine rhyta.

The dog’s varied jobs encouraged selective breeding (DOG, BREEDS). While certainty is impossible, the role of the outdoor guard dog in the countryside probably changed but little since Hesiod warned “Take care of your sharp-toothed dog, lest
a man who sleeps by day come and steal
your goods” (Op. 604–05). But dogs were
to be found throughout the polis as well.
The trial scene in Aristophanes’ Wasps is
predicated on dogs being in and around
houses and in the Themophoriazousae we
hear of large Molossians used to guard
against adulterers (416). Thucydides
points out that the plague of 431 BC was
odd in that the carrion birds and the dogs
did not touch the bodies of the dead scat-
tered throughout the city (2.47.50). Dogs
are omnipresent on Greek vases (Johnson)
and seem to have marked out the stages of
an Athenian male’s life. From birth until
their early adolescence, Athenian males
inhabited the women’s quarters (gynaiko-
nitis) of the house. Here, they partook
basically in the females’ world and were
surrounded by their favored pets. Among
these were the cuddly Maltese dogs, whose
small size, curly tail and lively actions are
still endearing across the centuries. Such
dogs are very often seen on grave stelai of
women and children of both sexes and
they populate the small vases called choes
which played a prominent role in the Anthes
teria. Here the dogs play with the children,
pull them in carts, are trained to
carry small choes on their backs, and in
general seem a major part of the children’s
lives. Perhaps they were gifts presented to
children at this time along with similar
pets such as birds and fawns.
Adolescent males, however, are routinely
seen with sleek hunting dogs on vases and
stelai alike, and it is very infrequent that
they are shown with Maltese. These hunting
dogs are the youths’ constant companions
while hunting, at a banquet, or at leisure in the gymnasium. Moreover, these
dogs and their masters are often engaged in
meaningful interactions. A glance through
the plates of Conze’s masterful study of
grave stelai makes it clear that the dogs
most often are looking up, directly into
their masters’ eyes in exactly the same way
that children look up at adults. A kylix in
the Kimbell Art Museum attributed to the
Triptolemos painter even depicts the train-
ing of a dog. Inside is a scene where the
unruly dog defecates while it bites a youth
on his thigh, drawing blood (Kimball Art
Museum, 70–71, fig. 11–12). On the out-
side, however, the better behaved dog is
being taught the trick of “give me your paw” (cf. Conze, no. 958, p. 205, Taf.
CLXXXV). The frequent depiction of col-
lars and leashes indicates that these dogs
are more domesticated than those who lay
beneath Priam’s couch at banquet.
According to the Greek Anthology (6.34–
35) collars and leashes of favorite dogs
were even dedicated to the gods. For dogs
in sculpture see Richter (31–33).
In Athens, these dogs also played an impor-
tant role in the homoerotic life. Numerous
vases depict an all-male courting scene
where the dog is not only present but is,
aparently, a present from the erastès (the
generally older lover) to the eromenos (the
younger object of his affection). Aristophanes (Plut., 153f.) specifically
mentions dogs as love gifts. In vase scenes
the dogs accompany the men as they
exchange gifts of hares and deer – prey the
dogs have helped to capture (Barringer,
70–124). Such dogs were also brought to
the gymnasion to be shown off as status
symbols. Contrast an interesting vase frag-
ment (Thompson, 187–88, pl. 67.3) with a
pair of youths between which sits a dog
that seems to be a shaggy mongrel.
The dog is found on Etruscan artifacts, but
is only occasionally depicted on mirrors
(Wiman).
The Roman world was equally involved
with the dog. The dog’s urban presence is
clear from the Cave Canem mosaics and
the plaster casts of dead dogs from Pompeii
(King, 410–14) as well as a doghouse
(Jashemski, 130, fig. 106). There is also
ample evidence for the use of dogs in hunt-
ing, especially for hare, deer, boar, and
antelopes. Lap dogs are depicted in art and literature. Trimalchio’s friend Croesus owned a small dog named Margarita (Pearl), which is pampered and terribly obese. It almost perishes in a fight with Trimalchio’s own massive dog ironically named Skylax (puppy). Many dogs had elaborately decorated collars and were overly indulged. Many funerary monuments bear likenesses of these pets and some certainly were for the dogs themselves (Toynbee, 109–22). Others, such as the famous Helena second century AD monument in the Getty Museum, may be either for the dog or its owner (Boucher; Koch; Slater). Martial has two epigrams on favorite dogs, one to a hunter killed in a boar hunt (11.69) and the other to a smaller, lap dog named Issa, whose master had a portrait of her painted (1.109). Other epitaphs from the Anthology extol their animals’ traits and offer a wide variety of names (Toynbee, 121). A small Roman bronze shows the dog in the obvious play posture (Kozloff et al., 30–32, fig. 159).

Uses of the dog

The most commonly referenced use from antiquity was hunting. Grattius (Cyn. 215–16, 249 f.) names Hagnon son of Astylos as the first person to train dogs and put them to the leash. In the hunt the dogs could bring down large animals, such as boars, or could run them to ground or into nets, as in the case of hares, gazelles, and foxes. Such dogs needed to be fast and to have what Xenophon calls “good noses” (Cyn. 4.2). Phillips (88) reports that hunting the hare takes up 70 per cent of Xenophon’s work and this is probably also an indication of the number of dogs bred to this task. Other dogs, “sight hounds,” were fast enough to capture the hare on the run. Guard dogs tended to be larger and more solidly built, although the plaster casts of the dogs of Pompeii show medium-sized animals. Some, of course, guarded houses and probably, as in today’s world, the bulkier, fiercer ones watched over warehouses and workplaces by night. Other dogs were bred to guard flocks, especially from wolves. Columella claims that such dogs should not be as bulky as house guard dogs, but should have the ability to chase after the wolf (7.12.9). The most famous breed of guard dog was the Molossian. Phillips (pl. 5.1) shows an excellent photograph of a Roman copy of a Hellenistic statue of this sturdy animal. We have seen above that dogs hitched to small wagons appear on Attic choes but in Roman times some larger dogs were truly trained to draw carts and, in the case of Elagabalus, a chariot. Yet both of these instances (Toynbee, 108) seem to have been staged for the novelty and the custom was probably never regularized as was later the case for the Bernese mountain dog. Trained dogs were probably part of roaming troupes of performers and Plutarch (Moralia 973e–f), relates as an eyewitness the performance of one under the reign of Vespasian. Finally, 2,400 dogs (Hyrkanians, Indian, Molossian and others) were paraded in the grand procession of Ptolemy II (Jennison, 33; Rice, 93–94).

The dog also served several other uses in antiquity. “By the dog,” was a favorite oath of Socrates, perhaps referring to Anubis (Blackwood; Hoerber). Pliny offers numerous anecdotes involving the dog, such as the fact that every year dogs were crucified in Rome on a cross of elder because the geese, and not they, gave the warning against the Gauls in the early fourth century BC. He claims, based on a lost work of Plautus, that dogs once were eaten at magistrates’ inaugural banquets (HN 29.14.57–59, cf. Burriss). We also know that dogs were once used as messengers in Epirus and Thessalia (Aeneas Tacticus 31.31–32). In a bizarre form of capital punishment called the poena cullei, a dog, a monkey, a cock, and a snake were put in a leather bag with the accused and all were drowned (Egmond). In another
ritual the dog was sacrificed to help the health of crops (Zadoks).

There are scattered references to the use of dogs in war (Forster), a custom that can also be seen on Assyrian reliefs (Clark, 58). A similar scene appears on the Altar of Pergamum (Clark, pl. 4.9) Pliny (HN 8.61.142–43) reports on packs of dogs kept and trained for war, but most of his examples also belong to the eastern realms of the empire. Some objections have been raised concerning the visual evidence adduced for Greek use of war dogs (Cook, 1952). Aelian (VH 14.46) is quite explicit, however, that dogs actually fought as first attackers in a battle. The Spartan general Agesipolis, when besieging Mantinea, put out dogs as sentries (Polyaenus Strat. 2.25). It seems clear that the Hyrcanians and the Magnesians took dogs into battle (Aelian NA 7.38). The Caspians (Valerius Flaccus Arg. 6.106–08) and the African Garamantians (Pliny HN 8.61.142) were believed to have done the same. We even know of tombs erected to such canine warriors (Daremberg and Saglio 1.888–89). A dog was by his Greek master’s side at Marathon and was so brave that he was included in the picture of the battle painted by Micon or Polynogotus of Thasos for the Stoa Poikile in Athens (Aelian NA 7.38). The Romans used dogs in special wartime circumstances as well. In a fragmentary section of the column of Marcus Aurelius, dogs were seen and Manius Pomponius Matho, fighting the Sardinians, used dogs to flush out the enemy hiding in woods and caves (Smith 2.972). These may have been the same sort of dogs trained to track down runaway slaves. Dogs could accompany sentries on their rounds (Aeneas Tacticus 22.20; Vegetius Mil. 4.26) and other stories tell us that dogs were common in camp, whether or not they sallied out to battle (Plutarch, Aratus, 24.1, Aeneas Tacticus 38.2–3, Frontinus, Strat. 1.5.25).

The dog is also found throughout Greek and Roman mythology. Laelaps was a Cretan dog of divine origin who hunted the Teumessian fox. The former could never fail to catch what it pursued and the latter could never be caught. The coins of the Cretan city Kydonia show a dog nursing an infant, presumably the eponymous hero Kydon or Zeus Cretagens (Dulière, Stefanakis).

**Ancient authors on dogs**

Many authors in antiquity studied the dog. Aristotle has many references to the animal, but they are generally brief. More germane are those authors who devoted entire works to dogs.

Xenophon (430–after 355 BC) wrote a *Cynegetica*, or “Hunting with Dogs.” Books 3–4 are especially filled with practical advice on dogs as well as detailed descriptions of the breeds. Book 7 describes breeding and the raising of puppies, including how best to train them for the hare hunt. He includes an interesting list of dog names, notable for being short and easy to call out (see below). This work was revised in the reign of Hadrian by Arrian (ca. AD 80–160) and is translated by Hull. In the time of Augustus, Grattius Faliscus (the second name is dubious) wrote a *Cynegetica* of which about 540 hexameters survive. Columella (fl. AD 50) describes in detail dogs which serve as guard dogs of the *villa* or in the fields and also discusses breeding and the treatment of certain ailments (7.12.1–13.3). Only 325 lines survive of the *Cynegetica* of Nemesianus (late third century AD) but it covers many aspects of raising hunting dogs. Oppian lived in the late second century AD and wrote a work on fishing entitled the *Halieutica*. The *Cynegetica* ascribed to him is generally believed to have been written by someone else. It is dedicated to Caracalla (AD 198–217). Iulius Pollux (second century AD) wrote an *Onomasticon*, a sort of...
topical encyclopedia, which remains to us only in copies derived from an epitome. It has a significant section on dogs that relies heavily on Xenophon but also contains original content (5.17–86). Finally, the dog holds prominent place in the world of the fable where the full gamut of its traits is displayed, ranging from foolishness (Babrius 79; Phaedrus 4) to its faithfulness toward humans (Phaedrus, 23).

See also /n.sc/a.sc/m.sc/e.sc/s.sc, /a.sc/n.sc/i.sc/m.sc/a.sc/l.sc/s.sc.


Dog, breeds It is certain that Greeks and Romans bred dogs for special tasks and that other countries did the same and then exported the dogs to the Mediterranean. Hull (21) reports that he has found “at least sixty-five names in Greek and Latin literature that may represent breeds.” Yet many of these names are synonyms and most references to breeds in antiquity were made by non-specialists. We must be more cautious than was Keller in equating any ancient breed with a modern one. Most names of breeds came from the place where they were developed. Grattius, in his long discussion of breeds, says “mille canum patriae ductique ab origine mores quique sua”; “There are a thousand homelands for dogs and the traits of each are derived from their place of origin” (Cyn. 154–55). The Cretan hound was a very important breed, known for speed and agility. The Locrian was recommended for boar hunting and there are references to Elean, Arcadian, Tegean, and Argive hounds to name but a few. From outside the Mediterranean, Indian and Persian hounds were well known and Libyan hounds are mentioned. Grattius has a very complete list of breeds, including some that have been identified from as far away as China (or Tibet), Britain, Germany, and the modern Ukraine (150–262). The notes of Duff and Duff are very useful here, especially for further references.

It is best to view the dogs of antiquity as forming three basic groups: guard dogs, hunting dogs, and pet dogs. Guard dogs were bred for strength and aggression. They guarded homes in the city, villas in the country, and flocks. Dogs were not generally used for herding purposes in antiquity. Most authors are content to list the characteristics that make a good guard dog and few mention names, but it is safe to say that the large dogs from Epirus (Acarnanians, Athamanians, Chaonions) were guard dogs. Also from Epirus were the better known Molossians, which were said to be descended from the divine dog Lelaps. The Molossian was sturdy and square and is wonderfully executed in a Roman copy of a Hellenistic sculpture now in the Uffizi Museum, Florence (Richter, pl. 174). Such dogs often show a mane as does the Molossian sitting atop famous monument of Lysimachides in the Kerameikos (Richter, pl. 170). A charming Molossian rests beneath a chair in a sculpture from Rome (Keller, 1909, 1.106, fig. 40).

Hunting dogs varied according to the prey they were bred to hunt but in general are depicted in ancient art as long and sleek,
possessing pointed muzzles and erect ears. In ancient Greece the hare was the primary animal hunted and for this purpose the Greeks bred swift dogs, generally depicted as long and lean. Laconian hounds were large but had a longer head and snout than a Molossian (Freyer-Schauenburg). It hunted by scent and Xenophon (Cyn. 2.3.1f.) specifies that two kinds of Laconian, Castorian and Vulpine (αλοπεκίδες, pl., “foxish”), are especially good for hunting. Grattius (204f.) claims the verträba a Celtic hound resembling a greyhound, was excellent for catching hares (cf. Martial 14.200, Hünemörder).

Pet dogs form an interesting puzzle. Numerous scenes on Greek vases, for example, show young men reclining at dinner or a symposium, with their dogs, often leashed, beneath their couches. Were these dogs, which were undoubtedly used for hunting, also pets? A fine gem from the end of the fifth century BC shows a nude youth reaching down to pet his dog, which wags its tail (Richter, 1968, 79, pl. 224). Many such animals must have served dual purposes, one utilitarian and one emotional. For this discussion, pets are viewed as animals whose upkeep and maintenance were undertaken solely for the pleasure of their company. The prime canine pet fitting this description is the Maltese or, more properly, Melitaean dog (Melitaion kynidion). They are often said to have been solely the pets of Greek women, but Bussuttil has shown that this is incorrect. The affection of adult males for these animals is demonstrated both in literature and in art. It may be that the Melitaean was a common present to children at the time of the Anthesteria. Their place of origin is a matter of some dispute as many places with the name “Melite” claimed them. It was a small dog with curly hair and a tail that curled at the end. It is often depicted on Greek funeral monuments and a poem of Martial (1.109) is a tribute to a Melitaean named Issa, the beloved pet of his friend Publius. Not all small pet dogs should be thought of as Melitaean, however. Phillips (94, fig. 5.13) shows a relief from Pompeii which depicts a small dog and its dead mistress and the dog does not have traditional Melitaean features. As she states, “pet dogs were simply any that caught one’s fancy.”

The ancients also reported cross-breeds. The smallish hunting dog named αλωπεκϊς (αλοπεκίς, “foxy”) was reported to be the offspring of a fox and a dog (Xenophon Cyn. 3.1f.) and Cyrenian dogs were said to be the product of a wolf and a dog. The Indian dog was said by Aristotle to be a cross between domestic dogs and wild ones (Gen. an. 746a30f.) or tigers (Hist. an. 607a4).


Dolphin Greek: δελφίς (delphis); Latin: delphinus, dolphin.

(1) Saltwater dolphins The dolphin is quite common in the Mediterranean basin. The striped dolphin (Stenella coeruleoalba) is the most populous cetacean in the Mediterranean and is found along its entire northern shore (Reeves and Notobartolo di Scira, 57–63). This dolphin is noted for its prominent beak and distinctive coloration which consists of a light blue or gray dorsal region with a whitish area on its lower body and belly, which in turn is marked with stripes. Its Mediterranean population is currently listed as “vulnerable” by the IUCN. The short-beaked common dolphin (Delphinus delphis) was
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once widespread throughout the Mediterranean but, beginning in the 1960s, rapidly declined. It also exists as a Black Sea subspecies (*D. d. ponticus*) which is currently listed as “endangered” by the IUCN (Reeves and Notobartolo di Sciara, 16–22, 130–36). Its coloration is also complex: a dark upper body with yellowish/white sides marked by a yellow stripe. The common bottlenose dolphin (*Tursiops truncatus*) is found throughout the northern shores of the Mediterranean from Gibraltar eastward, continuing up into the Black Sea where *T. t. ponticus* represents a subspecies listed as “endangered” by the IUCN (Reeves and Notobartolo di Sciara, 64–83; Bearzi). *T. truncatus* is the all grey bottlenose dolphin known to most people from their appearances in television, film, and dolphin shows. They frequent shallow waters near the shore and would have been seen regularly. Risso’s Dolphin (*Grampus griseus*) is found throughout the Mediterranean, but especially in the western basin (Reeves and Notobartolo di Sciara, 28–33). It resembles a small whale more than a dolphin. First, it is large, reaching 10 feet in length. It has a bulbous head marked with a bump like that on a beluga whale. Its face is rounded, lacking any significant beak. It thus may have been reported by the ancients as a whale more often than as a dolphin. The rough-toothed dolphin (*Steno bredanensis*) is a visitor to the Mediterranean and has been sighted in Italy and Greece as well as the eastern shores of the Mediterranean (Reeves and Notobartolo di Sciara, 106–08). It is notable for its narrow beak.

Aelian (NA 16.18) reports that there are two kinds of dolphin in the Indian Ocean. One has sharp teeth and is fierce, exhibiting hostility toward fishermen. The other is gentle, even allowing people to stroke it. Ball (315) identifies the former as a genus of river porpoise (*Platanista*), the latter a species of *Delphinus*. See below on the freshwater dolphins known to antiquity. Aelian is quite precise in placing these dolphins in salt water. The best candidate for the gentle dolphin is the Indo-pacific bottlenose dolphin (*Tursiops aduncus*) which may be a separate species of *T. truncatus* (WMW, 925f.). The identity of the hostile dolphin is unclear.

Homer uses dolphins as a symbol of speed (Il. 21.22–24), comparing the attack of Achilles to that of dolphins who drive fish into shore (cf. Od. 12.96). Aristotle knew the animal well and classified it under the κητή (κῆτε) with the porpoise and whale, though he admits that it is hard to classify. He knows they are not fish and that they have lungs and breathe air, which causes them to sleep with their heads out of the water, whereupon they snore (Resp. 476b13–31). He knows they are viviparous with a gestation period of ten months (11–12 is more accurate), give birth to one or two young, and can live for over 30 years. (Hist. an. 489a 35–b 7; 506b3–5; 521b21–26; 535b32–536a 4; 566b2–26; 589a 31–b 11; Gen. an. 732b24–27; Part. an. 697b1f).

Aristotle also has much to say about dolphin behavior (Hist. an. 631a8–b4). They can become friendly toward humans, even to the extent of forming personal relationships approaching love. He tells us that they travel in groups with the young toward the inside, have the ability to dive deep and then shoot out of the water and they beach themselves for no apparent reason. The dolphin was seen in antiquity as intelligent and very attached to its own kind, but the theme of the dolphin’s ability to bond with humans is equally common. Several sources report that dolphins would
cooperate with human fishermen in return for a share of the catch (Pliny HN 9.29–33; Oppian Hal. 5.425–447; Aelian NA 2.8). In fact, this currently occurs frequently in Laguna (Santa Catarina) and Inibé/Tramandaí (Rio Grande do Sul), Brazil, where bottlenose dolphins drive mullet into the shore and then retreat a little way while the humans cast their nets (Pryor; Simões-Lopes; Zappes et al.). Their behavior is taught to their young and repeated over generations. Curiously, Pliny specifies that the dolphins proved helpful by driving mullet toward fishermen from the province of Narbonensis. Pliny (HN 9.8.25–28) cites no less an authority than Maecenas that, in the reign of Augustus, a dolphin off the coast of Puteoli fell in love with a young boy. The boy fed it out of his hand and even rode it (cf. Ridgway). When the boy died, it kept returning to their favorite spot and ultimately died as well. He tells other tales of dolphins that befriended humans in a variety of places (cf. Pliny the Younger, Ep. 9.107). To these compare Gellius (6.7.1–7) and Aelian (NA 6.15). Credibility is given these stories by the documented instance of a modern dolphin that came near shore and played with people in New Zealand. See Higham for photographs of the dolphin, named Opo, with human riders. Dolphins were also known for their love of music (e.g. Aristophanes Frogs 1317f. for love of the flute, based on Euripides Electra 435–36; Aelian NA 2.6, 11.12, 12.45; Pliny HN 9.8.24). This, coupled with the animal’s affinity for human contact, and the common knowledge that they followed ships (citations at Stebbins, 93) all come together in the famous story of the musician Arion who was saved by dolphins, first told by Herodotus (1.23–24) and retold countless times thereafter (Stebbins, 66–69). Less well known is the story that the poet Hesiod was murdered and cast into the sea, but dolphins brought his body back to shore (Stebbins, 71–72). The Romans even had a nickname for the dolphin, and called it “simo,” “snubnose,” which might refer to the roundness of its beak (but cf. Stebbins, 4–5).

There are many other stories of close interaction between humans and dolphins, all documented by Stebbins. One such story eventually led to the dolphin appearing on the coins of Tarentum with the eponymous hero Taras.

This closeness between human and dolphin is reflected in myths that claim Dionysus turned Tyrrhenian pirates into dolphins (Spivey and Rasmussen). The most famous version is found in the Homeric Hymn to Dionysus, but see also Apollodorus, Bibliotheca 3.5.3, Nonnus Dionysiaca 45.105–68, Lucian Dialogi Marini, 8 (=5, Harmon et al., 7.196f.) A famous black figured kylix by Exekias shows Dionysus riding his ship, whose mast sprouts grapes, while beneath dolphins swim (Munich 2044). A stunning hydria attributed to the Micali painter, in the Toledo Museum of Art (Toledo 1982.134), shows the pirates diving into the sea in the very act of becoming dolphins. Aesop (Perry, 434, no. 73) has a
delightful fable in which a monkey falls into the sea and is rescued by a dolphin who thinks he is a man. Another (Perry, 443, no. 113) tells of the mutual demise of a tuna and the dolphin that pursued it. Babrius (39) is a fable in which the dolphins are at war with the whales. Predictably, Pliny lists medicinal uses of the dolphin: skin ulcers are cured with dolphin ash; fevers are abated with dolphin liver; dropsy is treated with melted dolphin fat (HN 32.27.83, 38.113, 39.117, 46.129, etc.). People on the Black Sea harpooned dolphins for eating but also to obtain their fat and oil, which the locals used as the Greeks used olive oil (Xenophon An. 5.4.27; Oppian Hal. 5.519–588; Strabo 12.3.19). The Palatine Anthology contains epitaphs written for stranded dolphins (7.214–16, cf. Douglas, 160–64; Herrlinger, nos. 4, 18, 30, 33 which implies some sort of monument). Locals buried Opo (above) after she died unexpectedly and some even put a cross on the grave (Higham, 83). At other times the dolphin could be a problem for fishermen, becoming entangled in their nets (Plutarch Moralia 977f–78a). The dolphin is consistently found throughout all genres of Greek and Latin literature. The reader is referred to the careful catalog of Stebbins for a list of instances. Meleager (Anth. Pal. 12.52) wishes he were a dolphin so that he could carry the body of his friend, lost at sea (Gutzwiller).

The dolphin is common in Minoan art, appearing on seals and, most famously, in frescoes in the palace at Knossos (Stebbins, 19–35). These animals (cf. others at Thera, Ayia Irini) are notable for a long orange streak on their lower sides. Most consider this an attempt to render *D. delphis* (Gill, 65–69) but the striking markings of the striped dolphin cannot have gone unnoticed. Morgan (60–63), for example, believes that the dolphins in the Queen’s Megaron at Knossos are modeled on *Stenella styx* = *S. coeruleoalba*. Stebbins catalogs dolphins on Mycenean and Geometric vases (36–58) and the dolphin is seemingly omnipresent on later vases. For example, a search of BzAr under “dolphin/s” yields 733 results. It accompanies ships and sea gods (e.g. Boston 00.335 by the Menon painter, RF, ca. 500 bc Nereid or Thetis holding two dolphins) and is very often a shield device (Chase, passim). One notable vase shows a comic chorus of warriors decked out as dolphins and led by an aulos player (Palermo, Mus. Arch. Regionale: 22711). Compare this to an earlier (650–600 bc), BF Siana cup in the Villa Giulia (no. 64608) depicting theatrical dolphins, one of which has human arms and is playing the aulos (LIMC Supplementum 1, “Monstra, 89” with pl. 175) and to an RF psykter by Oltos (520–510 bc) which shows not only the riders but the words to their song (cf. also Sifakis, 1967; 1971, 88–90, pl. II). The Randazzo group of Sicilian plastic vases contains several examples molded into the shape of a dolphin (Heldring, 50–53) and a painter of small lekythoi is named “the Dolphin painter” (Neeft).

The early (ca. 480–50 bc) coins of Euesperides in Cyrenaica (modern Benghazi) show a dolphin, as do the coins of Tarentum for reasons indicated above (Rutter, 53–54, figs 33–35). Messana uses the dolphin as a subtype with the hare (ibid., /one.taboldstyle/six.taboldstyle/zero.taboldstyle, fig. 177). City states from Perinthos in Thrace to Syracuse have dolphins on their coins. Various coins of Alexander the Great have a dolphin as a subtype and the coins of Istros show an eagle attacking a dolphin. The reverse of various emperors’ coins (e.g. Vitellius and Domitian) have a small dolphin. The dolphin also appears as an amphora stamp (e.g. SEG 41 576; 50 567). The dolphin is present in mosaics from all periods, but the Romans had a special love for Cupids riding dolphins (Toynbee, 207). Instances of dolphins on gemstones are too numerous to list, but IBK’s index is a useful
starting place. Toynbee points out that the dolphin appears on funerary monuments, apparently as a guide for the dead to the Blessed Isles (cf. e.g. SEG 27 468). One must not forget that dolphin statues were used in Roman circuses to count laps.

(2) **Freshwater dolphins** The ancients knew of Indian freshwater dolphins living in the Ganges (Strabo 15.1.72) and in the Diardines (modern Brahmaputra, Quintus Curtius 8.9.9). Pliny (HN 9.17.46) speaks of a “fish” called the *platanista* that has the beak and tail of a dolphin, and is 18 cubits (24 feet) long. Elsewhere (8.38.91) he discusses dolphins in the Nile. These, he says, have razor sharp dorsal fins that they use to defeat crocodiles. Seneca (QNat. 4.2.13) relates a fight between the two animals based on the personal observations of the prefect of Egypt. He specifies that the dolphins came into the mouth of the Nile from the sea and stresses that the “gentle” dolphins won.

In fact, India has two subspecies of freshwater dolphin (WMW, 900f.): (a) the Ganges river dolphin (*Platanista gangetica gangetica*), which is found in the Ganges and the Brahmaputra rivers; and (b) the Indus river dolphin (*P. g. minor*). The IUCN lists both species as endangered. Neither reaches a length of 24 feet with the females being larger than the males and reaching about 8 feet in length (Moreno, 13). Both species are rather pale, have elongated beaks and a hump instead of a dorsal fin. Aelian’s description of the fierce marine dolphin mentioned above stresses that they have sharp teeth. Both subspecies have interlocking teeth that are visible even when the beak is closed and this could have led to their reputation for ferocity. It is most likely, then, that Aelian was actually describing a river dolphin. The Irrawaddy river dolphin (*Orcaella brevostris*) lives in coastal waters of the Bay of Bengal but does enter rivers (WMW, 936). There is no indigenous Nilotic dolphin, so those described by Seneca must be a Mediterranean species that entered the mouth of the river. Pompeian depictions of the dolphin are discussed by King (419–20).


**Donkey**

Greek: ὀνος, ὑποζύγιον (late) (onos, hypozygion); Latin: asinus/asina, asellus. The donkey or domestic ass (*Equus asinus*) was probably domesticated from the wild ass, known to the Greeks and Romans as the *onager*, ca. 5,000–6,000 years ago (Chua, 146, Clutton-Brock,16f.) and was widely used thereafter as a beast of burden. The donkey was able to carry heavy loads and is most commonly shown working alone, not in teams. It is sure footed, making it an excellent choice for the rocky and mountainous agricultural settings of both Greece and Rome and it is probably fair to say that, in general, it was the poor person’s equivalent of a horse or a mule, especially valuable for its ability to exist on coarse fodder. The best, according to several authors, were found in Arcadia. In a letter dated May 12, 257 BC and written by the
scribe Zenon, a certain Toubias writes to Apollonius to inform him that he has sent some interesting animals to Ptolemy II for his collection. Among them are two white, Arabian hypozygia. This term (literally, “under the yoke”) is used for any basic beast ranging from oxen to mules. In late antiquity, especially in the Septuagint, it comes to mean ass. Toubias may well have been sending along some rare albino donkeys (Hauben; White, 40; CPJ I.5 = PCairZen I.59075). We even have evidence of a lively trade in donkeys from the papyri (Drexhage, Litinas, Manning, Oates, Youtie).

Of the three major equids known to Greco-roman antiquity (horse, mule, donkey) the donkey occupied the lowest tier (Gregory). Many of the traits commonly, if somewhat falsely, associated to it today were also given it in antiquity – stolid, slow, unintelligent, stubborn, and able to bear blows. It was thus commonly equated with slaves and was probably frequently abused by modern standards (but cf. Bodson, 1986c, 247–48). Indeed, Homer’s sole simile involving a donkey (Il. 11.558f.) describes children beating the animal. Semonides (7.43–49, Gerber 308) says one type of woman resembles an ass in that it only works when beaten, eats all the time, and is lustful. It was given the hardest work, bearing immense burdens for its size and turning millstones in granaries (references at Freeman; Griffith, 224f.; Toynbee 199–95). To give some idea of its overall usefulness and ubiquity, note that Cato (Agr. 10.2) states that an olive grove of 240 ingera (ca. 156 acres) needed four donkeys to function properly, three to carry manure and one to turn the millstone. The difficulty of an ass’ life is vividly depicted by Apuleius throughout his *Metamorphoses* and it forms the basis of most Aesopic tales involving it.

In addition to the work it did, the donkey was also important in antiquity for the fact that, as an equid, it could interbreed with the horse, yielding the mule, another very important beast of burden for the ancients. As a result, there was a thriving trade in ass breeding and Varro records that one senator paid 400,000 sesterces for a he-ass (Rust. 2.7), a price which Pliny, in his description of ass breeding, says was probably the highest ever paid for an animal (HN 8.68.167f.). In the same passage we hear that Maecenas set the fashion for eating donkey foals at banquets. He tells us that asses’ milk relieved facial wrinkles (28.50.12) and that Nero’s wife Poppaea, had a herd of 500 she-asses with foals so that she could take frequent baths in their milk (11.96.41). Elsewhere (11.87.215) he claims that the asses’ hard bones make excellent flutes (cf. Plutarch *Moralia* 150e).

The donkey appeared in many venues for the ancients. An ostron found in the Kerameikos and dating to the 480s B.C. contains the name Agathias and the tag “ass.” This may be an insult but also may, as Bicknell as argued, refer to the children’s game called *ostrakidna*, a sort of tag in which the captured child had to sit down and bear the name “ass” (Pollux 9.111). The donkey was brought into battle on at least two occasions, but its main weapon seems to have been its bray (Herodotus 4.129; Aelian NA 12.34). A donkey also helped to bring victory to Augustus at Actium. When he encountered a person named Eutychos (Lucky) leading a donkey named Nikon (Victorious) he took it as an omen of such import that, after his victory, he erected a statue to the donkey (Plutarch *Antony* 65.3–4). It is found in many proverbs and sayings (Freeman, 35–36; Griffith, 227f.; Opelt, 576–77), many referring to it as a paradigm of one who has no ear for music, e.g. “An ass at the lyre,” (Athenaeus 8.349d, cf. Midas’ ears). “Ass” was also, as it is now, a term of insult (Opelt, 577–78; 1965a 240, 259–62). An RF kylix by the Antiphon painter shows a mule with a halter and a wooden saddle bearing a heavy load and an RF oenochoe in
the British Museum shows a foreigner riding one side-saddle (Griffith, figs. 8, 9). A scene of women at a fountain house by the Priam Painter, shows four lion-head water spouts and a single head of a donkey, fully bridled (Boston, MFA, 61.195). The donkey is commonly associated with Dionysus/Bacchus, frequently shown in the Bacchic processions, such as those depicting Hephaestus’ return to Olympus or carrying Silenus. Likewise, some excellent rhyta are formed into the head of a donkey (cf. Hoffmann, 1962, 1981 passim and /m.sc/u.sc/l.sc/e.sc/). The ass appears in this guise on the fifth century coins of Mende but is also shown alone with a bird perched on its haunches (Richter, 18–19, fig. 81–82). The latter scene evokes a fable in the Aesopic tradition (Perry, 457, no. 190). An early fourth century BC signet ring distinctly shows the emaciated animal’s ribs (ibid., fig. 83, cf. the first century AD Roman statue in Ciurillo and De Carolis, 151). An Alexandrian coin dating to the second century BC depicts on its reverse the crucifixion of the pretender to the Seleucid throne Achaios (Polybius 8.21). He is on a pole and bears the head of an ass (Hanfmann). Roman coins of Dacia in the mid-third century show what appears to be an ass’ head on a standard. The ass, by the ubiquitous nature of its presence throughout the ancient world, also contributed to the titles of ancient literary works, such as Plautus’ Asinaria, Apuleius’ The Golden Ass (Met.), and Lucian’s Lucius, or the Ass. It even makes its way onto the comic stage in the Wasps and Frogs of Aristophanes (Arnott, 178–79). Instances of bestiality with donkeys alluded to in the latter two works are not entirely unhistorical (Luppe). To dream of a donkey indicated hardworking tradesmen (Artemidorus Oneirocritica 4.56) or, if the donkey is diligently obeying its master, the dream can indicate an obedient wife (2.12). But to dream that one has an ass’ head indicates slavery and misery (1.37).


Dorcas Greek: δορκάς (dorkas) with variants dorkalis, dorx, zorkas, iorkos; Latin: dorcas, dorcus, dorx. The name seems to refer to the animal’s bright eyes (cf. δέρκο-μαι/derkomai).

Dorcas most commonly refers to a type of gazelle, though sometimes it indicates a deer. The gazelle was hunted for its flesh (Athenaeus 9.397a, also on the myriad forms of the name). Aristotle (Hist. an. 499a9) has a passing reference to its horns. Aelian relates that the people of Coptos worship the females and think they are pets of Isis but sacrifice the males (NA 10.23). The Κυνοπροσόποι (= the more common cynocephaloi?) live by hunting the dorkas and bovalos. Aelian’s description of them at 14.14 as having a grey belly with a black stripe running down the flank on brown flanks matches the Thomson’s gazelle (Gazella thomsonii/Eudorcas thomsonii) very well and his placement of them in Libya matches perfectly with the dorcas gazelle (Gazella dorcas) which does have a stripe, but it is rufous in color and often indistinct. The dorcas gazelle’s current habitat covers northern Africa while the Thomson’s current range is further south, around Ethiopia. His praise of their speed also matches, since the dorcas gazelle can reach speeds of 60 mph (Atkins, 50). The name “dorcas” probably was used for either DORCAS
animal. They are rather small, with the dorcas standing at about 2 feet at the shoulder and the Thomson’s 4–5 inches taller. Both have long legs and will leap into the air stiff-legged so that all four feet are off the ground. This impressive behavior is called “stotting” or “pronking.” Note that Herophilus, quoted by Galen (De differentia pulsuum 8.556), uses the verb dorkadizo to describe an irregular, “jumpy” pulse.

Dorcas (and various derivatives) was a Greek woman’s name (cf. Anth. Pal. 5.291.12) and the animal often is used as a metaphor for a young girl (Agathias Anth. Pal. 5.292.12). Dice made from antelope horn were valued and expensive items (Theophrastus Char. 5.9, Polyb. 26.1.8) and they were mentioned frequently in papyrus documents (cf. PSI 4.331.2, 444.2). Yet Gilmour (168) reports 21 actual astragalus bones of gazelles found as far back as the tenth century BC at Megiddo. Gilmour also notes many finds of deer astragali, a fact that brings us to a basic confusion about the term dorcas. LSJ, s.v. ὀρκαλίς (dorkalis), raises the issue that when the term dorkas is used to refer to a clearly European animal, it must refer to the Roe deer (Capreolus capreolus). Cf. Euripides’ Bacchae (699f.), when crazed bacchants nurse animals near Thebes. These local animals cannot be gazelles. But cf. Xenophon Cyr. 1.4.7, where the scene is set in the East and elaphoi (deer) are listed in the same phrase. These dorkades must be gazelles. In many cases it is therefore impossible to choose between deer and gazelle. Consider Oppian Cyn. 1.165, where dorkalis it is used alongside nebroi (fawns). Are we safe to assume it means gazelle? In sum, unless there is a strong European setting, we must generally keep both possible meanings in mind. On the variant iorkos see Oppian Cyn. 2.296 with Mair’s notes and note the form zorkos (Herodotus 4.192) and zorx (Nic. Tb. 42). Latin has a transliterated form of the word in its dorcas (dorca in Grattius Cyn. 200), rarely dorcus. Martial (10.65.13) makes the animal the prey of a lion and, in another poem, recommends it as a pet for a small boy and says the crowd often shows it mercy in the games (13.99.1). There is evidence that the Romans kept them in game parks (Columella 9.1.1). The house of the Betti at Pompeii shows pairs of tamed animals that are clearly gazelles harnessed to carts driven by Cupids. Their horns rather resemble those of Thomson’s gazelles. Tame dorkalides are recommended as wet nurses for puppies by Oppian (Cyn. 1.440–41).


Dormouse Greek: μυξεχός (myxexos), ἐλείος or ἐλείος (beleios); Latin: glis (on names, Thompson). Niemann lists eight genera and 26 species of dormouse; WMW (1625) lists ten and 28. Dormice are generally arboreal, nocturnal and crepuscular rodents that resemble a squirrel, with large eyes and (with one exception) a bushy tail. They range from 4 to 14 inches long (including their tail) and weigh from 0.5 to 7 oz. The edible dormouse (Myoxus glis) is one of the larger varieties and is native to Greece, Italy, and elsewhere throughout the Mediterranean, inhabiting wooded and scrub areas (cf. Oppian Cyn. 2.574f. with Mair’s notes). Pliny states that they are found in Italy only in the Mesian forest of Etruria. Dormice hibernate (the name is derived from Fr. dormir, “to sleep,” cf. Martial 3.58.36 “sonniculosos … glires”) and thus store fat (Arist. Hist. an. 600b11–12), making them a desirable food source for humans.

The Romans especially craved the animals, giving them as presents and raising them in darkened areas called gliraria and in vivaria in tubs called dolia (cf. Varro Rust. 3.15.1–2; Pliny HN 8.82.224; Dalby, 122–23; photograph in Ciarallo and De Carolis,
153). They were even the target of early sumptuary laws (Pliny HN 8.82.223) and their prices were controlled by the Edict of Diocletian (4.38).

Other sorts of dormice were undoubtedly known. The forest dormouse (Dryomys nitedula) is found in central Europe, including Greece, and is almost exclusively arboreal. The garden dormouse (Eliomys quercinus) is found throughout Europe, including Italy but not Greece. It does not actually inhabit gardens, but prefers trees and cultivated fields and is often carnivorous. The hazel dormouse (Muscardinus avellanarius), on the other hand, prefers nuts and berries, and is also found throughout much of Europe, from Britain to Russia. We must be careful, then, not to attribute every mention of glis to the edible dormouse. Undoubtedly, the various species were often confused. There are several African species, but most live well inland or to the south and may not have been known.

See also nitela.


Draco Greek: δράκον (drakōn); Latin: draco. While some authors use this term generically for snake (cf. LSJ, s.v.), others used it to refer to larger snakes (e.g. Nicander, Th. 438–57; Lucan 9, 728f., cf. Wick, 2.306–07). Philoumenos (30.1–3), closely following Nicander, offers the following: they are not poisonous, but kill with sheer strength; numerous in Aethiopia and Libya; they differ in color (black, yellowish-red, ashen) and size (from 5 to over 40 cubits); they have projections resembling eyebrows and a “beard” beneath the chin (Gourmelen); gaping maw with large teeth. Early Greek and Etruscan depictions of snakes show them with beards. Lucan (9.728–29) says they are harmless elsewhere but in Libya are deadly and golden colored, with the ability to draw birds down from the sky with their breath. He mentions their ability to conquer elephants, a belief very popular in medieval bestiaries; see also Pliny (HN 8.12.34).

We hear that Tiberius had a draco as a pet (in oblectamentis) with which he traveled (Suetonius Tiberius 72). Likewise, Seneca (De ira 2.31.6) speaks of dracones crawling on the tables and bodies of their owners, while Martial (7.87) speaks of a draco worn around a woman’s neck (cf. Curiel Ramírez del Prado, 84). Such descriptions would seem to indicate a young python. Bodson (459–60) claims that the draco was originally the non-poisonous, constricting European grass snake, Elaphe quatuorlineata, and offers Cicero Div. 2.65, 135, 141 as proof (the passages are actually quite vague). She says the term was passed on to the larger constrictor, the python. Cf. G&S (178 on 397) and Leitz (29–30).


Dryinas Greek: δρύινας (dryinaς “oaken”), χέλυδρος (chelydros); Latin: chelydrus. A very poisonous snake dreaded by the ancients. Philoumenos (25) offers these facts about the dryinas: it lives in the roots of oak trees; abounds in the Hellespont; smells bad; is 2 cubits long; fat; possesses rough scales in which the “bronze-winged flies” dwell and ultimately kill the snake (see horsefly). Nicander (Th. 411–37) gives both names and indicates that it is amphibious, leaving the water for the oaks when summer dries up its pond, has a diet of frogs and that it
Dugong

Pliny (HN 9.2.7) and Aelian (NA 16.18) each relate a fantastic account of creatures that come out of the ocean at night to graze and return by day. Pliny places them near the Gedrosi and reports that they have heads resembling various different animals. Aelian puts them in the Indian Ocean. It is logical to follow Keller and to identify these creatures as garbled reports of the dugong (Dugong dugon), a large, aquatic, herbivorous animal related to the manatee (Trichechus manatus) of the western hemisphere (WMW, 983–86). Dugongs do inhabit shallow, coastal waters as reported and browse on submerged grass beds. Aelian’s report that some have the bodies of satyrs and the faces of women may relate to the fact that females are commonly seen with their young, which nurse at nipples near the axilla of each front flipper. It is probable that the dugong and manatee, placed in the order of Sirenia by modern taxonomists, are the source of mermaid myths and perhaps those of the Sirens.

Dung beetle

Greek: κάνθαρος (kantharos); Latin: scarabaeus. The Greek term is used fairly consistently for the dung beetle (cf. mélolonthē, D&K 83, 89–90), but the Latin term frequently simply means “beetle” (Beavis, 157). The best known dung beetle was the sacred Egyptian species Scarabaeus sacer (S. pilularius; D&K, 84). It famously appears in the beginning of Aristophanes’ Peace as the mount chosen by Trygaeus in his attempt to fly to heaven. There are hundreds of species in the Mediterranean area (Lumaret and Lobo) and both Beavis (157–64) and D&K (84–89) list many other species and alternative names, describe its life cycle thoroughly, and have an extensive list of ancient citations. The beetle is mentioned throughout antiquity as noisily flying or pushing around its ball of dung with its back feet. It uses the dung for food and as a place of incubation for its eggs (see illustration in Evans, 316). Aristotle (Hist. an. 552a17–28) and Pliny (HN 11.34.98) are two main sources. Ball (1885, 333; 1889 5–6) identifies Ctesias’ (= Aelian NA 4.41) Indian “bird” named the dikairon in the Indian tongue but dikaión in Greek, as a dung beetle. Larew (316–17) has a list of the Coleoptera found at Pompeii. The beetles’ main contribution to the art world was that their shape was used frequently in creating scarab sealstones. The stone of a typical seal is quite rounded and the body of the beetle is seen from the top. Its wings and legs are clearly shown. Beneath it is a flat surface into which the design is cut (e.g. Richter, 72, no. 211; Boardman passim),

Eale Latin: eale. Agatharchides (frag. 77 = Burstein, 123–24) tells a tale of carnivorous Ethiopian wild bull. It was fiery red, had moveable horns, hair that lay in the “opposite direction” (i.e. it lay not toward the rear, but toward the head), attacked native herds, and could not be wounded. It is hard to equate this with any known animal and Keller claims it is entirely mythical (1.345). The story is also to be found Pliny (HN 8.30.73–74) where the animal is called the eale. Similar versions about this “bull” appear in Diodorus Siculus 3.35.7, Strabo 16.4.16, and Aelian NA 2.20, 17.45. This composite creature had a long life and appeared in many works in the Middle Ages, eventually becoming the yale (jall) of heraldry. George’s suggestion that the eale is a water buffalo is intriguing, but not persuasive. A painting in the tombs at Marisa shows an ox eating a snake, perhaps a reference to this animal (Meyboom, 43; Jacobson, 28, cf. oxen, wild).

Burstein, 1989; Druce, 1911; George, 1968; Jacobson et al., 2007; Mielsch, 2005, 62–63.

Echidna Greek: ἔχιδνα, ἔχιδνας (echidna, echis); Latin: echidna. As with many names for serpents, this term seems both to serve as a generic term for poisonous snakes or vipers. Philoumenos (17) seems to take echis and echidna as separate snakes or, perhaps, uses echidna for the female echis (cf. haemorrhhois), since the echidna’s bite kills more quickly and female serpents were thought to be more deadly. Nicander (Th. 209ff.) specifies that it comes in many varieties and lists several localities in Greece and Asia where it lives. He claims that the Asian variety reaches a fathom (ca. 6 feet) in length. He states that the European echidna (Th. 211–12) has a horn on its nose, a clear reference to Vipera ammodytes, the European viper (q.v. for details; SSW, 1.390–92), which has been identified as the cerastes and sēps. As with the asp, he claims four fangs for the female (cf. Philoumenos 16.22–23) and most authors discuss the sexual dimorphism of the animal as markedly different. This is not usually true for snakes and it is more likely that these were different animals (Aelian NA 10.9). Aristotle (Hist. an. 511a14–23, 558a 25–31, Gen. an. 732b 21–24) knows well that the echidna is ovoviviparous and seems to have dissected them. It was commonly believed that moray eels came out onto land to mate with serpents (e.g. Pliny HN 9.93.76; Oppian Hal. 1.554–579) and Aelian (NA 1.50, 9.66) specifies that this was the echis. Symptoms of asp bite are described
in detail by Nicander (Th. 231–57) and Philoumenos, who also lists antidotes for asp bite (16.3–17.21). The monstrous Echidna, daughter of Phorcys and Ceto, had snaky nether parts and Herodotus (4.8–10) claims the Scythians were the descendants of Hercules’ union with an echidna (Visintin). Leitz (103–14) summarizes previous identifications and opts for Vipera ammodytes.

In 19–20 BC ambassadors from India visited Augustus on Samos and brought him as a present ten large echidnas which Jennison (67) suggests might be “hamadryad cobras,” i.e. King COBRAS, Ophiophagus hannah (Nicolaus of Damascus = Strabo 15.1.73; Dio Cassius 54.9.8). They also brought him what was likely a PYTHON. See also Plutarch (Crassus 32.4).


Echinees Greek: ἐχίνες, ἐχίνες (echines, “hedgehog-mouse”). Herodotus (4.192) lists three kinds of mouse on the Libyan/Egyptian border: two-legged (JERBOA?); echinees; and zegeries (Libyan word meaning “hills”). Aristotle (Hist. an. 581a1–2) locates them in Egypt and Aelian (NA 15.26) in Cyrene (cf. Pseudo-Arist. Mir. ausc. 832b3). Nathan lists eight species of spiny mice, WMW (1590) 14 species. An excellent candidate for the echinees is the Egyptian spiny mouse (Acomys cahirinus), which is found throughout Africa and the Middle East but was discovered first in Egypt. The ancients probably also knew the Golden spiny mouse (A. russatus) which is found in parts of Egypt and Arabia, the Cyprus spiny mouse (A. nesiotes) and the Cretan spiny mouse (A. minous).


Echis Cf. echidna.

Echinus Greek: ἔρις, ἔρις (eris, “hedgehog”). Herodotus (5.190) says that the Scythians live in them and are thus named. They also have a word for a kind of fish. According to Xanthus, there are three kinds of fish: (1) the small fish of the lakes, Arius; (2) the larger fish of the ocean, Arios; and (3) the largest fish of the ocean, Echines.


Elephant Greek: ἑλεφάς (elephas) Latin: elephas, elephantus, barrus (perhaps Indian, Horace Epodes 12.11 with Porphyry’s comments ad loc.). Dwarf elephants persisted on Mediterranean islands in the Pleistocene (Caloi et al.) but the ancients, as we do today, thought of most elephants as “African” (genus Loxodonta) or “Asian” (genus Elephas). Aelian (NA 16.18) also speaks of herds of large elephants on the island of Taprobane (Ceylon). Today, however, DNA studies have identified subspecies. African elephants are divided into bush or savanna elephants (Loxodonta africana africana) of southern and eastern Africa and the forest elephant (L. a. cyclotis) which inhabits central and western Africa (Lister, 161–63). The Asian elephant (Elephas maximus) is smaller and less wrinkled than the African and has a single prehensile projection on the end of its trunk as opposed to the African’s two (WMW, 994–98). Lister notes three subspecies (164). The African elephant is the largest living terrestrial mammal. Today, it is confined to areas south of the Sahara but in Classical times its range was further to the north, especially along the Mediterranean in modern Morocco, Algeria and Libya and along the Red Sea in Ethiopia and Somalia. Elephants in Syria died out in the later Bronze Age (Scullard, 24–31, with map).

Ivory from both elephants and hippopotamuses was imported into Greece in Minoan and Mycenean times but Alexander the Great was probably the first to encounter elephants in his eastern marches, most notably at the battle of Gaugamela (331 BC, cf. Charles). He and his successors are frequently depicted on coins with an elephant’s scalp piece, and a gold stater minted by Ptolemy I shows four elephants pulling Alexander in a chariot. Several Roman emperors show themselves on coins also drawn by
elephants. Aristotle, Alexander’s teacher, frequently mentions the elephant and analyzes its anatomy in some detail. Bigwood has written that his descriptions are quite accurate and are based on the Indian, not the African, elephant but Romm declares the opposite (qq.v. for citations and cf. Hünemörder). The elephant’s behavior in the wild was well fairly known. Strabo (16.4.14) describes well elephants’ behavior at dried up water sources during periods of drought.

The elephant was used fairly often as a military mount (Scullard, 236–50) but its use had inherent problems (Ducrey, 103–08). Alexander’s troops and their horses had difficulty fighting the elephant, as did the Romans, who first encountered the elephant when King Pyrrhus of Epirus invaded Italy in 280 BC. Since this first encounter occurred in Lucania, the elephant got the Roman nickname “Lucanian oxen.” These elephants are commemorated on the early (first half of the third century BC) Roman coinage called aes signatum, in which an Indian elephant has been identified on one side. A pig on the other side is a tribute to the fact that, throughout antiquity, it was believed that the squealing of pigs frightened elephants, as did mice (Pliny HN 8.10.29, cf. Deonna, 301–02; Zafiropoulos). Seleucus, having seen the elephant in India with Alexander, borrowed it as a war animal and even made it an emblem of his dynasty. Some war elephants bore war towers (howdahs – commonly used for archers). A plate in the Villa Giulia, Rome, depicts just such an animal, with a young elephant in tow (cf. Ciarallo and De Carolis, 70). The Ptolemies had a sophisticated program of hunting African elephants and training them for use in battle (Casson; Jennison 37f.; Meyboom, 49).

The Carthaginians used elephants in battle as well, first bringing them against the Romans at Agrigentum in 262. Hannibal’s famous crossing of the Alps with troops, which included elephants, occurred in 218 BC and his personal elephant, Saurus, was given the honor of being named by Cato the Censor in his history, even though Cato normally did not assign names even to generals (Pliny HN 8.5.11).

The Romans used elephants in war, but did so rarely. A famous example is at Thapsus where Caesar included them in his armaments against the Pompeians in 46 BC. The main threat of the elephant was its very size, its ability to break ranks, and the fear it engendered in horses. The Romans more commonly employed the elephant as an animal of show, often displaying it in the arena. Clutton-Brock (243–44) claims that the forest elephant was most commonly used. One such slaughter occurred when Pompey dedicated his theater in 55 BC. Cicero (Fam. 7.1) was present and tells of the audience’s sympathy toward the elephants. Pliny (HN 8.7.20) relates that the elephants used trumpeting and gesture to implore the audience for aid. The audience sided with the elephants and cursed Pompey. But elephants continued to be
shown and a publicly financed herd of them called the *Caesaris armentum* (Juvenal 12.102–06) existed in Laurentum, presided over by a *procurator ad elephan-tos*. Galen, court physician to Marcus Aurelius, relates a very interesting story about a group of doctors, including himself, who dissected an elephant slain in the games (*Anatomical Procedures* 7.10 = Kühn II.619–20; Scarborough, 125) in order to study the so-called “heart bone.” Galen relates that his prediction about what they would find was vindicated as they felt around inside the heart. When the heart was taken away for the emperor’s (Marcus Aurelius or Commodus) cooks, Galen dispatched a friend to beg back the “heart bone,” which he thereafter kept as a souvenir. They were also captured alive and transported to Rome, as depicted on the Great Hunt Mosaic and in a fragmentary mosaic from Veii that shows an elephant being loaded onto a ship (Baratte). Seneca (*De brevitate vitae* 13.3) reports that Curius Dentatus first had an elephant in his triumph.

There are several accounts of how they were hunted in the wild. Pliny says that in India they were caught by a mahout on another elephant, but in Africa they were driven into an excavated trench from which they could not escape Pliny (*HN* 8.8.24–25). The courage of the Trogodytae of Ethiopia was great, for they leapt on them from trees, grabbed their tails while standing on their thighs and hamstrung the animals with axes (*HN* 8.8.26). They were probably not hunted in the following manner, as related by Strabo (16.4.10). Hunters notched out trees against which the elephants were accustomed to sleep. Having no knee joints, the elephants had to lean on something to sleep. Once asleep, he claims, the tree was cut through, the leaning elephant fell, could not rise and was easily slaughtered. This belief lasted well into the Middle Ages. Horace’s (*Epist.* 2.1.195–06) casual mention of a white elephant as an oddity may refer to a Siamese elephant as Toynbee suggests (374, n. 6) but it may be easier to see it as an albino.

Authors such as Aelian and Pliny praise the elephant for its intelligence and nearly human traits. Trained elephants carried torches for emperors and others supposedly danced and walked on ropes. Lucius Cornificius, consul 35 BC, was supposedly wont to ride out to dinner on an elephant (Dio Cassius 49.7.6).

The elephant is ubiquitous in Classical art and Scullard contains many examples in all genres. It is found on numerous gems and coins (IBK, index; Biers, 10, fig. 14 for a fourth century BC example) and is a constant in Roman mosaics. A whimsical Greco-Roman engraved finger ring in the Metropolitan Museum (no. 81.6.139) shows an elephant creeping out of a snail’s shell (Richter, 1920, 139–40). A third century BC lamp shaped like an elephant’s head uses its trunk as the nozzle for the wick for the wick (Richter, 1930, 11) and a Roman lamp shows one on a scale being out-weighed by a rodent (Deonna, 298–99). In a tomb at Marisa (Jacobson et al., 30, pl. 19–20; Meyboom, 45, 284, n. 15, fig. 61) an elephant wearing a blanket as a saddle cloth is followed by a Negro wielding an axe who is generally taken to be the animal’s keeper. A clever Roman terracotta shows a monkey riding an elephant (Mottahedeh, 119, fig. 99).

Elk Greek: ἀλκή (alkē); Latin: alce, achlis. The Latin and Greek words translated “elk” do not refer to the North American elk, or wapiti (Cervus canadensis), but to a large Old World deer (Alces alces alces), a near relative of the American moose (A. a. americana). The Greeks may have encountered the animal in the inland Steppes and Romans definitely did so in Central Europe. They are large deer (Cervinae), most notable for the males’ impressive antlers which, in most types, are palmate, i.e. possessing wide, flat areas. Most citations are from Roman times, with perhaps the earliest being that of Caesar (BGal. 6.27.1), who compares them to a goat, probably on the basis of the “beard” they possess. He also gives a lively account of how they are hunted. Supposedly, the animal has no knee joints and, since it cannot lie down, must sleep leaning against trees. Once asleep, the trees, previously notched, break and the fallen elk cannot rise and is easily slaughtered. The same method is ascribed by Strabo to hunting elephants (16.4.10). The term “alce” came into Latin as a loan word from Germanic tongues and from there moved to Greek. Elk were exhibited in Roman games by some of the later emperors and ten were displayed in the massive animal collection assembled under Gordian III (AD 238–44) and ultimately slaughtered in the Secular Games under Philip the Arab in AD 248 (SHA The Three Gordians 33.1). These elk even appear on the reverse of coins minted by later emperors (Twente). Elk were part of Aurelian’s lavish triumph of AD 273 (SHA Aurelian 33.4).

Strabo (4.6.10) cites Polybius as referring to a large deer-shaped animal with a beard and this is likely to be the alces. Calpurnius Siculus has a rustic character report having seen an elk in the games and he says that it is rare (Ecl. 7.59). This is probably not true, although elk may have been thinned out by his day. It may rather reflect the fact that the Eurasian elk, like the American moose, is a solitary animal and does not gather in herds. Pausanias (5.12.1) calls it a Celtic animal and discusses its antlers. He also numbers it among the wonders (θαύματα) he saw at Rome (9.21.2) and says they are a cross between a camel and a deer. Richter sees references to the now extinct giant deer that once inhabited northern Europe (Megaloceros giganteus; cf. Lister).

Pliny’s Scandinavian achlis (HN 8.16.39, cf. Solinus 20.3) may be the same animal, though he stresses its rarity and says it resembles an alce. His belief that it grazes backward in order not to trip on its oversized lip is the stuff of legend. A bronze statue of an elk from Pompeii is discussed by King (408).


Elops Greek: ἐλόψ (elóps). Nicander (Th. 490) lists this among the harmless snakes, but offers no details. Philoumenos (28.4) says that its bite causes torsion of the bowels.

See pelias.

G&St., 537; Leitz, 135–36.

Enydris (1) See otter. (2) A water-snake, “énydris” (Pliny HN 32.26.82), which G&St. (537) equate with the hydrus.

Ermine The ermine (Mustela erminea) is a member of the Mustelidae family, and is thus a relative of the weasel, ferret, and mink. Also known as a stoat, it is found throughout Europe and Asia into Japan. It ranges from 8 to 14 inches in body length, including its short tail, and weighs less than a pound. It has a brown coat in
summer and a white one in winter with a black tip to the tail (Larivièrè, 327; WMW, 706–07). This has led to its identification as the pontic mouse. One version of the THÔS has also been identified as the ermine.

Ammianus (31.2.5) describes the Huns as wearing clothing sewn together out of linen or the pelts of “forest mice” (*pellibus silvestrium murum*). Translators and commentators generally translate this as “field mice,” but this is unlikely. The sheer labor involved in making a coat out of innumerable small pelts, plus the fact that Huns often wore fur, makes the idea of a “mouse coat” untenable. L&S, s.v. *mus*, suggests an ermine and this seems sensible, though identification with the European mink is also possible (*weasel*). The adjective “silvestris” can mean “wild” but it can also mean, literally, “forest dwelling.” Of course, this identification does not rule out the fact that Ammianus actually thought he was describing mice.

There was a fur trade in antiquity. Aristophanes (*Ach.* 880) lists the pelts of the ıktis (see *weasel*) for sale in Athens and Strabo (11.2.3), writing in Augustan times, tells us that the people of the city of Tanaïs, at the place where the Don River (the ancient Tanaïs) flows into the Sea of Azov, traded hides with the more civilized European nomads.

*See also simör.*

Ferret See WEASEL.

Firefly Greek: λαμπυρίς (lampyris, “shining one”), πυγολαμπίς (pygolampis, “rump-shiner”); Latin: cicindela. These names refer to members of the family Lampiridae, beetles which produce light both in the larval and the adult stage – a fact known to Aristotle (Part. an. 642b34, cf. Hist. an. 523b19f., and 551b24f., which contains a garbled life cycle description). The English term “glow-worm” generally refers to larvae or to the wingless adult female of some species. In the genus Lampyris the females are wingless and resemble larvae and may be called “glow-worms” along with larvae. In the genus Luciola (e.g. Luciola italica) both sexes are winged and both glow. For synonyms, cf. Beavis (175–76) and D&K (158–59). Pliny (HN 11.34.98) mentions winged versions and (18.66–67, 250–53) describes their beauty rather lyrically. According to the Cyranides (3.26.2f.) it is a female contraceptive when worn. Artemidorus (2.22) reports that they can be good or bad signs in dreams.


Flea Greek: ψυλλα, ψυλλος (psylla/os); Latin: pulex. As with the LOUSE and BEDBUG, lack of hygiene and insecticides insured that the flea was a prevalent pest in antiquity. There are many species, but the ancients tended to identify a flea by its host, be it human, bird, rodent, or dog. In today’s terminology, Pulex irritans is the human flea and the dog flea is Ctenocephalides canis. Predictably, they were thought to arise from spontaneous generation and many ancient repellants are proposed. See Beavis (240–42) for references but mention must be made of Socrates’ famous flea experiment in Aristophanes’ Clouds (144f.).

See also PHALANGION, PITHEKE.

Thüry, G., “Flea,” in BNPO.

Fly Greek: μυία, μυά (myia, mya); Latin: musca. Flies are common insects belonging to the order Diptera and families Muscidae and Calliphoridae, including the common house fly (Musca domestica) and numerous outdoor flies that bedeviled the ancients in every aspect of their lives. The terms above were occasionally also used for larger flies that bite livestock. Beavis (119–20) lists possible identifications for various sorts. Flies would have been seen at sacrifices, drawn by the blood and car- rion (Aelian NA 5.17), at the dinner table, in open-air markets, at food stalls, latrines, garbage pits, near the dung of animals and humans, at milking time (Homer, Il. 2.469f., 16.641f.), around the sick and
dying, pestering children (II. 4.130) and laying eggs in the wounds of warriors (II. 19.25–26). Such was their presence that there are several references throughout antiquity to fly swatters (Greek: myi-osobe; Latin: muscarium, cf. Hünemörder, Beavis, 224) and various gods were invoked to keep them away (D&K, 152–53, Beavis, 225). Lucian wrote an entire work praising the fly (Harmon et al., 1.83–95), notable for its tongue-in-cheek tone and wealth of information.

Aristotle knew its life cycle, from copulation through maggot stage (Greek: skōlēx; Latin: vermis), to adult (Hist. an. 552a20f.), but also acknowledged its spontaneous generation (Gen. an. 721a6f., 723b3f., cf. Pliny 10.87.190, Beavis, 220–22). The fly appears in art on gems (Boardman, pl. 589; D&K, pp. 33 and 34, 150–53; IBK (with caution), pl. 23.29–30, 39; 24.37; Richter, 123, no. 479) and Roman coins of 179–170 BC show the fly. A rock crystal fly was found in Pompeii (Ciarallo and De Carolis, 59). Larew (318) discusses the presence of various species of Diptera in Pompeii.


**Flying serpent** Herodotus (2.75–76, 3.107, 109) claims to have seen the bodies of winged serpents lying in piles at the head of a narrow mountain pass near Buto in Arabia. Each spring they attempt to migrate between Arabia and Egypt, but the Egyptian ibises intercept them. They resemble small serpents, are a variety of colors, and their wings resemble those of bats. In Arabia they guard frankincense trees in great numbers. Aristotle (Hist. an. 490a12) mentions the serpents but is skeptical. Hutchinson claims that the animals in question are locusts, basing his argument on the fact that in an Anacreontic poem a bee is referred to as a winged serpent. But Herodotus was an eyewitness to the bodies of these “serpents” and surely knew what locusts looked like (see GRASSHOPPER). Megasthenes, quoted by Aelian (NA 16.41) reports a three foot long Indian snake with membranous wings. It is nocturnal and flies like a bat, dropping a liquid that causes pustules on human skin. Ball (310) concludes that these are the flying fox (Pteropus giganteus), using the older name P. edwardsi. Morta offers an identification of Draco volans, a gliding lizard native to the forests of places such as Borneo and the Philippines. He explains their presence in Greek lore as a tale passed to the West from China. For further references, West (291, n. 4).

**See also** bat.

Ball, 1885; Hutchinson, 1958; Morta, 1994; West, 2006.

**Fox** Greek: ἀλῶπηξ (alōpēx); Latin: vulpes. The red fox (Vulpes vulpes) is native to both Italy and Greece. Its range extends completely throughout the Mediterranean litoral and into England, being almost as widespread as is the human race (WMW, 636). It is also found in North America. Malcolm notes 46 races or subspecies while Macdonald and Reynolds note 44, of which several are dubious. Regardless of subspecies, the red fox is the most common fox of the ancients, and is the largest of the true foxes, which are members of the family Canidae. European males reach about 15 pounds and 14–15 inches at the shoulder. The red fox is exceptionally adaptive and can live in a variety of habitats, mingling well with the world of humans. They are welcome for their control of vermin but a nuisance due to their fondness for domestic fowl. Their fur is warm and they have long been hunted for this reason. Thracian celebrations for Dionysus featured women clad in a costume made of fox fur called the bassara (another name for alōpēx) and
Thracian soldiers wore caps of fox fur called the *alopekis* (Herodotus 7.75; Xenophon *An.* 7.4.4). The cap can be seen on Greek vases such as Louvre G 448 (ca. 460–450 BC) attributed to the Penthesilea painter. It often appears in purely Greek scenes such as Louvre G 105 by Onesimos (490–480 BC) and one wonders if it was not adopted by the young Greek nobility who hunted it. The cap can also be seen on coins of Potidaea where the dangling, bushy tail is very clear. Fourth century BC coins of Alopekonnesos in the Thracian Chersonesos also show a fox on their reverse, a punning type (Head, 258).

A white ground Corinthian plate from about 550 BC (Tampa 86.9) shows a cock in the center, standing above an area in which a fox runs, and a gemstone shows a fox attacking a chicken (IBK, 1889, pl. XVI.1) It was obviously hunted, then, to help protect poultry, some of which were expensive fighting cocks. Note, however, that the fox could also be a benefit. The often misunderstood passage of Horace (*Epist.* 1.7.29–36), which speaks of a fox who entered a granary through a narrow opening, only to be unable to exit because of how much it ate, is not referring to the consumption of grain, but to the fact that the fox caught the rodents who were there eating the grain. There is no need to emend the text at this point as many editors do. An RF askos from Italy and in the Ashmolean (Calder, pl. 6.1–b) shows a fox caught in a trap, lured there by an ox’s foot, but the fox was most regularly hunted with dogs. The fox hunt is depicted as early as the Geometric period, for example, in a late geometric vase in Boston (no. 25.42, *ca.* 735–720 BC) which shows the hunt in full action, where dogs and foxes are distinguishable by the differences in their tails. Numerous vessels, throughout the sixth and fifth centuries BC show the hunter returning with dead foxes strung from a carrying pole (e.g. London B52, Amasis painter, *ca.* 540 BC; Harvard 1925.30.51, *ca.* 480 BC). Many of these foxes were love gifts offered between Athenian male homosexual lovers. Many vases show what Beazley called the “courting” gesture where the *erastes*, or older suitor, offers the fox as a gift to the *eromenos*, younger beloved. The fox may be alone or may be accompanied by a HARE, part of a complex relationship between the hunt and the love life of aristocratic Athenian youth so well studied by Barringer. We must also imagine that the fox was hunted for the sheer thrill of the hunt, although Oppian states that hounds should never be set after foxes as it will be the ruin of them (*Cyn.* 6.3) since the fox is hard to hunt due to her cunning (*Hal.* 4.448–53).

The fox’s wiles were as well attested in antiquity as they are in most cultures where the fox is a trickster figure. Semonides, in his famous poem against women (7.7–11, Gerber 304) says that the fox-woman is clever in all things, ever changeable, and into all sorts of mischief. The most famous example of this is Archilochus’ statement (201, Gerber 216) that “The fox knows many things, the hedgehog but one – a big one.” The fox also appears as a shield device (BzAr nos. 12965, 214454, 200685; Chase, cxiv), undoubtedly to invoke just this sort of cleverness in battle.

In the Roman world, the fox played a religious role in the rite to Ceres conducted each April 19, when several foxes were turned out into the Circus Maximus with lighted torches tied to their tails and subsequently burned to death (Ovid *Fasti* 4.681–712, Zadoks). In contrast to this brutality, Martial (7.87) speaks of a “long eared fox-hare” (*lagalopez*) kept as a pet by his friend. L&S identifies this as a fennec fox (*Fennecus zerda*), which is found in desert areas from Morocco to Egypt and Sudan (*WMW*, 643), and is a very small fox still kept as a pet today (Dempsey et al.).
The most famous fox in mythology is the story of the Teumessian fox and Cephalus’ dog, in which the fox was fated to outrun any pursuer while the hound Laelaps was fated to catch whatever it pursued. Zeus, faced with a fate-related conundrum, solved the issue by turning both animals to stone (Apollodorus 2.4.6, Ovid, Met. 7.759–93, Pausanias 9.19.1, Antoninus Liberalis Met. 41). The fox loomed large in ancient folklore and symbolism as well (Diez and Bauer).

Malcolm (271) states that most foxes will eat fruit, and in antiquity it was considered an enemy of grape vines. The persistence of this story is probably due to the famous fable of Aesop on the Fox and the Grapes (Phaedrus 4.3) or to the fox’s association with Dionysus Bassareus (cf. Gardner, 43, pl. xxvi, Boardman, pl. 497). Such was the association of the fox and Aesop that Philostratus describes a painting in which the fables gather around Aesop as a chorus and a fox is chorus leader (Imag. 1.3). On foxes and grapes see Gow on Theocritus’ Idylls 1.49. Aelian (NA 1.36) claims that foxes will drop the herb squill into wolves’ dens, knowing that they are afraid of it. Oppian reports the tale, popular in medieval times, that the fox would play dead in order to lure birds close to its mouth (Hal. 2.107–19). On the tricks it uses to capture hares, see Aelian (NA 13.11). Many medicines were made from the fox (Hünemörder). A type of bat was called alōpex.


**Frog** Greek: βάτραχος (batrachos); Latin: *rana*. Both frogs and toads are tailless amphibia of the order *Anura* (“tailless”), which contains 28 families. They are most notable for their protruding eyes, squat bodies, and webbed legs, the hindmost of which are adapted for leaping. Frogs are divided variously among many suborders and families, the most populous of which are those in the suborder *Neobatrachia*, which also contains the toads, family *Bufonidae*. A search of the IUCN Red List and the ASW focusing on Greece and Italy yields 22 species of frogs, though there is much flexibility in the taxonomies (Tunner and Heppich). Notable species of *Ranidae* are *Rana ridibunda*, *R. esculenta*, and *R. temporaria* (all sometimes put in the genus *Pelophylax*). *R. ridibunda* is the largest European frog and is green; *R. esculenta* is the source of edible frog legs (cf. Varro *Rust. 3.3.9; Columella 8.16.4*); *R. temporaria* is the common European brown frog. Other genera include *Alytidae* and *Pelodytidae*. Tree frogs belong to the family *Hylidae* and their main Greco-Italian species are *Hyla arborea* and *H. orientalis*. Evidence generally does not support the precise equation of these species with ancient references suggested by Hünemörder and others.

Frogs were certainly well known as inhabiting areas near streams, lakes, ponds, and marshes (*Hist. an.* 487a 26–28) but are also found near wells and fountain houses in both urban and rural settings. Aristophanes’ famous croaking frogs in their namesake play are water-dwellers (*Ranae* 226f.) as are those that battle in the mock epic *Batrachomyomachia*. Plato describes Greeks as living like frogs around a pond (the Mediterranean, *Phaedo* 109a–b). Theophrastus (Sign. 15) describes a green frog that lives on trees. Pliny notes a small frog living on reeds and grasses that is mute (*HN* 32.24.75), a reed dweller called the *calamites* (32.42.122) which may or may...
not be the same as the *dioptes* (32.24.70; 50.139) and a small tree frog (32.30.92). Aratus (948), Theophrastus (*Sign.* 15), and Theocritus (7.139) use the term ὀλογγόν (ologygon), which can refer to the male frog’s croak (cf. Arist. *Hist. an.* 536a11) for a tree-dwelling animal which some take to be a bird, others a tree frog (cf. LSJ, s.v.).

Aristotle studied frogs, commenting on their tongue and mating call (536a 4–19) and their manner of reproduction (540a27–33, 568a 22–23). Tadpoles were called γύρινοι (gyrinoi, Plato *Theatetus* 161d; cf. Aelian *NA* 1.58; Arat. 947). Pliny (*HN* 9.74.159) offers details of frogs’ reproduction and knows they hibernate in mud, which led some to think they arose from mud (Ovid *Met.* 15.375; Plutarch *Moralia* 637b; McCartney, 109). Cf. Theophrastus (frag. 174.1–2 = Wimmer 3.219) who denies it rains frogs and Athenaeus (8.333a–b) who insists that such showers occur (McCartney, 112).

Frogs’ croaking could be annoying (e.g. Hor. *Epist.* 1.5.14; *Batrachomyomachia* 187f.) or soothing (Theocritus 5.111; Pagliaro) and was even reported to have driven people out of their homelands (Pliny *HN* 8.43.104; Diod. Sic. 3.30.3 for a plague of rain-frogs). They preyed on bees (Arist. *Hist. an.* 626a9; Aelian *NA* 1.58) and they are commonly used in magic and medicine (Hünemörder, for citations; cf. Artemidorus 2.15; Cyranides 2.5.1f. et passim). Frogs were good at predicting rain (Aratus and Theophrastus, see above; Vergil *G.* 1.378; Pliny *HN* 18.87.361). They appear in fables, often as fairly foolish creatures (Perry, index).

Frogs/toads are popular on sealstones from earliest times. A small pre-palatial Minoan gold object from Koumasa may be a frog or toad (Xanthoudides, ix) and many appear on gems from Minoan through Classical times (Watrous, 393; Boardman, 1968a, 70, pl. 146, 1970, pl. 263; Richter, 122, nos. 471–72). An archaic Greek bronze mating pair is of special interest (Kozloff, 99–100, fig. 81). They occur on coins (IBK, 42–43) and appear as minor figures elsewhere, e.g. on a lily pad from the House of the Faun Nile Mosaic in Pompeii (Andreae, 110, 114, 116; Meyboom, pl. 28). Bodson (330–32) lists frogs and toads from Pompeii, including many on fountains. *Anth. Pal.* (9.406) describes a decorative frog on a wine ewer.

Gadfly Cf. HORSEFLY.

Gale See weasel.

Gall insect Greek: ψην (psēn). This tiny insect, known also as a fig wasp, was widely discussed in antiquity for its importance in helping the fig tree to produce fruit (e.g. Arist. Hist. an., 557b25f., Gen. an. 715b22f.). A very common species is today known as Blastophaga psenes but each species of fig has its own specific wasp which helps to fertilize the flowers. Caprification, the complex fertilization process involving pollen transfer from the wild fig to the domestic variety, is described in detail by Theophrastus (Caus. pl. 2.9.5–15; cf. Beavis (212–17 and RE 6.2129–33).

Gazelle The ancients were no more precise in their sense of a gazelle than are moderns. Scientifically a gazelle is a genus of the subfamily Antelopinae, which belongs to the family Bovidae. In practice, however, the terms “antelope” and “gazelle” are a matter of convenience and readers are directed to individual articles on a given animal.

Genet The common genet (Genetta genetta) is a carnivorous member of the family Viverridae resembling a CIVET, WEASEL, or MARTEN. It reaches a maximum weight of only 3–6 pounds, with short legs, a spotted body and a maximum total length of just over 3 feet, almost half of which is its bushy, ringed tail (Jakowska, 1910; Larivièrè, 340; WMW, 751–54). Jennison (183–87) makes a strong case for the common genet being referred to by the Greek πάνθερα (PANTHER). It is clear from some of the ancient descriptions that this “panther” is not a large or strong animal and Jennison’s conjecture is tenable, although the civet may also be a candidate (see Meyboom 117). Its bodily shape is more mustelid than feline, but its spotted appearance definitely recalls the LEOPARD. It is found today in western Europe, the Arabian peninsula, and north Africa, and was thus surely known to the ancients. The animal beneath a dining couch in the Etruscan “Tomb of the Black Sow” (Tomba della Scrofa Nera) at Tarquinia (ca. 475–450 BC) has been identified as a cat or a marten (Steingräber, 142; Stopponi, 21, pl. 3, 20c) but is surely a genet. The European pine marten (Martes martes) has a solid brown coat and the presence of the domestic CAT in antiquity is underattested. Nor does the animal particularly resemble a cat. Genets, however, can be tamed and make excellent mousers and in the wild also eat birds, reptiles, and similar small game.

Jakowski, 2008; Larivièrè, “Civets, Genets, and Linsangs (Viverridae),”
Giraffe Greek: καμήλοπάρδαλις (καμέλο-πάρδαλις, “camel-leopard”); Latin: camelopardalis, camelopardalis, or camelopardus. The giraffe (Giraffa camelopardalis) is the world’s tallest mammal, attaining a height of up to 18 feet, 11 inches at the shoulder. It is found only in Africa, although several authors in antiquity call it “Indian.” There are up to nine species, but the number and division of them is in dispute. Gatier has gathered the ancient evidence. The Greeks mention the animal but rarely, although it was well known to the Egyptians and, apparently, the Persians (Afshar; Laufer, 15f.). One marched in the splendid procession of Ptolemy II (Athenaeus 5.201c; Rice, 97–98). Agatharchides (frag. 73 = Burstein, 120–21) shows that he knows the animal uses its long neck to browse in trees. Pliny (HN 8.27.69) reports that the Ethiopian name for the animal was nabun (presumably accusative for nabus) and states that it was first seen in Rome in the games of Caesar of 46 BC (Cannuyer, Laufer, 58). His description is very useful for studying the way in which the ancients fitted unusual animals into their preexisting constructs (Bodson). Pliny says it has a neck similar to a horse, feet and legs like a cow, and the head of a camel. A flawed description is to be found in Dio Cassius (43.23.1–2) but Strabo (16.4.16) and Oppian (Cyn. 3.461f.) describe the animal with accuracy. Varro (Ling. 5.100.100), in discussing the name, claims it was a recent import from Alexandria. The animals continued to be shown in the games and Horace refers to it as well (Epist. 2.1.195–96). Pausanias, in the second century AD saw a giraffe and called them “Indian camels with the coloring of leopards” (9.21.2). Commodus bragged of killing one single-handed, no great feat given the acknowledged gentle nature of the animal. Mayor conjectures that the monster on a Corinthian vase (Boston, Museum of Fine Arts, 63.420) is based on a prehistoric giant giraffe’s skull. Keller (1.284) shows a sketch taken from a wall painting in the Villa Pamphili in Rome showing a giraffe wearing a bell around its neck. As late as the third century AD Heliodorus (Aethiopica 10.27f.) tells a vivid tale about the gift of a giraffe to Hydaspes that is notable both for his wonderment at the animal at such a late date and as his accurate description of the animal’s swaying gait, caused by the fact that both the front and back legs on one side move forward together, then the other two legs on the other side move forward. Giraffes featured in Aurelian’s triumph of AD 273 (SHA Aurelian 33.4). The tomb paintings at Marisa show an amateurish giraffe (Jacobson, 28–29; Meyboom 45, fig. 59) but two well-depicted giraffes are on the PALESTRINA NILE MOSAIC. A difficulty arises from the fact that a nearby animal is labeled NABOYS (NABOUS) (Meyboom, 23–24, 119–21 n. 39, see NABUS). A mosaic from Rimini dated to AD 530 shows a giraffe being led on a leash attached to a muzzle (Mielsch, 21–22, abb. 8, 9a).

Afshar, 1974; Blanc, 1999; Bodson, 2005; Cannuyer, 1989; Gatier, 1996; Houlihan, 1996; Hünemörder, s.v. “Giraffe”; Jacobson, 2007; Laufer, 1928; Mayor, 2000; Mielsch, 2005; Rice, 1983; Toynbee 141–42.

Glanos Greek: γλάνως. Aristotle (Hist. an. 594a32) speaks of this animal, which “some call a hyena.” The description fits a hyena as does the behavior described. Whether it is a specific type of HYENA cannot be determined.

Gnu The black wildebeest (Connochaetes gnou) and the blue wildebeest (Connochaetes taurinus), are most often identified with the katōbleps. Meyboom (21) suggests it as
the possible source for the mythical ono-kentauros, “ass-centaur.”

WMW, 1184–86.

Goat Greek: αὐξ (aix, generally for the she-goat), τράγος (tragos, generally for the he-goat); Latin: caper/capra, hircus, haedus (kid).

This article deals with the domesticated goat (Capra hircus). For wild goats, see aoudad, chamois, ibex, kri-kri, and mus(t)mo. Wild goats were initially hunted and then were among the first domesticated animals, ca. 8,000 BC (Clutton-Brock, 57f.; Hatziminaoglou and Boyazoglu; Luikart; Zeder; cf. Varro Rust. 2.3.3). The most likely ancestor of C. hircus is the bezoar goat (C. aegagrus) but other breeds are not out of the question and cross-breeding between domestic and wild goats must have occurred.

Bronze long-haired goat, 4th century BC.

The goat was essential to the Mediterranean economy from Neolithic times forward. A goat produces more milk for its size than either a sheep or a cow and its cheese has an excellent flavor. Its finer hair, especially that of Gilician goats, was used to make fabric while coarser hair, including that from the goats’ beards, was used in ropes and even to fill in chinks in boats (Varro Rust. 2.11.11; Vergil G. 3.3.11; Laures and Pascual). In general, goat hair cloth was seen as a poorer and more rustic garb. Its skin was used for bags, rough coverings, and wineskins (Jameson; White, 315–16). Its flesh was eaten but opinion differed on its quality (Jameson for sources, to which add Athenaeus, 7.282E9, 9.399A44 and 48; cf. Dalby, 160). It needs less water than a sheep and can exist on rougher fodder (even on fish, Aelian NA 16.35). Minoan state-owned herds of domestic goats and possibly kri-kri existed (Bloedow) and the Mycenean Linear B records show that goats were second only to sheep in the numbers being kept, with careful notes taken on the gender of each animal (DOCS², 199f.; Enegren, 15–16). Words used in these records anticipate later Greek terms: ἀττιγός (attēgos, Ionian for a he-goat); ἐνόρχος, ἐνόρχης, ἐνόρχις (enorchos/-ē/-is, “in-testicle,” an uncastrated male); χίμαιρος (chimairos, he-goat) and χίμαιρα (chimaera, she-goat); ἔριφος, αἰγίδου, χιμαιρίς (eriphos, aigidion, chimaris, “kid”). Odysseus’ many herds included goats (Od. 14.99–100, 17.211f.) and Hesiod has advice on rearing them (e.g. Op. 582–85, 791–92). Aristotle quotes Alcmeon’s (early fifth century BC) odd statement that goats breathe through their ears only to dismiss it (HN 492a13–15). Aelian supports the belief, basing this on shepherds’ narratives (NA 1.53, cf. Varro Rust. 2.3.3, citing Archelaus). Elsewhere, Aristotle gives details on goats and sheep, such as longevity, number of young, pasturage, and training the leader of the flock (beğemōn) (Hist. an. 573b17f.; 596a13f.; 610b22f.). In literature the goat often evokes the peace of the countryside while the behavior of the he-goat represents licentiousness.
Roman agricultural writers such as Varro \((Rust. \ 2.3.1-10)\), Columella \((7.6.1-8.7)\) and Pliny \((HN \ 8.76.200-04)\) have left us much detailed information on goats and goat husbandry, summarized neatly by White \((313-16)\). Of special interest is the fact that, while goats may seem harder than sheep, they are more susceptible to weather and disease \((Rust. \ 2.3.5)\) and require constant attention from their shepherds, the best of which keep a book with them outlining care and cures.

Goats could be trained to draw a small chariot. Small sees this on the Minoan Haghia Triada sarcophagus and goats drew chariots in Ptolemy II’s procession \((Toynbee, \ 166)\). Such scenes last at least until the fall of Pompeii \((House of the Painters at Work, \ room 16 where Cupids ride the chariot)\).

Male goats possess a strong odor, which increases during the breeding season. It arises both from sebaceous glands at the base of the goat’s horns and from its habit spraying its own urine on itself, even drinking it and then flaring its lips (called the “Flehmen” posture). This behavior gave rise to language referring to human body odor: Greek, \(grasos, \ kinabra, \ tragomachalos, \ hypertragizo; \) Latin, \(hircosus, \ tragus\). In two poems, Catullus \((69 \ and 71, \ cf. \ 37.5)\) attacks Rufus by claiming he “has the goat,” anticipating a modern English usage, and elsewhere \((22.10)\) he takes down an affected poet by saying he is no higher in status than a “\(caprimulgus,\)” “goat-milker.”

The goat is quite common in art. G. Richter \((25-27, \ figs. \ 120-135)\) offers a nice selection of Greek statues, gems (cf. Boston MFA 98.760) and coins (e.g. those of Ainos, cf. IBK, 17-18). Boardman \((508, \ pl. \ xxxiv)\) shows a gem in the Boston MFA \((63.1520)\) with a monkey milking a goat. “Goats” appear on Greek vases frequently, but many (e.g. in procession on Rhodian ware) are really wild goats. Yet many portrayals of domestic goats exist. An excellent portrait of a he-goat is the sole decoration on a BF Amphora in Boston \((63.2664 = BzAr no. \ 756)\), dated to 575–525 BC. A striking tondo from a broken kylix by the Kleomelos painter in the Getty Collection \((Malibu 83.AE.323 = BzAr no. \ 13362)\) shows a white-haired old man dragging a goat along and goat-shaped rytha are known \((Hoffmann, \ pl. \ xi.1)\). Roman art abounds with goats grazing in a bucolic setting and Toynbee \((165)\) cites examples from mosaics and frescoes (e.g. Pompeii, in the House of the Lovers) to which add a plaque built into a Pompeian wall showing a goat \((Reg. VII, \ ins. \ 5)\). The marble statue of Pan engaging in sex with a goat, found in Herculaneum and now in the Naples Museum is very well known. A search for “goat” in the Roman section of the ANS returns over 150 items. Notable is a Republican denarius of C. Renus on which the obverse shows Juno driving a \(biga\) drawn by goats. On the presence of goats in Pompeii see King \((414-16, \ with \ plates)\).


Gorilla The word “gorilla” comes to us from the writings of Hanno the Carthaginian, a noble Carthaginian explorer of the early fifth century BC who set out to establish colonies along the African coast. His account, originally in Punic and erected by Hanno in the temple of Kronos (Moloch?) at Carthage to commemorate his voyage, has been preserved.
in about 650 words of Greek under the name *Periplus*, or Voyage (GGM I.1–14). The narrative claims that he left with 30,000 colonists and with 60 fifty-oared ships. Sailing west two days beyond the Pillars of Herakles (Gibraltar) Hanno founded his first city and, in short order, five others. He then pushed southwards, along the western coast of Africa, and came to an island which he named Kerne and upon which he founded his seventh colony. After further adventures, he reached an island inhabited by small, hairy “wild men” who threw rocks at the Carthaginians. The nimble males escaped, but three scratching, biting females were taken and promptly skinned. Pliny the Elder (*HN* 6.36.200) tells us that two of these skins were on display in the temple of Juno at Carthage until its destruction by the Romans in 146 BC. Hanno’s interpreters informed him that these creatures were called *gorillai* (*gorillai*). After this statement the *Periplus* informs its readers rather abruptly that Hanno ran out of supplies and returned home.

McDermott has identified a gorilla in several works of art and believes that the apes displayed by Pompey in 55 BC were gorillas, but the evidence is very tenuous (e.g., 70–71, 108, 235f.). His claims have been refuted by Montagu (96–100).

Desanges, 1983; Hemmerdinger, 1997; Lamer, 1926; Montagu, 1940.

**Grasshopper** Greek: ἀκρίς (akris); Latin: *locusta, grillus, gryllus*. People in antiquity, as today, had difficulty separating cicadas, crickets, locusts and grasshoppers. Naskrecki (205) divides the order *Orthoptera* into two suborders containing 18,000 species: *Caelifera* (short antennae) and *Ensifera* (long). The *Orthoptera* of Greece have been catalogued by Willemse and Larew (321–24) lists the *Orphotera* of Pompeii. True grasshoppers are members of *Caelifera* and make their chirping sounds by rubbing their hind legs together. The vast majority of these belong to the family *Acrididae*. *Ensifera* includes the family *Tettigoniidae*, which are called catydids (American), bush crickets (British) and long-horned grasshoppers. The term “locust” technically refers to the swarming phase of certain species of grasshoppers (*Acrididae*) that periodically come together in migratory swarms. The grasshopper’s life cycle affected its ancient names (below). After the eggs are laid in a tube-shaped hole in the earth, nymphs hatch out which resemble full adults but lack wings. Each stage (instar) in the nymphs’ growth sees gradual wing development. When population density becomes too great, such grasshoppers change color and engage in the swarming activity usually called a plague of locusts. Note that the American 17- or 13-year “locust,” is actually a cicada (genus *Magicicada*). True crickets resemble grasshoppers in shape, but belong to
the family *Gryllidae*. They have very long antennae and live under rocks and logs. They are generally nocturnal and males chirp by rubbing their wings together. Some authors noticed the difference in sound producing mechanism between crickets and grasshoppers, e.g. Aristotle (*Hist. an. 535b12, akris*), Pliny (*HN 11.112.266, locusta*) and Meleager (*Anth. Pal. 7.195.4, akris*). Given the imprecision of ancient use, we here follow Beavis (62–80) and D&K (131–49) in treating all such insects in one place. D&K also have representative art work to which compare the two insects on the wall of the House of the Golden Bracelet at Pompeii (Ciarallo and De Carolis, 58–59) and Larew (323, fig. 269) has a sketch of a now lost Herculeanum painting showing a grasshopper driving a chariot drawn by a parakeet. A plethora of names for the insect exists, some referring to its stages of development, and many of which are local variants.

**Main names**

(1) Akris (D&K, 135–44; Beavis, 62–78) can mean grasshopper or cricket, especially when it refers to its song, but the word is also used for locust (Gow, 92) and some texts say the mantis was a sort of akris. As is the case today in several cultures, these insects were kept as pets for their soothing song and cages (*akroidōθē ka* or *adroidōθēra*, which some take as a locust trap) were woven for them out of plants such as rush and asphodel (*Theocritus 1.52, Longus *Daphnis and Chloe* 1.10.2; Weidner). Several epitaphs of dead akrides and other insects appear in Greek literature as well (Herrlinger, nos. 3, 6–8, 11–15, 20, 24). Pliny (*HN 34.19.57*) tells us that Erinna (fourth century BC?) wrote epitaphs for a cicada and a locust and later epigrams about the animal abound (e.g. Anyte *Anth. Pal. 7.190, cf. 7.189, 193, 195, 197–98, 364; Kevan). Aristotle (*Hist. an. 535b18f.*) studied its reproduction closely.

At other times the akris seems clearly to be a locust and is given various related names, often for its nymph stage, see below. It is common for scholars, when they view an ancient representation of such an insect on a piece of vegetation, to call it a locust. This is because of the destructive capabilities of the swarming locust. A common insect, it is often found on gems (e.g. Smith and Murray, 39 no. 8, 75 no. 412, 114 no. 835; D&K, 139) and also on coins of Akragas and Metapontum (*IBK 29, 31, 48, 50*) and, beneath a heron’s feet, on a beautiful seal of Dexamenos (Boardman, 1970, pl. 469, cf. 502 and 523). A fragment of a vase found in Egypt and now in Oxford shows a boy reaching up into vines where an enormous locust sits, whose size may indicate the severity of the infestation (Boardman, 1958, pl. 1a). Note that several authors mention the Akridophagi, “Locust-Eaters,” who only eat salted and smoked locusts but, perhaps because of their diet, are short in stature and do not live longer than 40 years. Agatharchides describes how the insects are caught, smoked, and salted at length (frag. 59 = Burstein 100–05).

The swarming locust was a problem for all Mediterranean farmers. Homer (*Il. 21.12f.*) depicts them as fleeing fires set to deter them. Pliny (*HN 11.35.101–07*) describes carefully the birth cycle of locusts but adds such nonsense as the fact that India has locusts three feet long and that a locust can kill a serpent. Yet he accurately describes their swarm behavior and says that Italy is prone to attacks by locusts from Africa. He reports extermination campaigns. In Cyrene a law enjoined people to kill locusts three times a year – at the egg, larval, and adult stages. On Lemnos,
he reports, each person is required to bring in a quota of dead locusts (cf. Plutarch Moralia 380e). Urban centers were not immune, for Pliny (HN 8.43.104) tells of a city in Africa that was devastated by locusts. Birds were often used as allies against locusts. The people of Lemnos, Thessaly, and Illyria kept jackdaws (graculi) for this purpose and the inhabitants of Mt. Cadmus would pray for the Seleucid birds (Arnott, 213–14) to come whenever under locust infestation (HN 10.39.75, 11.35.106, Aelian NA 3.12; Plutarch Moralia 380e). Apollo was called Parnopios (cf. Plutarch Moralia 636e) in his role as averter of locust plagues and Zeus and Herakles fulfilled similar functions (Sturtevant, 236–37). A statue of Apollo Parnopios existed in Athens and a bronze statue crafted by Phidias (1.24.8).

(2) **Attelabos** Greek: ἀττέλαβος (Ion. ἀττελέβος), also ἀττελάβη Latin: *attelabus*. This is most commonly a locust. Aristotle (Hist. an. 550b33) separates it from the *akris*. Theophrastus frag. 174.3 (preserved in Photius = Wimmer 3.220) says that the *akris* is bad but the *attelabos* is worse and offers other evidence which leads Sturtevant to claim that the *akris* is the type of locust which does not rise in swarms to devour crops and that the *attelabos* is the swarming sort. Cf. Plutarch Moralia 2.636e. Pliny (HN 29.29.92) identifies them as the small and wingless stage (i.e. newly hatched).

(3) **Locusta** Beavis treats *locusta* as generally equivalent to *akris*, in both its specific and general senses. Many authors (e.g. Livy 30.2, 42.2; Tacitus Ann. 15.5; Pliny HN 8.42.104) use the term for swarming locusts and it is commonly said to be a pest (Phaedrus 30.6) but other uses (e.g. Columella 8.11.15; Pliny HN 11.108.258) could easily refer to grasshoppers. A famous poisoner bore the name Locusta (Tacitus Ann. 12.66; Suetonius Nero 33.2). For *locusta* as crustacean see Dalby (192–93).

**Variant names**

Many names are less common, often being used only by lexicographers, and represent local names or names for various stages of a locust’s life. Other names are found in the Septuagint. Beavis treats 25 such names (62–69, cf. D&K, 144–48).

Among the more notable are: ἀκορνός (akornos) (Sturtevant, 239); ἀττάκης, ἀττακής, ἀττακός (attakes, attakus, attakos, Latin: *attacus*); βροχος (broukos Latin: *bruchus*); πάρνοψ (parnops) Aristophanes’ favorite word for locust (Sturtevant); κόρνοψ (kornops), which Strabo (13.1.64) gives as the Oeatean name for *parnops*; ὀψιομάχης (opsiomache) “snake fighter.”

See also FLYING SERPENT.

Haemorrhois Greek: αἰμόρροος, αἰμορρούς, αἰμορροίς (haimorhoos, haimorhous, haimorrhōois); Latin: haemorrhois. Nicander (Th. 282–319) describes the “blood-letter” well: a footprint long; two horns; side-winder movement with rustling sound like the cerastes; its bite causes hemorrhage, both subcutaneous lesions and as torrents of blood from every orifice. He attributes its odd locomotion to Helen of Troy, who once broke the back of one. He clearly believes it is a type of cerastes. Philoumenos (21.1) describes it as sandy colored, thin and tapering, and only 3 palms long (ca. 9–12 inches). He says it creeps straight along slowly and its entire body is covered with white and black markings. Its scales make a rustling sound as it moves. He distinguishes the locomotion of the male (haimorroos) and female (haimorrhoi) as well as the placement of the cloaca in each. According to Lucan (9.709–10, 805–14; Wick 2.287–88, 343–44), the haemorrhōois is enormous (ingens) and arose in the Libyan Desert from Medusa’s blood. Its size is either exaggeration or indicates another type of snake entirely. Bleeding in areas such as the gums, eyes, and nose fits the venom of vipers and the Naja genus of cobra. G&S (175–76 on 282) and Leitz (72–81) have a list of possible identifications. Vipera latastei (Lataste’s viper) is found in Spain and northwestern Africa (SSW, 405–06). It has no horns and Nicander places it in Egypt. Another candidate offered is Cerastes cerastes (= G&S’s Aspis cerastes; SSW, 367–69), but this truly horned viper is a common identification for the cerastes. Celsus 5.27.7 offers various herbal cures for its bite, which are the same as those for dipsas and cerastes. Cf. Philoumenos and Pliny (HN 20.81.210).


Hamster The hamster is a stocky, nocturnal, hibernating rodent known mostly for its cheek pouches, short legs and nimble forepaws. The Romans probably knew the black-bellied hamster (Cricetus cricetus), found in the fields of northern and central Europe (WMW, 1419–20), yet the sources are silent. Lamer feels the ancients did not know it. Keller (1.190) cites Bentley in identifying the nitidula (cf. dormouse) as a hamster but in fact Bentley claims it is a field mouse (31). It is also likely that the ancients thought of hamsters and dormice as the same animal.

Hare Greek: λαγώς/λαγός (lagōs), δασύπους (dasypous, “shaggy-foot”); Latin: lepus. For other names and forms, see Hüнемörd, Keller (1.210–18), LSJ s.v. λαγώς, and Athenaeus (9.400a–c).

The hare was an important hunting animal for both Greece and Rome and is intertwined throughout many other aspects of Greco-Roman life. Hares, like rabbits, belong to the family Leporidae, which contains 11 genera and over 50 species (Angerbjörn, 505, 512). WMW (1733–34) lists 29 species of hare. The hare that was most well known to the ancients would have been the European hare (Lepus europaeus). It remains brown year round, has longer ears and tail than a rabbit and is equipped with longer limbs. Its body length ranges from 20 to 27 inches and its weight from 5.5 to 14 pounds. Once confined to Europe, south to Iran and east to Siberia, it now has been transplanted to other continents. Hares tend to have a wider range than rabbits. Burrow diggers, they tend to be solitary until mating season. They are not monogamous and females can produce four litters of between one and four young every year. Moreover, they can become pregnant while already carrying embryos, a process called superfetation, a fact known by the ancients such as Herodotus (3.108), Aristotle (Hist. an. 542b29–31, 579b30f.), and Varro (Rust. 3.12.4). For further references see Oppian Cyn. 3.519f., with notes by Mair.

The gestation period of the hare is longer than that of rabbits and the young (leverets) are born fully developed. It prefers relatively open ground and thus came into increased contact with the ancients as more and more farmland was opened up. Normally evasive, hares come out in the spring to put on mating displays, which include chasing each other and “boxing” matches, leading to the English expression “mad as a March hare.” Interestingly, it does not give birth in a burrow, but in a shallow scrape called a “form.” Its natural enemies include foxes and large eagles such as that in the famous image of the eagle and the pregnant hare in Aeschylus’ Agamemnon (114f.). For the tricks by which the fox captures the hare, see Aelian (NA 13.11).

There are many subspecies (Hoffmann and Smith; WMW, 1733f.) throughout the Mediterranean whose names help to express their range (Bodson), including: L. e. creticus, L. e. cyprius, L. e. cyrensis, L. e. judeae, L. e. karpathorum, L. e. parnassius, L. e. ponticus, and L. e. rhodius. The Cape hare (Lepus capensis) would have been known to Greece and Rome in species such as L.c. arabicus and L.c. aegyptus (Bodenheimer, 47). Hoffmann and Smith think that there might be four distinct species, and three would have been known: in the Near East and Arabia L. c. arabicus; in east Africa L. c. aegyptius, L. c. hawkeri, L. c. isabellinus, L. c. sinaiticus; and in northwest Africa L. c. atlanticus, L. c. schulmbergeri, L. c. whitakeri.
At one time the Sardinian hare (L. *mediterraneus*) was thought to be a separate species. But surely such fine distinctions were lost on the ancients, many of whom, like many today, must have confused even rabbits and hares. Note that the hare was found in most Mediterranean islands because Greeks brought them there. There were a few exceptions, such as Ithaca (Arist. *Hist. an.* 606a2–5) where a hare brought in would die. A proverb, Καρπάθιος τὸ λαγόν (“A Karpathian [brings in] the hare”) refers to the fact that the small island of Karpathos introduced the hare there only to have it become a nuisance through its fecundity (Bodson, 1978a). The tyrant Anaxilas was supposed to have introduced it to Sicily and, as a result, it appears on coins of Acragas (Aristotle, cited by Pollux 5.75; Bodson, 1978a).

The ancients acknowledged different varieties (Hull, 60–62). Xenophon (*Cyn.* 5.22–25) speaks of two types of hare, large and small. The smaller hare is a lighter color with a small white patch on the forehead and is found on the islands. The larger is darker with a larger white patch. The island variety is more plentiful since there are fewer foxes and fewer people hunt on islands. Varro (*Rust.* 3.12.5–6) says that there are three *genera* of hare. First is the Italian hare, with short forelegs and long rear legs, a dark upper body but white belly, and long ears. To this type he assigns those of Transalpine Gaul and Macedonia where they grow large and those of Spain and Italy which are smaller. The second type is the one in Gaul near the Alps. These “usually” differ by being entirely white and are rarely seen in Rome. This must be the Alpine snow hare or Mountain hare (*L. timidus*). It is brown during the summer but molts to white for winter protection. Pliny (*HN* 8.81.217) describes the same animal and see Calpurnius Siculus, below. This must be kept distinct from the true Arctic hare (*L. arcticus*) which is a New World animal. Varro’s third hare is the Spanish hare, also called the *cuniculus*, which is indigenous to that country. It has short legs, says Varro, and this probably makes it a rabbit. Aelian (NA 13.13–14) divides them according to where they live—plains or mountains.

Aristotle (*Hist. an.* 606a21–24) knows a large Egyptian hare and he mentions a type found in Macedonia and elsewhere that has a liver almost divided into two parts (*Hist. an.* 507a14–19, Pseudo-Arist. *Mir. ausc.* 842a15–18, no. 122). Cf. Pliny (*HN* 11.73.190) who says that if the hare is moved to another country, one of the livers disappears. Many similar myths grew up surrounding the hare: the males can become pregnant (Aelian *NA* 13.12); it sleeps with its eyes open (Pliny *HN* 11.54.147; Plutarch *Moralia* 670f); and Pollux (5.69) goes so far as to say that it has no eyelids. Thus, a proverb has it that to be deceptive is to sleep like a hare (Philostratus *Vit. Ap.* 4.37). It can predict the weather (Aelian NA 7.8). Pliny (*HN* 8.81.218–19) quotes Archelaus as an authority for the fact that it can reproduce without sexual intercourse since it is a hermaphrodite and has as many openings for excrement (perhaps, “pouches in its intestine”) as it has years of age. Reports that it mated backside to backside (Arist. *Hist. an.* 539b21–24) arose out of a misunderstanding of the fact that they are retromingent.

For Homer the hare is a symbol of speed and fear (*Il.* 22.310, *Od.* 17.295). In Herodotus (1.123) Harpagus sends a secret message to Cyrus sewn into the body of a hare. Aristotle knew the hare’s anatomy, speaking of its uterus (*Hist. an.* 511a28f.), and says that it is the only animal that has internal hair, having some in its mouth, and that it is unique in having hair under its feet (*Hist. an.* 519a20–23, *Gen. an.* 774a35–37). He even
discusses rennet in hares (Hist. an. 522b8f., mistranslated by Peck). Other authors stressed the hare’s timid nature and cleverness. Strabo (1.2.30) uses the phrase, “more cowardly than a Phrygian hare” as an example of double hyperbole since both hares and Phrygian slaves were known for cowardice. Demosthenes (On the Crown 18.263) uses the phrase “to live a hare’s life” to mean living in fear. In fable, the hare’s natural traits are stressed: speed (“The tortoise and the hare”, Perry, 465, no. 226; cf. 54, no. 616); weakness (Babrius 25; Perry, 411, no. 28 from Perotti’s Appendix); along with a certain amount of stupidity (Perry, 571, no. 658).

Of interest are epitaphs for hares (Herrlinger, nos. 23, 32).

It is safe to say that the hare has been hunted as long as humans have been in the Mediterranean. Hare bones are routinely found in Bronze Age contexts and there is evidence of the consumption of hare at ritual Mycenaean meals for the dead, perhaps a reference to the hunt (Hamilakis). Hesychius reports that κεκην (kekēn) was Cretan for “hare,” conceivably a Minoan loan word. Hare hunting had several social aspects to it. First and foremost, it was sought for its tender flesh, which not only made for good eating (Dalby, 172–73) but also was thought to enhance beauty and charm for several days after consumption (Pliny HN 28.79.260; Martial 5.29, 13.92). Various parts of the hare were also useful for cures and magical purposes (Rathbone). Hare rennet in vinegar is good against scorpion and mus araneus bite whereas the rennet alone wards of bites in the first place (Pliny HN 28.43.154) and baldness can be checked with the ash of a hare mixed with myrtle oil (28.46.166) to give but a few examples. In Athens, hare hunting was an intricate part of the activity of young men and we know a great deal about the mechanics of the hunt (Hull, 59–75). Roman mosaics often show hare hunting (Blanchard-Lemée et al., 179–82, figs. 128–31).

The hare is common in art from as early as Minoan times (Richter 1930, 29–30, with plates), but many descriptions of Greek pieces erroneously call it a “rabbit.” This is incorrect, for the Greeks were largely unaware of the rabbit (q.v.), knowing only the hare. Once captured, hares, live or dead, were often male homosexual love gifts. Koch-Harnack (63–98) has an extensive set of illustrations. Likewise, the hunt itself is frequently illustrated on vases and gems and youth are often seen with hares on their tombstones. Representative examples include the following. A bearded man reclines at a symposium and beneath his couch is a tame hare (Athens, Nat. Mus., 1357, Koch-Harnack, 88, abb. 22). An older man offers a live hare to his eromenos (Rome, Vatican H550, Koch-Harnack, 72, abb. 9). An RF pyxis by the Eretria painter in the Worcester Art Museum (1935.148) shows erotes with a hare on a leash. A hound chases a hare around the shoulder of a BF lekythos from Vulci (Leiden, Rijksmuseum van Oudheden: PC5, BzAr no. 1237) just as on the rims of fifth century mirrors (Richter, 1930, 29). Another lekythos shows two youths pursuing a hare with a dog. One is ready to throw a stone and the other wields the specific throwing stick used in hunting hares, the lagōbolon, which are found as dedications (Douglas, 50–54). Fairbanks (1907, 256–57) claims that the scene indicates the departed youth’s love of the hare hunt. Compare this to a dead youth approaching Charon on a lekythos, carrying a bird cage in one hand while a hare stands erect in the other (Fairbanks, 1914, 72–73). Both volumes of Fairbanks contain many other illustrations of hares on lekythoi. Funeral stelai also show youths with hares. Conze (II.2, no. 937, 201, Taf. CLXXXVI) shows a youth leaning on a pilaster, on top of which sits a life-like hare and another (II.2, no. 1036, 223–24, Taf.
CCVIII) shows a hare standing upright in the young man’s hand, about to wash its face. Cf. also Kozloff (113, fig. 94), sixth century Corinthian.

Pet hares are well documented and often appear in art (Lazenby, 301). The best known pet hare is that lamented by Meleager (Anth. Pal. 7.207). It was the pet of his friend Phanion and died from having too many treats. An epigram by Philippus of Thessalonica (Anth. Pal. 6.92) speaks of a goldsmith, who, upon retiring, dedicates his implements to Hermes and among them are “hare pads” with which he used to gather up shavings.

Although not such an intricate part of social interaction, the hare was still hunted in Roman times. In fact, hunting parks were called leporaria since, at one time, they served only to house hares (Varro, Rust. 3.3.1–2, 3.12.1–7; Columella 9.1.8f.; Aulus Gellius 2.20, cf. Rathbone). It was certainly hunted in the wild as well and such activity is often preserved in art (Toynbee, 201) Remarkably, hares even found their way into the arena. Calpurnius Siculus (Ecl. 7.58) says he saw white ones during Nero’s reign and Martial (1.6, 14, 22, 44, 48, 51, 60, 104) reports that lions played with hares in the arena and did not harm them, even putting them in their jaws (Garthwaite).

The Greek coins of Rhegion and Messana show a hare on the obverse (e.g. ANS 1997.9.8) as a reference to Anaxilas mentioned above. Other Greek mints show one or two eagles attacking a hare: Acragas (ANS 1997.9.86); Olympia/Peloponnesus (ANS 1969.30.34). Greek coins from Etruria show a hare running (ANS 1967.152.9). Coins of Arcadia show Pan sitting on a rock holding a lagobolon with a syrinx on the ground next to him (Boardman, 195). More examples are listed in IBK (11–12 and passim). The hare appears frequently on Greek engraved rings (Richter, 1968 passim) and playful Greco-Roman engraved rings often showed hares creeping out of snail shells (Richter, 1920, 139–40).


Hedgehog Greek: ἐχῖνος χερσαῖος (echinos chersaios, “land-echinos,” to differentiate from sea urchin); Latin: ericius, erinaceus, echinus. Hedgehogs are small, spined insectivores belonging to the family Erinaceidae and genus Erinaceus. Beer notes five genera and 14 species. The Eurasian hedgehog (Erinaceus europaeus and E. concolor) would have been the best


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known species, although other species (e.g., *E. algirus*, *E. auritus*) would have been known from other countries (WMW, 175–79).

The hedgehog was well known and studied throughout antiquity. Archilochus famously touted its ability to roll into a protective ball (Diehl, 103, cf. Aelian *NA* 6.54). Aristotle studied it, noting its bristles instead of hair (*Hist. an.* 490b29, 517b24) and its internal anatomy (509b9) stating falsely that it mates upright and face to face to avoid being punctured (540a3–4). Elsewhere he states that they can predict the weather, a trait which brought wealth to an entrepreneur in Byzantium (612b1–9). This supposed ability has linked the hedgehog to omens and Amphiaraus (Edlund; Hurwit, 2006; Keller, 1.17–20; Mielsch, 2005, 102–04; Rystedt, 1987).

**Hermes** Greek: ἔρπης (herpes, “the creeper”). Philoumenos mentions this snake along with the *Prēstēr* as a serpent whose bites and venoms are mentioned by previous authors but claims that he has not found the animals themselves. Note that the scientific name of the mongoose is *Herpestes ichneumon*.

**See ichneumōn.**

G&St., 537.

**Hinnuleus/Hinnulus** This Latin word is used by Varro (*Ling.* 9.22) to indicate the offspring of a stallion and a she-mule, a “hinny.” Pliny (*HN* 8.69.172) indicates that this use was old-fashioned. The form *hin*num is used elsewhere by Varro (*Rust.* 2.8.1 and 6) for the same thing. But elsewhere, as in Horace’s famous poem to Chloe (*Odes* 1.23), *Hinnuleus* refers to the young of a deer (cf. Pliny *HN* 8.50.118, 28.42.150).

**See also mule.**

Whatmough, 1927 and 1928.

**Hippagros** Greek: ἰππαγρός (hippagros, “wild horse”). Oppian (*Cyn.* 3.251–61) gives a jumbled description of these animals. He says that they are Ethiopian but that Indians hunt them. They have tusks, hooves cloven in two and not solid as are those of a horse, and possess a thick mane from shoulder to tail. They are impossible to tame and, if taken, will refuse to eat and die. Keller (1.273) says they are as much *gnu* as horse. Meyboom (113) suggests that they might be the roan antelope (*Hippotragus equinus*) or the Cape eland which, he says, may also be identified with
the Hippelaphos. The roan antelope is found from Senegal to western Ethiopia and south to northern South Africa (WMW, 1174–75). Along with the oryx and five other species, it is a member of the “horse-like” antelopes called the Hippotraginae. It has the unusual habit of fighting from its knees (Taylor, 31). The Cape eland (Taurotragus oryx oryx) is rather far south for contact with Mediterranean cultures but the common eland (Taurotragus oryx) is found in Ethiopia. It is notable for its size (5 feet tall at the shoulder, up to a ton in weight) and dewlap (WMW, 1143–45). If one takes Oppian’s “tusks” for horns, this is a possibility. Their mane, though narrow, runs from shoulder to tail. This trait is repeated in his description of the Hippelaphos.

See also onelaphos.


Hippelaphos Greek: ἰππέλαφος (“horse-deer”). Aristotle (Hist. an. 498b32–99a5f.) describes this antelope-like creature in some detail. It is the size of a deer (elaphos), has a beard next to the larynx, cloven hooves, and a mane from head to withers. Their horns resemble those of a gazelle (dorcas) but the females lack them. It is found in Arachotae which Peck (ad loc., p. 237) identifies as Baluchistan, now part of Pakistan. He identifies the animal as the nilgai, Boselaphus tragocamelus. See Hippagros for identification with the eland.

See also tragelephos.

Peck, 1965–70.

Hippopotamus Greek: Ἰππός ποτάμιος (hippos potamios, “river horse”); Latin: hippopotamus. The hippopotamus was well known throughout antiquity. Its ivory was imported to the Minoan and Mycenean world and used in works of art thereafter (Krzyszkwoska, cf. Pausanias 8.46.4). There are two species of hippopotamus, the common hippopotamus (Hippopotamus amphibius; WMW, 1068–71) and the pygmy hippopotamus (Hexaprotodon liberiensis; WMW, 1071–72). There is no reason to believe the ancients knew of the pygmy variety, which is concentrated in western Africa. Strabo (15.1.13) rejects Onesicratus’ claim that the hippopotamus was found in India. Most references and depictions from antiquity must refer to the hippo as it occurred in the Nile River and it is in this context that Herodotus (2.71) first describes the animal. Aristotle (Hist. an. 589a 18f.) emphasizes its amphibian existence and describes its many parts with reference to common animals (499b10–11; 502a9–15). Pliny describes its huge canine teeth (HN 11.61.160) and adds that the first hippopotamus to be shown in Rome was kept in a temporary water pen (temporario euripo) during Marcus Scaurus’ games of 59/58 BC (HN 8.40.96). They were hunted in games as early as 29 BC where a single animal was killed, but Commodus boasted of killing five with his own hand on a single day (Dio Cassius 72.10.3; Jennison, passim; Toynbee, 128–30). Nero may have had a hippopotamus kept for the purpose of disposing of his enemies, although the Latin of Suetonius may also allow for a crocodile (Nero 37.2, Woods). Amazingly, the Historia Augusta reports that Firmus rode a tame hippopotamus (SHA Firmus 6.2, cf. also SHA Elagabalus 28.3, The Three Gordians 33.1). Jennison (147) suggests that they were captured in pits but also points to Diodorus Siculus’ (1.35.8–10) account of harpooning a hippopotamus from boats. Diodorus Siculus adds that the animal is inedible, even its viscera. Hippos must have frequent access to water or their hide splits, and one hopes that the animals kept by
emperors were held in enclosures similar to those of Scaurus’ games. The hippopotamus was correctly seen as a fierce animal with thick hide. Herodotus and Aristotle even report that spear shafts were made from it, though Pliny says it was used for helmets and shields. Pliny (HN 8.40.95). Aelian (NA 5.53) claim that it walked backward to cover its tracks after raiding crops. They do raid crops at night, but scarcely have to fear retribution.

Pliny’s report (HN 8.40.96, 28.32.121) that the hippopotamus invented blood letting is an excellent example of how natural fact became natural fable. He reports that when the hippo grows too fat it backs into a sharp stick, bleeding itself healthy. In fact, the reddish tinge seen on hippos originates from thick, viscous sweat which turns red within a few minutes of exposure to air and then dries to a brown powder, serving as an effective sunscreen (Saikawa).

The earliest hippopotamus in art appears to be the inadequate rendering of it in the Marisa Tomb Paintings from the second century BC (Jacobson, 33). It has a red body which reminds one of Pliny’s bleeding, but this is countered by its yellow stripes. The hippopotamus is frequently shown in Nilotic mosaics of the Roman period, often finely drawn and most commonly alongside crocodiles and/or in conflict with pygmies armed with shields and spears (Andreae, pl. 112–15, 120–21; McDaniels, pl. XI). The PALESTINA NILE MOSAIC depicts a hippopotamus hunt from boats in which the hunters use harpoons and where the animals are depicted true to life (Andreae, 96, pl. 96/97; Meyboom, 31–32, 256, n. 114, 116 for parallels). Also on this mosaic is an animal labeled ξιοί (XIOIG) which is nonsensical. The creature resembles a hippopotamus with a crocodile’s jaws. Meyboom (22–23) suggests it may be the flesh-eating bull but compare this to the hippo fighting the pygmies mentioned above. Whether the artist at Palestrina knew it or not, he was representing one idea of a hippo which, despite Pliny’s knowledge of their tusks, reverted to crocodilian dentation.

The House of the Faun in Pompeii has a Nilotic scene in which a hippopotamus rears its head out of the water to confront a crocodile (Andreae, 113, pl. 113 top, 114–17, top). A hippo is being hunted in the Great Hunt Mosaic at Piazza Amerina (Toynbee, 130) and one appears on the Vatican Nile (Swetnam-Burland, fig. 8). An interesting gold coin issued by Augustus has a hippopotamus on the reverse, rather like his coins bearing a crocodile on the reverse, both symbolizing the capture of Egypt (Babelon). A similar coin of Hadrian also bears a poorly drawn hippopotamus on the reverse in association with the river god, Nile. They also appear on coins of Philip II, commemorating the Secular Games put on by Philip I, using animals gathered by Gordian (Twente).


Hornet See Wasp.

Horse Greek: ἵππος (hippos); Latin: equus, caballus (a lower quality horse), cant(h)erius (gelding, nag). The horse was the last of the major animals to be domesticated, probably kept first as a food source (Clutton-Brock, 80). Clutton-Brock believes that by the Iron Age the domestic horse existed in two essential groups – the small “Celtic” ponies of
Throughout antiquity, the horse represented wealth, since horses require more care and more expensive food than mules and donkeys. Classes of society were even created based on whether individuals had enough money to own horses for cavalry use (hippeis, equites). Despite, or perhaps, because of such expense, horses were revered by their famous owners. We have been left the names of individual horses from Achilles’ Xanthos and Balios, through Alexander’s Bucephalus, Nero’s Incitatus, Hadrians Borysthenes to the racing horses of the late Roman Empire (names, animals). Anderson has studied the horse in Greece, and Hyland has done the same for Rome.

Minoan Crete shows little evidence of the horse, but the Myceneans knew it well. Linear B tablets are fairly quiet on the subject of actual horses (DOCS, 132) but speak in detail about the chariot industry and horse tack (519–21). Chariots are depicted on a grave stele from Grave Circle B at Mycenae, on gems, and on pottery. Moreover the internment of horses with Mycenean nobles shows the high esteem in which they were held. This can be seen in places such as Lerna, Arnos (Marathon), where two horses were buried in the dromos of a tholos tomb, and on Crete at Arkhanes. The practice is seen in Homer, when Achilles sacrifices horses at Patroclus’ funeral. The famous Dark Age structure at Lefkandi has a four-horse burial. Antikas traces the history of the practice (cf. Vermeule, 58–61).

The horse is present from the earliest literature on. In the Iliad the horse conveys warriors to battle in chariots and is a prized possession. In the Odyssey (e.g. 3.478–95) it is used for transportation. Hesiod only mentions it in passing in his Works and Days (814–18). Semonides, in his famous poem against women, says that the woman derived from the horse is overly dainty, refusing chores that
normally would go to the donkey. She is beautiful but fairly useless to the average person (78.57–70, Gerber 308). Pindar reminds us of the the glory associated with winning the two- or four-horse chariot race. The horse is mentioned continuously throughout subsequent Greek and Roman literature, but most notable are works devoted to the horse and its upkeep, such as Xenophon’s *On Horsemanship*, which deals with all aspects of acquiring, keeping, training, and riding horses. Earlier than this, and probably one of its sources, was a work by Simon of Athens (*ca.* 470–420 BC; EANS, 742). Aristotle speaks at length on many subjects concerning the horse: mating (at length); dentition; life span; birth (*Hist. an. passim*, especially 575b20–77a18). He asserts as absolutely true a pygmy race with pygmy horses (597a6f.) and speaks of their diseases and aversion to music of the aulos (604a23–05a15). He lists the *hippomanes* as a disease (cf. 572a21, 577a8). It is a growth on the heads of foals which is eaten off by the mare and many ancient authors speak of its magical, aphrodisiacal properties (e.g. Vergil *G.* 3.280–83; Tibullus, 2.4.57–58; Pliny *HN* 28.49.181). A plant also bore this name and Pausanias says that a bronze statue of a mare at Olympia possessed the *hippomanes* to such a degree that stallions came from far and wide to mount it (5.27.2–4).

The Roman agrarian writers Varro (*Rust. 2.7.1–16*) and Columella (6.27.1–35.2) also pass on a good deal of practical information, including cures for the horse’s many diseases. More such information is to be found in what is called the Hippiatric corpus, i.e., books devoted to the treatment and prevention of equid diseases, such as those of Vegetius, Pelagonius, Chiron and the works called *Mulomedicinae* (more at MULE). Pliny speaks at length of the horse, preserving many interesting stories and beliefs (*HN* 8.64.154–67.166). He furthers the belief in mares’ lustfulness with the story of those who could be impregnated by the wind (Zirkle). Aelian has no long passage on horses, but tidbits are scattered throughout. Scholfield’s index provides easy access. Epitaphs for horses are fairly common: Anyte (Herrlinger, 14–15 = * Anth. Pal. 7.208*); Hadrian’s lament for Borysthenes Alanus (*CIL XII.1122*, cf. Herrlinger, no. 51); racehorse epitaphs are numerous (Herrlinger, nos. 10 [Greek], 38, 45, 52) and include one for a mare (no. 53). See also Frizell and Kitchell for a dedication at a healing spa. While outside the scope of this study, it is notable that the horse is involved in a great many myths (e.g. Diomedes’ flesh-eating horses, Ares’ fire-breathing horses, those that drew the Sun and Moon, Pegasus) and formed the basis for many mythical creatures (e.g. centaurs, hippocamp, hippoceltryon, satyrs’ tails).

There was a very large trade in the breeding, stabling, and training of horses. Philip II once imported 20,000 breeding mares from Scythia alone (Orosius 3.13.7) and the stud farm of Seleucus I had over 30,000 mares (Strabo 16.2.10). The Roman’s reliance on cavalry resulted in large scale ranches (*saltus*) charged with supplying their mounts (cf. the numbers at Hyland, 76f.; White, 288–94). There is evidence that the Romans bred horses to be larger than in earlier times (Audoin-Rouzeau).

The horse is at least as prevalent in ancient art as was the dog. It is one of the first animals represented in Geometric art, often with chariots (Benson). A search for “horse(s)” on Greek vases at BzAr yields over 2,000 hits. Apelles was famous for drawing horses so lifelike that real horses neighed upon seeing them (Aelian *VH* 2.2). Famed sculptures of horses were done by Strongylion (Pausanias 9.30.1) and Lysippus (*Anth. Pal.* 9.777). The bronze statue of a jockey on a horse found off
HORSEFLY

Artemesium (Hemingway), the Dexileos stele from the Kerameikos (Ensoli), and the anatomically perfect horses from the Parthenon’s frieze and east pediment all attest to the interest the animal held for Greek artists. Equestrian monuments were well known in both Greece and Rome, with the most famous perhaps being that of Marcus Aurelius (Bergemann; Eaverly). Horses are found throughout Greek coinage, e.g.: heads (Alexander, tetradrachm); hindquarters (Athens, drachm); drawing chariots (Syracuse); grazing and galloping (Larisa). The coins of Alexander of Pherai bear a horse’s hoof (IBK, 14). Coins of Carthage featured a horse on the obverse and Roman coins show Victory leading horses, individual horses, horses drawing wagons/chariots and mounted emperors. A stunning Greek gem has a scene looking down as a horse rolls in the dust (Boardman, no. 357, cf. no. 565; Richter, 1968, nos. 207, 209), an activity handled by grooms and mentioned by Aristophanes (Clouds 32, Frogs 904) in a specific place called a (κ)αλίνδεθρα or κυλίστρα.


Horsefly Greek: μύση (myōps); οἴστρος (oistros); Latin: asilus, tabanus. The name horsefly or gadfly covers a variety of fly-shaped insects in the family Tabanidae known for their strong bites, often inflicted on cattle, horses, and humans to release blood for the insect’s meal. There was probably much misidentification. Some authors distinguish between the myops and the oistros. Aristotle (Hist. an. 551b21–24, 552a29) does so based on their birthplace. Other authors use the terms interchangeably and there is some evidence to show that myops was a popular name, with oistros generally used in literature (Beavis, 226–27; D&K, 159–64 for citations). Seneca (Ep. 58.2) states clearly that asilus was an older name for oestrus. The horsefly’s bite causes large animals to bolt and gave rise to the word οἰστροπληξ (oistroplēx, “horsefly-struck”) and to the use of the insect as a driving force. Such a fly tormented Io (e.g., Aeschylus Prom. 541, Suppl. 568, 575, 879) and Socrates likened himself to a horsefly whose job it was to rouse the large, lazy horse (Athens) to action (Plato, Apology 30e).

The famous “Medea Krater” labels the torch wielding driver of the snake-drawn chariot “Oistros” (Shapiro, 180–81, fig. 127). Gems and certain Cretan coins show flies biting cattle (D&K, 163–64).


(1) The name for the water-based version of the chersydros.

(2) A water snake, most commonly indicating “water snake” in general. In Homer (Il. 2.723) a venomous hydros delivered Philoctetes’ festering wound. Herodotus (2.76) compares the bodies of his winged snakes (flying serpents) to hydroi. For Aristotle, it serves as an example of a footless animal (Hist. an. 487a24)
and its gall bladder is near its liver (508b1). Callimachus (Iambi 1.218) speaks of the whiteness of its stomach. For Artemidorus (4.56) it is one of the smaller venomous creatures and signifies a small, contemptible man. White’s (215) translation here of “water salamander” is surely incorrect. Wick (2.301) equates it with the natrix.

For Vergil (G. 4.458, Aen. 7.753) it is venomous (cf. Ovid Met. 13.804), huge, and a river dweller. Pliny (HN 29.22.72) clearly says that the hydri form a “genus anguïum” and are exceptionally beautiful and quite venomous. Its preserved liver is a cure for its bite. Pliny (HN 6.26.99) speaks of the 20 cubit long (30 feet) “sea snakes” (hydri marini) in the Arabian Gulf. The hydra forms the hair of the Furies and Medusa: (e.g. Vergil Aen. 7.447; Valerius Flaccus 2.195; Ovid Met. 4, 800). In sum, given the lack of specific descriptions, the term hydus seems mostly to have indicated any snake that kept near the water.


**Hyena**

Greek: ὑαῖνα (hyaina); Latin: hyaena.

(1) The hyena, whose range today extends from Africa, through the Near East and into India, was well known to the ancient Greeks and Romans. The main species are (Mills; WMW, 786–93): spotted hyena (*Crocuta crocuta*); striped hyena (*Hyaena hyaena*), brown hyena (*Hyaena/Proteles brunnea*); aardwolf (*P. cristatus*). The striped hyena’s range today coincides most closely with ancient Mediterranean lands and was surely known to antiquity. Anatomical issues, discussed below, make it clear that the spotted hyena was also known and Oppian (Cyn. 3.262f.) mentions both. The range of the brown hyena is today confined to the southernmost parts of Africa making it, perhaps, a lesser candidate. All are carnivores, notable for their external resemblance to dogs, strong jaws, dorsal manes, elevated forequarters and distinctly lower hindquarters. Herodotus (4.192) is among the earliest to mention the animal. Aristotle knew the hyena well and addresses head-on the belief that the hyena has both male and female sexual organs, calling it untrue (Hist. an. 579b15–29, 594a31–b5). Spotted hyenas, both males and females, seem to have a penis, the female’s being in fact a clitoris that also serves as a birth canal (Frank and Glickman; Hamilton et al.). She also possesses a pseudo-scrotum (McMillen). Aristotle’s account of the sex organs of hyenas is accurate enough to indicate some sort of first-hand observation, perhaps post-mortem examination. Pliny (HN 8.44.105–06) and Aelian (NA 1.25) both discuss the animal and it is to be seen in art (Richter, 13, with plates), though rarely, as late as the sixth century AD Worcester Hunt Mosaic. The ancients ascribed a bad nature to the animal, claiming it could call humans by name, and imitated the sound of men vomiting to lure dogs (who were known to eat vomit) to their deaths. They were said also to dig up graves and eat bodies, an actual behavior. Their antipathy to dogs extended to the belief that shoes made of their hide frightened dogs or that a hyena’s shadow would paralyze a dog. Many medicinal uses were ascribed to it as well (Cyranides 2.40.1f.). The author of the life of Gordian in the *Scriptores Historiae Augustae* claims that ten belbi, which the author identifies as “hyenae” were exhibited by Philip the Arab during Gordian’s reign (*SHA The Three Gordians* 33.1).
(2) At Aelian *HN* 15.15, the Greek *hyainai* (plural) is used in a context that indicates a four-footed equid or antelope. The passage is undoubtedly corrupt.

(3) Cf. also GLANOS and COROCOTTA.


**Hyrax** Hyraxes, also known as dassies, comprise the order *Hyracoidea* which has a single family, *Procaviidae*. There is some debate as to its nearest relatives and there are three genera and seven species found in southeast Asia and in Africa. The ancients knew the rock hyrax (*Procavia capensis*), which now is found from Turkey south to the Arabian Peninsula and throughout Africa. It is distinctive in shape, rather resembling a cross between a rat and a gopher or rabbit, though it is not a rodent. It is notable for its two upper, externally visible “fangs,” the more striking since it is an herbivore. Though small, it can fight fiercely.

Although surely known, it is unclear under what name the hyrax appeared in antiquity, if at all. Nicander (*Alex.* 36) mentions a plant called *myoktonos* (“mouse-slayer”) and says it destroys the “licking hyraxes.” LSJ (cf. Keller, 1.14) cites the passage and identifies the animal as a shrew-mouse, Latin *sorex* (cf. *SHREW*). G&S translate it as “mouse” without comment. The χοιρογρύλλος (*choirogryllus*) of the *Septuagint* and medieval bestiaries is often taken as a hyrax (e.g. LSJ; Hünemörder) but was mistakenly identified as a porcupine by lexicographers (cf. LSJ, s.v.). A late Latin grammatical fragment erroneously ascribed to Petronius says the *cyrogrillus*, larger than a hedgehog but similar to a mouse and a bear, is commonly found in hollows and burrows in Italy (Beck, 2, 8). This fits the hyrax’s habitat but probably still describes a porcupine.

Beck, 1861; Hünemörder, s.v. “Rock Hyrax”; *WMW*, 1041–44.
Iaculus  The “spear-snake” is the “flying” serpent of Lucan (9.720, 822–27) which killed by launching itself through the air and driving straight through the head of a soldier named Paulus (cf. Pliny HN 8.35.85). It is almost certainly the Latin version of the Greek *akontias* (*akontias*, “javelin snake”) found in Aelian (NA 6.18, 8.13), though characteristics vary. The name “flying snake” is today reserved for the genus of gliding snakes called *Chrysopelea*. There are five species. Word of such animals may have reached the Romans for, while *Chrysopelea* is found in southeast Asia in places like southern China and the Philippines, it is also found in north-central and western India and Sri Lanka (e.g. *C. ornata*, cf. RDB). It lives in tropical, not desert, habitats and its glide is slow, gentle, and surprisingly accurate.


Ibex  Greek: *aĩξ ai̱γριος* (*aix agrios*, “wild goat”), *aĩγαγρος* (*aigragros*); Latin: *ibex*. The ibex is a mountain-dwelling goat with curved horns, which has long been utilized by humans and is depicted in Neolithic art. The ibex best known to the ancients would be the Alpine ibex, or steinbock (*Capra ibex*) which neared extinction in the 1850s but has been reintroduced to its former range (WMW, 1222–24; IUCN). The Spanish ibex (*Capra pyrenaica*; WMW, 1226–27) was also certainly known. Both species have long, thick, swept-back horns marked with rings at regular intervals. The Nubian ibex (*Capra nubiana*) is a less imposing animal with shorter horns found in the mountainous deserts of such countries as Jordan, Egypt, and Ethiopia. It is also quite likely that the *kri-kri* (*Capra aegragrus cretical/creticus*), so popular in Minoan-Mycenean art, was included under this generic term. Although not definite, the identification of the *aĩξ ai̱γριος* (*aix agrios*, “wild goat”) as an ibex is sound. In Homer, the Trojan Pandarus shoots a bow made from its horns (*Il. 4.105–06*). Odysseus’ men hunt *aĩγας oresko̱n* (*aigas oresko*), “mountain goats”) in the land of the Cyclops and these must be ibex as well. Pliny (HN 8.79.214) aptly describes it as a swift animal which uses enormous horns resembling sword sheaths to help balance itself as it leaps from crag to crag. Later authors misreport this to say that the ibex uses its horns to catch itself (e.g. Isidore *Etym.* 12.1.17). Babrius (102.8) makes it the prey of the *lepópard* (*pardalis*) and it receives a passing mention in Oppian (Cyn. 1.71). They are not mentioned frequently in the Roman games, but Gordian I and Probus had several of them shown and killed (SHA *The Three Gordians* 3.6, *Probus* 19.7; Jennison, 89; Toynbee, 147).
Keller takes the Greek ἵχαλος (ixalos) as a Greek name for ibex, but it is probably better to side with LSJ, s.v., who identify this as an adjective describing the animal meaning “springing” (cf. Agathias Anth. Pal. 6.32; Simmias Anth. Pal. 6.113; Leonidas of Tarentum Anth. Pal. 11.99). Artists depicted the ibex’s impressive horns on coins and gems (IBK, pl. 3.13, pl. 18.22–23; Richter, 27–28 with plates, mis-identified as a sheep).


Ichneumon (1) Greek: ἰχνευτής (ichneutēs); Latin: ichneumon. The African/Egyptian mongoose (Herpestes ichneumon) is a low, slender animal with a long tail. It resembles a weasel, but is not of the same family, belonging to the family Herpestidae, a relative of the meerkat and the fossa. It reaches a total length of up to 2 feet and weighs up to 9 pounds. It is found today in Spain and Portugal (probably through introduction) but in antiquity would have been seen in Asia Minor down to Palestine and in Africa from Tunisia to Egypt. Various other species may have been encountered in India (WMW, 771).

Herodotus (2.67, cf. Lloyd, 2.302 ad loc.) merely mentions the animal as sacred to the Egyptians. Aristotle (Hist. an. 612a16f.) first relates that the ichneumon, which lives along the Nile, coats itself with mud to render itself impervious to the blows of the asp or cobra upon which it preys (Aymard, cf. Plutarch Moralia 966d; 980e; Nicander, Th. 190f; Aelian NA 3.22, 6.38). It was also the enemy of crocodiles (Aelian NA 10.47), devouring their eggs or entering the gaping maws of sleeping crocodiles and gnawing out their stomachs (Pliny HN 8.37.87–90; Strabo 17.1.39). The mongoose does fight the cobra and has developed high tolerance to its venom (Dunham, 352–53). It is actually its thick hide (and quick reflexes) that keeps it safe in these encounters. They will enter water and thus must have been seen covered in mud along the Nile. They walk constantly while hunting, hence their name, which means “tracker,” despite Isidore’s etymology (Etym. 12.2.37). Isidore’s strange name for it, suillus, has been shown to be derived from psyllus, a sort of Libyan snake charmer (Phillips). Lucan states (4.724f.) that they bite the snakes in the head from behind and eat crocodile eggs (Nic. Th. 190f.; Athenaeus 10.450a). In fact, Diodorus Siculus (1.87.4–5) claims that if mongooses did not keep down the crocodile population, the Nile would become impassable (cf. Cicero Nat. D. 1.101). Nemesianus reports hunting them and his mention of their utilitas, coupled with Martial’s allusion to one as a pet (7.87.5), raises the possibility that, in Roman times at least, they may have been kept as companion animals, most likely for vermin control. In fact, they were imported into Fiji, the Caribbean, and the Hawaiian Islands for this purpose (Lodrick, 192). Pliny (HN 10.83.179) gives their lifespan as six years, although most texts emend that to ten. Gow has emended the text of Callimachus, Hymns 6.110, based on a papyrus, changing the reading from ailouron to malourin and he states that this may refer to Ichneumia albicauda, the white-tailed mongoose. Its modern range includes both shores of the southern Red Sea and, as such, it could have been known to the ancients (WMW, 780–81).

The fight between the mongoose and the cobra is vividly depicted on an engraved Hellenistic gem in Berlin (Mielisch, 67, abb. 48). An interesting and accurate Roman parallel was found in Transylvania (Vlassa). It is a fairly frequent scene in Nilotic mosaics such as the House of the
ICHNEUMON

Faun at Pompeii (Andreae, 2012, 116–18; Balty; Mielsch, 67, abb. 47; Meyboom, fig. 28), the palestrina Nile mosaic (Meyboom, 27 with notes for parallels), and one from Jerusalem (Rosén). Some ancient sources claim, accurately, that the mongoose fights the cobra with its tail raised, and this detail is captured on the Vatican Nile sculpture. Mielsch reproduces a wall painting from the House of Marcus Castricius in Pompeii that also shows the battle of the mongoose against a crocodile (69, abb. 49). It appears on Hadrianic Roman coins from Panopolis and on various gems (IBK, 3, no. 1, 98 nos. 5–6). Pliny (HN 29.20.68) mentions the belief that the burned fat of an ichneumon drives off venomous creatures. The ichneumon’s story passed into the Middle Ages both under its own name and under variants of the word hydrus.

Illustrations

The research of Kádár and those before him make it clear that illustrations of animals accompanied many manuscripts in antiquity. Aristotle refers to two accompanying illustrations (Hist. an. 510a30f., 550a25) and Tertulian (Scorpicae 1.1) clearly says that he has seen an illustrated manuscript of Nicander. Byzantine scholars preserved the illustrations in their copies of the Greek works of other authors as well and these have been studied by Kádár with many plates. Illustrations are also found in manuscripts of Dioscorides (52–76), and Oppian (91–109). A wide variety of animals was illustrated, but by far the most common are the serpents. The extent to which the Byzantine copies reflect the ancient originals is as open to discussion as is the extent to which the ancient illustrations were based on first-hand observation or creative impulse. One illustration of the velvet ant (see h.s.p.h.k._k.e.o.n), for example, shows it with eight legs and two crab-like claws (Kádár, pl. 26.3) and the same manuscript shows a spider (h.s.p.h.a.l.a.n.) with six legs and two claws (pl. 31.1). Yet more common animals such as a shrew (pl. 44.3), hedgehog (pl. 67.3), or a hare (pl. 78.2) are well drawn. The so-called “Artemidorus Papyrus,” which first became known in 1994, should be mentioned. This curious papyrus contains text of a geographical work by Artemidorus, a map that may be of a portion of Spain, and numerous sketches. The verso side holds labelled pictures of 38 animals. Amid normal animals such as a giraffe and lynx one finds the ΑΣΤΡΟΚΥΩΝ (ASTROKYO, “Mongooses and Fossa (Herpestidae),” Grzimek, vol. 14: Mammals III, 347–58; Gow, 1967; Houlihan, 1996, 125–27; Hünemörder, s.v. “Ichneumon”; IBK, 6.98–99; Keller, 1.158–60; Lloyd, 1994; Lodrick, 1982; Mielsch, 2005; Phillips, 1998; Rosén, 1984; Toynbee, 91; Vlassa, 1982.

(2) Aristotle (Hist. an. 552b27–30, 609a5) has a detailed description of a smallish wasp which hunts the phalangion spider, killing it and taking it back to its lair where it seals it in a hole and leaves the prey for its offspring. Pliny (HN 10.95.204, 11.24.72) relates the same story. The term has been translated as “ichneumon-fly,” (cf. LSJ s.v.) but the English is misleading as the “ichneumon-fly” is a hunting wasp. Many types of wasps exhibit this sort of behavior and specificity is impossible. LSJ, s.v., suggests Sphex sabulosus, Beavis (189) believes it is a member of the Pompilidae and quotes Gow as identifying it as a sphacid named the Sceliphron genus of mud daubers. It should be noted that the prey is actually paralyzed and left to be eaten alive by the wasp’s larvae. For the bird called the ichneumon (Antoninus Liberalis 14), see Arnott (76).

Andreae, 2012; Arnott, 2007; Aymard, 1959; Balty, 1976; Dunham, A.,
“star-dog”), all studied by Kinzelbach. The date and even the authenticity of the papyrus are much debated (Brodersen and Elsner provide an overview). Much is uncertain, but the fact remains that ancient Greek manuscripts clearly contained illustrations of many of the animals they discussed.


**Indian ants** (1) When describing northern Afghanistan, Herodotus (3.102–05) speaks of desert ants, μύρμηκες (myrmēkes). Ant-shaped, they are smaller than a dog but bigger than a fox and live in burrows. In forming their homes, they heap piles of gold-laden sand at the mouth of their burrows. To steal the gold, the native people ride out on three camels, two males flanking a female recently separated from her foal. They load up the golden sand during the day while the ants are below avoiding the sun, and then flee when discovered. As the ants come closer, the male camels are cut free one at a time as bait to slow down the ants. The female, swifter by nature, runs all the faster to return to her young. Pliny (HN 11.36.111) says that the horns of these ants were set up in the temple of Hercules at Erythrae. The ants are the color of cats and the size of an Egyptian wolf. He locates them near the tribe of the Dardae. It seems he takes the animals for insects and their “horns” would be antennae. Strabo, citing Nearchus (15.1.44), relates that the pelts of the ants were spotted like those of leopards. Megasthenes, he says, places the ants near the tribe called the Derdae, who live in the mountains. He generally follows Herodotus’ tale but adds that chunks of meat are scattered about to distract the ants. He later (15.1.69) states that some of the ants are winged. Arrian (Indica 15.4–7) quotes Nearchus as saying that he did not actually see the ants but rather saw their pelts when they were brought into the Macedonians’ camp. Megasthenes, he says, claims the story of the gold is true and tells its main elements. But he adds that Megasthenes mostly just reports hearsay and maintains a scholarly distance from the tale. Dio Chrysostom (Orat. 35.23–24) substitutes horses and chariots for camels and greatly exaggerates the amount of gold involved (D&K, 209). Aelian (NA 3.4) sets the story among the Issedonians, near the river Campylinus and says the ants will not cross the river. He may allude to the “ant” as a marmot by claiming its young have a special name analogous to that of a young tiger (NA 7.47).

Although modern prospectors have located gold deposits by using termite mounds (Weintraub), real ants are surely not a possibility here. Neither does the old identification of the ants as Tibetan gold miners and their dogs command belief (Ball, 303–04). The most common identification of these animals has been the marmot (WMW, 1251–53. Peissel (144–45) tracked down the story in the field and found that locals’ ancestors had collected gold in this way from marmots in the “Dansar Plain,” between Ganosh and Morol in the upper Indus area north of Kargil. The specific animal is the bobak marmot (*Marmota bobak*), which lives in the high altitude grasslands of the Himalayas (Keller, 1.184–85), or the long-tailed marmot (*M. caudata*), which lives in a restricted range in Pakistan and Afghanistan. It lives in colonies connected by underground tunnels and this tunneling may have led to their being called “ants” (Meyboom, 128). But Jennison’s (190–93) identification of the pangolin is also attractive in that the pangolin is nocturnal and would be asleep underground during the day. It is found in the specified areas and its tunnels can reach as far as eight feet beneath the surface, where it also digs extensive rooms. A great deal of dirt
would be excavated in the creation of their dwellings. The Indian pangolin (*Manis crassicaudata*), which is well described by Aelian (NA 16.6) is a sort of armored anteater and is an excellent candidate (WMW, 1239–42). Their hard skin and their outstanding burrowing abilities may have given rise to the ant identification, or it may have arisen from some corruption of a name, in whatever tongue, meaning “ant-eating animal.” It is not, however, a hostile animal, preferring to roll into a defensive ball like an armadillo. Nor is it swift, and when it runs it tends to use only its rear feet.

Note that Beavis (210) cites Philostratus (*Vit. Ap.* 6.1) as one who placed this story in Ethiopia. He also lists many other sources for the story (209–11). This story should be compared to that of the gold-gathering griffins, which Ball (312–13) identifies as large Indian dogs.

(2) In a separate passage, Aelian (NA 16.15) discusses a different sort of Indian ant that may be the termite.

Atkins, W., “*Pholidota* (Pangolins),” *Grzimek*, vol. 16: *Mammals* V, 107–20; Ball, 1885; Mayor, 1994; Peissel, 1984; Walsh, 1997; Weintraub, 1996.
Jackal See THŌS.

Jaculus See IACULUS.

Jerboa Greek: διπός (dipos, “two-foot”). Jerboas are small to medium-sized long-tailed, mouse-like rodents of the family Dipodidae noted for their elongated hind feet and jumping ability (WMW, 1327f.). Herodotus (4.192) places such a “mouse” in Libya, near to Egypt (cf. Arist. Hist. an. 6.37.581a2–3; Pliny HN 8.55.132) and it is well described by Theophrastus (frag. 174.8 = Wimmer 3.321). Rogovin lists between 49 and 51 species of hopping rodents like the jerboa but geographically we may concentrate on the four-toed jerboa (Allactaga tetradactyla), which lives today in Libya and Egypt, the lesser Egyptian jerboa (Jaculus jaculus), the small five-toed jerboa (A. elater) of southeastern Europe and Turkey, and the greater Egyptian jerboa (J. orientalis). Sundevall’s jird (Meriones crassus) is often called a gerbil, and may have been known to the ancients since its habitat is the dry climates of northern Africa and the Arabian peninsula. The Mongolian gerbil (M. unguiculatus), though a common pet today, was probably unknown. “African mice” are cited as good for lung ailments by Pliny (HN 30.14.43), probably a reference to jerboas. The jerboa appears as a subtype on certain coins of Cyrene, nibbling on a sylphium plant (IBK, 11.5), but the animal on the Alexander the Great drachma identified as a jerboa (IBK 41.35) might be either a mouse or a hare.

Kantharoeides Greek: κανθαροειδής. Nicander (Th. 752–58) describes this phalangion but does not actually name it. The name given here is taken from illuminated manuscripts that have this name, which means “shaped like the kantharis” (blister beetle). Nicander only says that they are quite small, red, and are “similar” to the blister beetle. They bite workers who are careless enough to harvest the pulse plant by hand rather than with a sickle. So many identifications exist (Beavis, 52–53; G&S ad loc., 185; Scarborough, 13) that a sure identification is impossible.

Scarborough, 1979.

Kartazoinos Greek: καρταζωνός (kartazōnos). Aelian describes both the μονόκερων (monokerōn, “one-horn”) and the kartazoinos in the same passage (NA 16.20), saying that each has a single horn. It seems best, with Ball (316–18), to take both terms as describing the same animal, which is probably the Indian rhinoceros (Rhinoceros unicornis), the only true one-horned rhinoceros.

See also unicorn.

Ball, 1885.

Katobleps Greek: κατόβλεψ (also katoblepōn and katoblepos, “down-looker”); Latin: catoblepas. A wild animal in Ethiopia, perhaps a species of buffalo, or the gnu, a species of antelope. Pomponius Mela was the first to describe this animal (De chorographia 3.98, ed. Frick). He says it is not very large in body, but possesses a head so large that it can hardly keep it upright and is always looking at the ground. Its charge and bite pose no threat but its gaze can kill. Pliny (HN 8.32.77) says much the same but places it in West Ethiopia. Aelian (NA 7.5) calls it the katoblepōn and adds many details: Libya; size of a bull; shaggy eyebrows and narrow, bloodshot eyes that are hidden beneath a mane that covers its entire face. It can raise this mane to reveal its glaring face and kills with a poisonous breath that is the result of its diet of poisonous plants. Athenaeus cites Alexander of Myndus as his source for the beast (5.221b–d, cf. 9.409c). Athenaeus’ account also puts the katoblepos in Libya and he adds that his description is based on reports of people who have seen its skin as well as the reports of Marius’ soldiers in his campaign against Jugurtha (ca. 107 BC). He reports that some say it resembles a wild sheep, others a calf. He seems to say that the locals believe it kills with its breath, but in fact it does this with its eyes. He complicates matters by calling it the “gorgon,” but this is probably a reference to its lethal stare and the context of the passage of Athenaeus. He claims that Marius ordered it captured and skinned. Faced with this
evidence, Athenaeus decides that the animal is real. What, then, is this downward looking animal of Ethiopia or Libya, that has four different names, resembles a sheep or calf, and which kills with either its breath or its glance? It is regularly identified as a gnu, i.e. wildebeest. WMW (1184–85) discusses both types – the black wildebeest (Connochaetes gnou) or the blue wildebeest (C. taurinus). This identification is based largely on the animal’s mane and large head which, however, it manages to carry upright when walking. As a grazer, its head would commonly be looking down at the ground. The black wildebeest stands 3 to 4 feet at the shoulder and often weighs in at 240–400 pounds, however. The black wildebeest has a mane that stands erect, but is now practically extinct in the wild. Its natural habitat was in extreme southern Africa, quite a distance from Marius’ activities. The blue wildebeest is larger than the black and is still abundant in southern and south-eastern Africa. Its mane is much less erect than that of the black. In light of its current distribution, and the specificity of the location of Marius, one is tempted to take the identification cautiously, yet Mielsch (61) shows a wall painting from the House of Romulus and Remus at Pompeii that resembles a gnu. Meyboom (113), however, thinks the likeness is faint and offers an identification as a wisent (oxen, wild). Jennison (71, 189) also thinks that the maned bull described by Calpurnius Siculus (Ecl. 5.61–62) as taking part in the games may have been a gnu.

Frick, 1880; Gonnelli, 1991; Keller, 1.296; Mielsch, 2005.

Kausôn Greek: καύσων “burner,” an alternative name for the dipsas according to Philoumenos (26) and Aelian (NA 6.51). Cf. Bodson (118–21).

Bodson, 2012.

Kenchrias Greek: κεγκρίς, κενκρίς (kenkrias, kenkris); Latin: cenchris. The name, in many forms, derives from “millet” and refers to rough bumps on the snake’s skin or the color of ripe millet. Philoumenos (26) offers alternative names of κεγκρίνης (kenkhrinēs) and ἀκόντιας (akontias, “striker”, cf. Ammianus Marcellinus 22.15.27), gives a length of 2 cubits (3 feet), and says it is green. Nicander (Th. 491), however, lists the akontias among the harmless snakes, leading one to ask if they are, indeed, the same animal. Lucan (9.712–13) says its belly is variegated like marble, implying it is particolored rather than bumpy. Pliny (HN 20.89.245) gives an antidote but no description. Leitz (119–26) equates it to the akontias and taculus and identifies it as Vipera (Daboia) xanthina, i.e. Montevipera xanthina, the Ottoman viper, or the Palestinian viper, V. palaestinae.

G&St., 544; Sprengel, 1829–30.

Kentris Greek: κεντρίς “stinger”; alternative name for the dipsas according to Aelian (NA 6.51).

Kolos κόλος, κόλος, κόλον (kolos, kōlos, kolon). The Greek word is actually an adjective that means “docked, shortened” (LSJ s.v.) and is so used by Homer (Il. 16. 117) to refer to a spear. Herodotus (4.29) refers to the kolon type of cattle and this has been taken either to mean “stubby horned” or “hornless” (Asheri et al., ad loc.). However, Strabo (7.4.8), speaking about Scythia and Sarmatia, uses kolon as a noun and says it refers to an animal which is midway between a ram and a deer (elaphos) in size, is white, and is faster than a deer. He goes on to say that it drinks through its nose, storing up enough water in its head to last several days. Jennison (31) identifies the animal as a saiga antelope (Saiga tatarica, not “tar-tarica” as Jennison). This antelope is listed as “critically endangered” by the IUCN and its current range is in the Ural steppes and western Kazakhstan (WMW, 1206–07). Interestingly, the saiga antelope has a
downward facing, elongated nose that hangs over the mouth and can actually be inflated with air. Moreover, its winter coat is predominately very light gray or white. Twelve teams of the antelope marched in Ptolemy II’s parade (Athenaeus 5.200f; cf. Rice, 88). Theocritus (8.51) addresses a he-goat as ὅ κόλε, which brings up the possibility of shepherds docking the horns of aggressive males. In a somewhat garbled passage Hesychius, s.v., кολουστῶν (kolouston) and says it is a large goat with either no horns or merely horn buds. Nicander (Th. 260) uses the term for a horned viper.


Kranokolaptēs Greek: κρανοκολάπτης. Nicander (Th. 759–68) gives the only description of this phalangion with the ability to sting or bite. The name is given by the scholia and seems to mean “head-biter.” The scholia also offer a synonym, κεφαλοκρουστής (kephalokrousteis), “head striker.” The animal is clearly a moth as it flutters indoors at night around lamps and has scaly wings that leave a residue of dust on anyone touching it. Up to this point, Nicander is on safe ground. But he goes on to tell us of its hard, nodding head and that it is lethal when it stings a man on the head or neck. It lives among the “tree of Perseus” in Egypt. The Persea tree is well described by Theophrastus (HP 4.2.5) and his description fits well the Mimusops schimperi Hochst (= M. laurifolia), a small evergreen with yellow, edible fruit that contains a stone (Amigues). The scholiasts add that this “moth” has four wings (as moths do) and a stinger that is positioned below its head, hidden by its neck. Philoumenos (15.5 = Aetius 13.20) states that the “moth” is green, but Beavis (53) explains this as a misreading of Nicander. Dioscorides (1.187) lists them as phalangia and notes their connection with the Persea tree. Pliny (NH 28.45.116) tells of a moth (papilio) that flutters around lamps which is numbered among mala medicamenta; that is, it is venomous.

Beavis (54) quotes Taschenberg’s identification as a hawk moth (Sphingidae). It is generally believed that moths do not bite, but several genera are equipped with a noticeable proboscis and the males of some ten species, e.g. Calyptra thalictri, which is found from southern Europe to Turkey and various points to the east, suck juice from fruit as well as blood (Zaspel et al. 2011, 206). Some moths suck tears (lachrymophagy) as well. It is very interesting that, as the so-called vampire moth works its proboscis into its target, it does, in fact, rock its head. C. Thalictri is essentially a fruit piercer in southern Europe which has been shown to pierce the skin and draw blood in experiments conducted in far eastern Russia (Zaspel et al., 2007, 2011). Whether the “hard head” was a blood-sucker in antiquity or the behavior was simply deduced from observation of such moths at fruit is immaterial. It was the threat of a painful bite that caused this creature to be classed as a phalangion. It is interesting that the bite actually results in slight swelling and “a slight stinging pain” for 2–3 hours (Zaspel et al., 2007, 446) Cf. the skle rokephalon of Philoumenos (15.4), almost certainly a double of this animal.

Amigues, 2002; Hill et al., 2010; Zaspel and Hoy, 2008; Zaspel et al., 2007, 2011.

Kri-kri Also called agrimi and gri-gri in modern Greek, Capra aegagrus cretica/creticus/cretensis, is generally thought of as the Cretan ibex. This is due to its general shape and the sweep of the males’
strong horns. Yet the animal is not an ibex. No Paleolithic remains of the animal have been found and the earliest bone finds date to ca. 6,000 BC. Some scientists have related it to the Bezoar goat or pasang, a true wild goat (*Capra aegagrus aegagrus*), but recent DNA studies have been interpreted as suggesting that the kri-kri is a feral goat derived from domesticated goats brought to the island in the Neolithic age (Bar-Gal; Horwitz and Bar-Gal; IUCN; Masseti). It was once populous enough to play a major role in the iconography of Minoan religion, but today is confined to a few spots where it is protected, such as the Samaria Gorge National Park and three offshore islands. Specimens can be seen easily on the island of Dia by boat tour. The wild goat is very common in Minoan art, appearing second in number only to the bull (Bloedow, 2003, 56). In religion, it is commonly seen with a figure called the “Mistress of Animals” (occasionally a “Master of Animals”), who holds or otherwise dominates the animal. It is also associated with mountain peaks and their shrines and altars. The most famous example of this is the well known “Peak Sanctuary Rhyton” found at Kato Zakro, which shows the animals lying down on top of a shrine and clambering up and down the adjacent mountain. Yet Bloedow has argued persuasively that perhaps the main interest of the wild goat to the Minoans was as an animal to hunt and reproduces many Minoan works of art depicting this. It is commonly depicted as being run down by hounds. He also argues that it may have been kept in captivity by the Minoans. Linear B tablets may refer to *agrimi*, one sign representing the male animal and the other the *agrimi’s* horn, which was used to make composite bows (*DOCS*², 301–02). Small catalogs instances of *agrimi*-drawn chariots (cf. Nauert).

The wild goat appears in literature as early as Homer, who has Odysseus stop on an island inhabited solely by goats (*Od. 9.116–41; Clay*). The *agrimi* are almost surely the wild goats (and, in later lore, the deer) which, when struck with a hunter’s arrow, seek out the herb dittany to expel the arrow (Arist. *Hist. an.* 612.a3; Mielsch, 93–95). *Kri-kri* appear frequently in Minoan/Mycenean art (Boardman, 1970, 32 with fig. 46, 57, 61, pl. 19). The caprine animals on the BF “Wild Goat Style” pottery of the Orientalizing period and common to Rhodes (Boardman, 2001, 35–38), show goats with knobbled, swept-back horns that very much resemble the *kri-kri* and Masseti (cf. Masseti et al.) cites evidence that *aegagrus*-type animals were indeed present on Rhodes. These vases often show the wild goats grazing and lined up to create a frieze, and some fine examples date to the mid to late seventh century BC. In Roman times, the *kri-kri* is depicted on the reverse of denarii issued by Cn. Plancius.


**Kyaneon** Greek: *kuavneon*; Latin: *caeruleus*. This is generally translated as “Blue spider,” but the exact color in question may be debatable (Osborn; Irwin, 79–84). A spider classified as a *Phalangion* by the ancients. Nicander (*Th.* 729f.) says it is hairy and that it “darts about off the ground.” This thus might indicate a leaping spider. G&S (ad loc., p. 184) cite identifications of it as *Clubiona holoserica* Deg. (= *C. pallidula* Clerck, 1757) and a solpuge (cf. *Solipuga*). Beavis (47) and others believe it to be unidentifiable. Leitner (cited by Beavis, 48) has suggested that this is to be equated with the *araneus lanuginosus* of Pliny (*HN* 29.27.85). This
spider, Pliny says, is hairy and has a huge head. When cut open it is said to have two worms inside which, worn in a deer skin by women, have a contraceptive force. Just after this description (29.27.86), however, Pliny speaks of the *caeruleus* as a separate animal, so the two are probably not identical. Pliny claims the *caeruleus*’ bite causes dimness of vision and vomiting of cobwebs.

Irwin, 1974; Osborn, 1935.

**Kynalo-pe**x Greek: κυναλώπηξ (“dog-fox”). The term was used abusively by Aristophanes to describe a pimp (*Lys.* 957) and Cleon (*Eq.* 1067) and Douglas (16) claims that it appears in the *Greek Anthology* “more than once,” as a term of opprobrium. It probably does not indicate a true breed, though its name resembles the *alopektis* hound (*dog, breeds*). Douglas, 1928.
Lac insect Greek: λάκκος (lakkos). This Indian insect is best known today for producing shellac. The females live attached to trees from which they suck sap, using it to encase themselves in a hard shell. Ctesias, preserved in Aelian (NA 4.46) fully describes the insect, focusing on the fact that the Indians harvest it, crush it, and use it to produce a brilliant, red dye which is especially used for garments, some of which are exported to Persia (cf. Periplus Maris Erythrae, 6). The dye is still used today and, in addition to producing shellac, the secretion turns up in foods as a food additive known as E904. Many species of scale insect produce such a crimson covering, but the most important is Laccifer lacca Kerr = Kerria lacca.

Ball, 1885, 331–32, 1889, 6; Beavis, 111.

Lagalopex Martial (7.87) speaks of a “long eared lagalopex” kept as a pet by his friend. The name seems to mean “hare-fox,” and multiple identifications have been offered. L&S identify this as a fennec fox whereas Ker translates it as “lynx.” Toynbee (102) calls it a “long eared fox” and not a “long eared seal,” as Vioque (266, ad loc.) claims. Other identifications are summarized by Vioque as well and include an affectionate name for a pet hare (cf. Friedrich, 272) or an Egyptian goose or duck. It would seem most likely that the name does not refer to a discrete species, but simply compares the long ears of the fox to those of a pet hare.

Friedrich, 1913; Ker, 1979; Vioque, 2002.

Latax λάταξ is a word that is normally used in the plural, λάταγες (latages), to describe the drips of wine that were tossed at a target in the Greek game of kottabos. Aristotle twice (Hist. an. 487a22, 594b28f.) uses the term to describe an aquatic quadruped with a stiff coat that emerges from the water at night and cuts down trees, a perfect description of beaver behavior.

See also pyktis, satherion.

Law, animals and the The role of animals in the eyes of the law was a subject of interest to both Greeks and Romans. Existing evidence shows that their greatest concerns surrounded actual ownership of the animals and liability for any damage they might do. Mélèze-Modrzejewski (75–82) points out that biblical and Near Eastern law codes generally called for a monetary repayment by the owner for his animal’s damages but that in Greek times some liability fell onto the animal itself. Solon’s laws dealt with injury inflicted by quadrupeds and we know that a dog which bit had to be handed over (to whom is a
bit unclear) and fitted with a 3-cubit long collar, whose name (kloios) also indicates a collar worn by criminals (Plutarch Solon, 24.1). The famous Law Code of Gortyn (ca. 480–460 bc) seems to indicate that animals were treated like slaves with the added clause that the animal could be returned to the owner if it did harm within a stipulated period of time (VII.10–11; cf. Plato’s Laws 936d–e and Willetts, 70). Later sources mention an Athenian court set aside for such cases, the Prytaneion. This court dealt with homicides by people unknown, accidental deaths caused by inanimate objects, and deaths caused by animals. Plato discusses such cases in detail (Laws 873e–74b, cf. Arist. Ath. 57.4) with the common thread being that the polis must be rid of the pollution caused by the murder. The most common way to accomplish this was by exile beyond the borders of Attica. When an animal killed a person, except during a competition, the relatives of the deceased were entitled to bring an action against the “murderer.” Here the penalty was both death and expulsion. For more on this court see MacDowell (1978, 117, 1963, 86–89), Finkelstein and Ellis (55f.) and Hyde (1916, 696–701, 1917a, 285–96).

Many laws dealt with animals based on their status. A wild animal was owned by no one and thus no action could be brought against it. A purely tamed or domesticated animal, such as a pet dog or an ox broken to the harness, was under the control, and liability, of its owner. But many animals fall somewhere in between these two definitions. Bees, for example, often leave one owner’s hives and swarm to found new colonies. That is why Plutarch cites a law of Solon (Solon 23.6) stipulating that beehives had to be set up 300 feet from those already established by anyone else. Roman law spent a great deal of time trying to decide what constituted a tame, domesticated, or wild animal, and their laws attempted to deal with such issues (Frier, MacLeod). Finally, the scene in the Wasps where the dog Labes is brought to trial for stealing some cheese, is a funny hyperbole for the Athenians’ penchant for law suits. Roman law (Mélèze-Modrzejewski, 83–84) dealt at length with human injuries and material harm caused by animals, the technical name for which was pauperies. The earliest manifestation of this appears in the Twelve Tables (VIII.6) where the owner of the animal could either pay damages or give up the actual animal to the aggrieved party. The historical development of these laws is murky (Jackson) but certain areas of concern to the Romans should be pointed out. Some laws make a distinction between a quadrupes (quadruped) and a pecus (domesticated herd animal) and ancient commentators tried to clarify which animals belonged where. The same distinction was sought between wild and tame animals. Pigs could be seen as less domesticated than, say, sheep. Camels and elephants, though essentially wild, were also used as pack animals. The position of animals such as the dog and bestiae (= ferae?) such as pantherae, bears, and lions also came under scrutiny by jurists (Jackson, 128–35; Mélèze-Modrzejewski, 95–97). Other laws concerned herd animals that trespassed and, for example, ate fruit from a neighbor’s orchard leading to an actio de pastu (Twelve Tables VIII.7, 9; Jackson, 127–28, 136–38). Still others involved animals used as transport (Martin). While Jewish law explicitly accounts for bestiality (Exodus 22.19, Leviticus 18.23, 20.15–16), there were no Greek or Roman laws against such activity (Mélèze-Modrzejewski, 92–93).


**Leopard** Greek: πάρδαλις (pardalis), πάρδαλος (pardalos); Latin: leopardus, panthera, pardus, varia. On the plurality and confusion of names, see *panther*, bearing in mind that big cats, especially the leopard and *cheetah*, were routinely confused in ancient and Byzantine literature (Nicholas). In general, we can be assured that the leopard (*Panthera pardus*) was a commonly seen animal, especially in the Roman arenas, and that when most authors used the term “panther” or “leopard” they did not do so with modern accuracy. Today’s leopard is *Panthera pardus*, a spotted great cat which also has a melanistic variant. It is notable for storing its captured prey in trees. Even today it is found far enough north in Africa to insure that the ancients would have encountered it. Moreover, there are many subspecies found elsewhere: *P. p. saxicolor* (Afghanistan, Iran, Iraq); *P. p. tulliana* (Turkey, Caucasus, Syria, Jordan); *P. p. nimr* (Arabian peninsula); *P. p. jarvisi* (Sinai, Negev) (WMW, 830–31). Homer’s leopards are signs of ferocity (Naiden). The leopards that marched in Ptolemy II’s procession may have included such local varieties and the procession also displayed an enormous wine askos made from leopard skins (Rice, 13, 19, 96f.). Pliny (*HN* 8.17.41f., 8.23.62–65) describes them well and speaks of laws governing their import into Italy.

Most ancient artists were not familiar enough with cheetahs or leopards to know the difference between their spots. Cheetah spots are solid black dots and their faces are marked by so-called tear streaks, black lines running down along the muzzle from the inside corner of the eye. Baby leopards have solid spots but, as they age, these become rosettes, black-rimmed circles which are often filled with a tawny color darker than that of the leopard’s skin. This is what lies behind Pliny’s statements (*HN* 8.23.62) about shoulder markings. Occasionally an artist will reproduce these rosettes accurately (Andreae, 196). This is the case in the Etruscan “Tomb of the Panthers” at Tarquinia (*ca*. 600 BC; see illustrations in Steingräber, 41, 50–51) and the “Tomb of the Leopards,” *ca*. 480 BC, Steingräber, 130). Black leopards are a melanistic version of the species and still have the spots, although they are hard to see against the black background. The leopard/panther is frequently depicted in friezes on Greek vases and it is also found in funerary art (Vermeule, 58), sculpture (Richter, 9–10), gems and coins (IBK, Index s.v. “Panther”). A stunning mosaic showing a lion defeating a leopard was found at the theater of Gubbio, dating to the second century BC (Andreae, 184–87, with color plates). A snarling leopard is well drawn in the mosaic from the triclinium of the Villa of Hadrian that depicts a rousing, if geographically impossible, battle between centaurs and big cats (tiger, leopard, lion). A small Roman bronze has visible spots worked into it (Biers, 65, fig. 71).

In Roman art the leopard is often shown being hunted and the Great Hunt Mosaic at the Piazza Armerina shows them being captured alive in a traveling box. Many mosaics represent the animal in a *venatio* and some even identify the beasts with names such as *Victor*, *Crispinus*, *Luxurius*, or *Rapidus* (Mazzucchi, fig. 4.2, 74–76, text of mosaic 75, n. 3). The leopard often appears in mythological representations as well, commonly shown with Dionysus who can be seen riding the animal (Andreae, 52, 58–59). In the painted tombs at Marisa, a leopardo-, labeled ΠΑΡΔΑΛΟΣ (PARDALOS), has an arrow in her chest and is being hunted with a spear from horseback (Meyboom, 44, fig. 57; Jacobson, 25–27, pl. 11–12). In sum, the leopard was well known to the ancients, but the terminology used to refer to it and other large cats was imprecise.

*See also varia.*
Leucrocota


Leucrocota

A clearly fictional animal, mentioned in antiquity only by Pliny (HN 8.30.72) as a composite of stag, ass, lion, and badger. Pliny’s placement of it in Ethiopia may be the result of textual corruption, as Solinus 52.34 places it in India and there is trouble with Pliny’s text at this point. Its ability to mimic human voices links it to the hyæna (cf. COROCOTTA). It was very popular in medieval lore.

Hünemörder, “Leucrocota.”

Lion

Greek: λέων (leõn); Latin: leo. The African lion (Panthera leo), so well known to us today, once ranged from “northern Africa through Southwest Asia” (Nowell and Jackson, 19, cf. fig. 1, 39) and only became extinct in these areas about 150 years ago. The ancients also knew two subspecies. The last wild Atlas lion, also called the Nubian lion (Panthera leo leo) was shot in Morocco in 1920 but exists in captivity and the Asiatic lion (P. l. persica) was extinct in the wild by about 1940 (WMW, 634). The Asiatic lion, according to Nowell and Jackson (37), once inhabited northern Africa, the area of Palestine and Syria, Turkey, and even northern Greece. Its range also extended east as far as India. It became extinct in eastern Europe around AD 100, and in Palestine around the time of the Crusades. Its range remained stable until the mid-1800s when the advent of hunting with firearms diminished the population, with the animal disappearing in Turkey and Iraq by the end of the nineteenth century. It was last reported in Iran and Iraq in the 1940s (Firouz, 65–66) and was hunted mercilessly in India. Today, its population is in the low hundreds, confined to a reserve in the Gir forest on India’s east coast.

The evidence for the actual presence of the lion (or the lack of it) in Greece is confused and has been argued in many places. From the Bronze Age forward, the lion played an enormous role in Greek myth, literature and art, and is often depicted quite realistically. But did the artists see the actual creatures or were they largely copying Eastern art objects or sketchbooks? Recently, Thomas has thoroughly studied the lion in Minoan and Mycenean civilization. The lion is closely associated with nobility during Mycenean times. Was their knowledge of the animal only second-hand or might Mycenean nobles have imported lions from the Near East as pets, much as later Athenian nobles kept pet cheetahs (cf. Thomas, 190–91 with notes)?

We know that prehistoric lions lived in Greece, but exactly when the lion disappeared from Greece is unknown and archaeological remains are scarce. Nowell and Jackson (39) follow Guggisberg (17–19) in claiming that the lion did not become extinct in Greece until AD 80–100, but the evidence is shaky. Only a handful of bones and teeth have been found, and these may have been imports or souvenirs. Driesch and Boessneck (111) report that, of over 60,000 bones found at Tiryns, six are from lions. Thomas (189–90) has a detailed list of the most recent finds. For further references see the following: Boessneck and Driesch; Hurwit, 11, n. 36; Lonsdale 103f.; Warren, 123, n. 29. Bloedow believes that the existence of over 600 Mycenean/Minoan representations of lions, especially in hunting scenes, proves the presence of lions in Bronze Age Greece.

Herodotus (7.126), followed by Aristotle (Hist. an. 579b7f. and 606b15f.), claims that the only place in Europe where the lion is found is in the area of land between
the Acheloos and Nessos rivers, which would seem to place the lion squarely in Greek territory. Herodotus (7.125) also relates that Xerxes’ camels were attached by lions in Macedonia. Boardman (309) shows a Classical gem from the East depicting just this sort of event. Likewise, Poulidyampos, a Greek Olympic pancration victor in the Olympics in 408 BC, was said to have strangled a lion near Mount Olympus with his bare hands in imitation of Hercules (Pausanias 6.5.4–6). Hurwit (11, n. 36) suggests that the veracity of the tale might be strengthened by the fact that, ca. 337 BC, Lyssipos celebrated the event by creating a rendering of it at Olympia. Yet Xenophon (Cyn. 11.1–4) says that people wishing to hunt lions had to leave Greece for places like Mysia to do so. The result of this evidence is that we simply do not know the exact truth. The most likely scenario has the lion surviving in the Balkan area during the Mycenean period and perhaps even for a portion of Classical Greek antiquity (Thomas, 191–92), but it was by no means as prevalent as its appearance in literature, art, and myth would suggest.

As mentioned, the lion is frequently portrayed in the Bronze Age. A lion appears to be chasing deer in a fresco from Minoan Thera/Akrotiri (Warren, cf. references in n. 29). Yet the ubiquity of the animal in Mycenaean art (Mylonas, Wace) leads many to believe that the lion served as some sort of royal crest for the Mycenean aristocracy, appearing over the main gate into the citadel of Mycenae itself. Elsewhere lions appear in hunting scenes, heraldically facing each other on gems, and in religious contexts such as those involving the “Mistress of Animals.” In certain cases it is even shown wearing collars or on leashes, sometimes led by a man (e.g. Younger, 267–70), raising the remote, but dubious, possibility that they were pets of some sort. A Linear B tablet describes a chair inlaid with a scene depicting men and lions (DOCS², 243).

This fascination with lions continues throughout most of Classical Greek art and literature and it is so prevalent there that we can only allude to certain aspects here. In Greek myths, for example, a well known image is that of Hercules either killing the famed Nemean lion or clad in its skin. Cybele is commonly pictured in a lion-drawn chariot and the Chimera and Sphinx both had a lion’s body.

Roman aureus of 43 BC, depicting Cybele, holding patera in right hands and reins in left, enthroned on cart drawn by two lions. Photo courtesy of CNG Coins.

Pelias demanded that suitors for his daughter’s hand yoke a lion and a boar to a chariot (Apollodorus 1.9.15). An unusual mosaic from the House of the Centaur in Pompeii shows a meek lion being adorned with jewelry by erotes (Andreae, color plates, 191–97).

Tarquinia boasts of the Etruscan “Tomb of the Lionesses,” which depicts a snarling feline with swollen teats. Yet this “lion” bears the spots of a LEOPARD/PANTHER and, surprisingly, the stripes of a TIGER on its legs. Male lions are better depicted elsewhere, such as in the “Tomb
of the Painted Lions” (third quarter, seventh century bc, Steingräber, 47) or the “Tomb of the Red Lions” (ca. 530 bc, Steingräber, 90),

The ancient writers of natural history saw the lion as powerful, fierce, and brave. Its descriptions contain many accuracies but also many fallacies (cf. citations of Hünemörder). Many beliefs about the lion taken from natural authors such as Aristotle, Aelian, or Pliny (lion bones have no marrow; the lioness can whelp but once) had a long life in the later bestiary tradition.

The lion is frequently met in Greek literary work as well. It is the single most utilized animal for Homeric warrior similes (Lonsdale, 49f.; Schnapp-Gourbeillon, 38–63) and when a warrior is in a duel and is compared to a lion, he rarely loses (Naiden). In Aechylus’ *Agamemnon*, Aegisthus lacks a lion’s heart (1232) whereas Clytemnestra is a fearsome lioness (1274–77). Agave in Euripides’ *Bacchae* carries her son’s head on stage, thinking it is that of a lion she has killed (1174f.). It is a symbol of power, ferocity, and dominion. Roman sources especially cite the Getulian lion of Libya for its ferocity (e.g. Horace *Odes* 1.23, Vergil *Aen.* 5.351f.). The lion is common in the fables where it displays a wide number of traits ranging from cruelty to fear (Jensen; Perry, index).

**Art**

The lion is encountered frequently in Greek art. It is ubiquitous in Minoan seal stones (Shapland, Thomas), and is ubiquitous in Mycenean art, from the supposed lions over Mycenean’s main gate to a lion hunt on the inlaid dagger and the embossed lion’s head from Grave Circle A at Mycenae (Thomas). The motif of a lion attacking a solitary animal (cow, deer, horse) and biting it on its back endures from Mycenean through Classical times (e.g. Richter, nos. 379–86).

It is a favorite motif on geometric vases. The row of archaic lions at Delos offers one excellent example as do the many representations on vases (black and red figure alike) of Heracles conquering the Nemean lion, whose skin he wore thereafter. An Etrusco-Corinthian oenochoe housed at the Villa Giulia (no. 12188) has, amid an ordinary frieze of animals and winged monsters, a human body with the head of a lion, clothed in a chitoniskos and perizoma. It is interesting to compare this to Artemidorus’ interpretations of dreams in which one dreams of oneself with the ears or head of a lion (1.24). A lioness appears on the *PALESTRINA NILE MOSAIC* nursing her young (Meyboom, 25, fig. 11) and an animal that clearly is a lion, despite being labeled ΠΑΡΔΑΛΟΣ (PARDALOS) appears in the paintings at Marisa (Jacobson, 27, pl. VII; Meyboom, 44, fig. 58). The lion also served a purely decorative function in Greek art, appearing in such diverse places as Greek gems, coins (e.g. Leontini in a punning type), tombstones, and as dispensers of water at fountains. Notably, the lion is a very common shield device in the Classical period, continuing the Homeric relationship between the animal and the warrior. The Macedonians valued the lion hunt and Alexander the Great is shown both hunting lions (e.g. in mosaics from Pella) and wearing lion skins in imitation of Herakles (on his coins).

Brown traces the hundreds of representations of lions in Etruscan art. In Roman times, the lion was less closely associated with heroes and heroism but was common in the games, first being exhibited in 186 BC. Here it fought humans to be sure, but also all sorts of other animals including bulls and tigers, and Toynbee collects many anecdotes in which the noble
animal’s death elicited sympathy from the crowd. Other stories, such as one by Seneca (Ben. 2.19.1) where the lion recognizes the bestiarius opposing him and protects him from the other animals, offer examples of the lion’s noble spirit. Lions were kept in the houses of the wealthy, a fine example of Roman ostentation. Statius even wrote an epitaph for Domitian’s tame lion (Silvae 2.5, cf. Herrlinger, no. 22). Marc Antony even broke lions to the yoke (Pliny HN 8.21.54). Toynbee discusses the importation of lions from Africa and the supply for the animals must have been strong throughout the empire. This, along with a passion for hunting the animals, almost surely contributed to the vanishing of the Asiatic lion described above. Lions are found frequently in Roman mosaics and in funeral art. A mosaic from El Djem, for example, shows two male lions attacking and devouring a boar (Blanchard-Lemée, 204, fig. 149).

Some confusion of names existed for the lion as it did for spotted cats (cf. panther). Pliny (HN 8.23.62) refers to the black, Syrian leo, almost surely a black leopard. Often in descriptions of felines presented at the games, we hear of maned lions versus those without manes. It is possible that the latter may not be lionesses, but other big cats poorly named.


**Lizard**

Greek: σαυράκαυπος (saúralsauros); Latin: lacerta, lacertus. The word “lizard” covered as many different animals in antiquity as it does today, when it is equally applied to creatures as varied as geckos, the Gila monster, the giant mangrove monitor lizard of India, or the Komodo dragon. All are rightly called lizards. The RDB gives the number of lizard species, as of February 1, 2012, at 5,634. A search of RDB lists 17 species of lizards in Italy and 19 in Greece, including the genera Algyroides, Anatololacerta, Archaelacerta, Darevskia, Hellenolacerta, Iberolacerta, Lacerta, Ophisops, Podarcis, Psammodromus, Timon and Zootoca. There are numerous subspecies as well. If one adds to this the plethora of lizards encountered by the Greeks in Asia Minor, Egypt, and the African littoral, and includes the number of species to be found throughout the Roman Empire, the number of “lizards” encountered is staggering. Adjectival modifiers often were used to differentiate various sorts of lizards, as will be seen in individual discussions.

Aristotle knew they were oviparous and commented on their legs (Hist. an. 498a13–16, cf. Pliny HN 11.101.249), hibernation (599a31f.), and notes (606b5) lizards over 1 cubit long in Asia (see crocodile (2)).

The ancients knew that some lizards could regenerate their tails (Arist. Hist. an. 508b7f.; Pliny HN 9.46.87, 11.111.26). Aelian extends this to their being cut in half (NA 2.23) and was eyewitness to one regaining its eyesight through magic (5.47, cf. Isidore Etym. 12.4.37).

Lizards are very common in Greek art, often crawling on walls, even chasing bugs. Hurwit collected examples of such scenes and argues that their presence is a harbinger of evil. To this add fragments of an Athenian RF cup, ca. 550–500 BC, in the Munich Antikensammlungen, 2587.
(= BzAr no. 20028) showing a snake and a lizard as a Boeotian shield device. Indeed, Artemidorus (4.56) says the appearance of a *sauros* in a dream signifies a small person with a contemptible mind. White translates as “lizard” while Harris-McCoy offers “horse mackerel,” but without explanation. Coins of Thasos and Rhodes show the sun god killing a lizard and the bronze Sauroktonos by Praxiteles was justifiably famous (Pliny *HN* 34.19.69, Olszewski). Bodson (2002, 334–35) discusses lizards found at Pompeii on wall paintings, reliefs and as remains.

Lizards posed problems for bee-keepers (Vergil *G.* 4.13; Columella 9.7.1) but surely also helped to keep down household pests. They were common ingredients in magic potions (bibliography at Hurwit, 131). They enhanced erotic spells (Faraone, 66), could aid eyesight (Pliny *HN* 29.38.129), and four geckos dissolved in sugar made a nice aphrodisiac if spread over the right big toe, whereas an application to the left big toe canceled the effect (Nock, 275).

It is rare to be able to identify positively a given ancient lizard by genus and species, but the following were surely known.

1. The **common wall lizard** (*Podarcis muralis* = the older *Lacerta muralis*) was well known to the Mediterranean and today it is found throughout southern Europe from northern Spain north to France and parts of Germany, and east to the coast of Turkey along the Bosphorus and Black Sea. Its name refers to its habit of living in the crevices of human-built stone walls, where it can often be found sunbathing. It is not a lizard that walks on the inside walls of human establishments. Eight species of *Podarcis* are found in Greece and seven in Italy (RDB), with many animals designated by locale, e.g. *P. filfolensis maltiesis, P. peloponnensis-acus*, or *P. cretensis*. The Italian wall lizard (*P. siculus*) is the most common type found in Italy and many subspecies exist.

2. Hünemörder sees the **European green lizard** (*L. viridis*), which can reach 15 inches from snout to tail, in the mention by Pliny (*HN* 29.38.129) of a (*lacertam* viridem). But *L. viridis* is only found today in extreme northeast Italy and is confined to Greece north of the Peloponnesus (IUCN). Some other green lizard may be meant here. Note the χλωροσάρια (*chlirosaura “green lizard”* in the scholia to Theocritus 2.58, 7.22).

3. The **gecko** is well known to anyone who has sat outdoors in a Greek or Italian dining establishment in the evening and watched them hunting insects on the walls and ceiling. They are distinguished by their large black eyes and by their feet, which consist of widely spaced toes. The Mediterranean (or Turkish) house gecko (*Hemidactylus turcicus*) is found in Italy and Greece, and throughout the Mediterranean (including many islands) and Balkan area eastward to Turkey. Its body is somewhat translucent. The Moorish gecko or common wall gecko (*Tarentola mauritanica*) is also found in Italy and Greece and is stockier than *H. turcicus*. The European leaf-toed gecko (*Euleptes europaea* = older *Phyllodactylus europaeus*) is a gecko species found in parts of Italy, Sardinia, and Corsica. Such animals are commonly shown climbing on walls on Greek vases (Hurwit).

Ancient names include the following:

4. ἀσκαλαβώτης (*askalabōtēs*) variants σκαλαβώτης (*skalabōtēs*), *καλαβώτης* (*kalabōtēs*), *κολώτης* (*kōlōtēs*), and *askalabos* on a Greek olpe (Hurwit,
130, LIMC 1.1, 437, no. 4). Pliny (HN 9.41.87, 29.28.90) lists the *colotes* as distinct from the *lacerta*. Aristotle treats the *askalabōtēs* as distinct from the *saura* (Hist. an. 599a32) and uses the *askalabōtēs* as an example of an oviiparous animal where the females tend to be larger than the males (Hist. an. 538a27–28).

Aristophanes uses the name for the lizard which defecates on Socrates’ head, interrupting the hatching of a great thought (Clouds 168–74, but see *galeōtēs* below). This lizard, we are told, was on the ὄροφη (orophē), which is often translated as “roof,” but clearly means ceiling here. This behavior fits a gecko perfectly and both LSJ and OLD identify this animal as the common wall gecko, *Platydactylus mauretanicus* (today’s *Tarentola mauritanica*), the Moorish or common wall gecko. It is notable for small, pointed projections running the length of its body. It can reach about 6 inches in total length. The spotted Eastern Mediterranean house gecko (*Hemidactylus turcicus*) should also be considered. This lizard was common enough to merit a metamorphosis story centering on one Ascalabus (Hünemörder; Hurwit, 131).

(5) γαλεώτης (galeōtēs): Aristophanes (Clouds 173) uses galeōtēs for the lizard he called *askalabōtēs* just four lines above. The logical inference is that the galeōtēs is also a kind of gecko. The word also appears in a fragment of Aristotle preserved in Antigonus Carystus (Rose, no. 370), saying that the animal eats its cast off skin, which is a true gecko behavior. The word is also used for a fish (Polybius 34.2.12, cf. Strabo 1.2.15 and Lucian Vera Historia 1.35).

(6) The χάλκις (chalkis), also named ζιγνίς (zignis, cf. LSJ for alternative forms), is a kind of poisonous lizard in Aristotle (Hist. an. 604b23–25; cf. Pliny HN 29.32.102, 32.13.30). Hesychios offers the synonym πίγγαλος (pingalos).

(7) κροκόδειλος χερσαίος (krokodeilos chersaioi, “land crocodile”) was an Ionian word for lizard (Herodotus 2.69, 4.192).

(8) σῆψ (sēps) is normally the name of a poisonous snake (sēps) but in Nicander (Th. 817) it is also a lizard, alternatively called σαύρα χαλκιδίκη (saura chalkidike, Dioscouriades 2.65).

(9) σκυγγος or σκίγκος (skingos, skinkos); Latin: scincus. Today the word “skink” refers to members of the family Scincidae, lizards marked by their stocky build, lack of a noticeable neck, and stubby legs. RDB lists four species in Greece and three in Italy. In antiquity, the name referred to a lizard found in Africa and the East and used in medicine (Dioscouriades 2.66, cf. LSJ, s.v.). Pliny (HN 8.38.91) identifies it as a denizen of the Nile saying that it resembles the crocodile but is smaller even than the ichneumon. It is used as an antidote to poisons and as an aphrodisiac for males.

(10) The stellio is mentioned by several authors (e.g. Vergil, G. 4.243; Columella 9.7.5). Pliny notes that it sheds its skin (HN 8.49.111). Isidore (Etym. 12.4.37) lists four “genera” of lizard: *botrax* (it has a frog-like face); *salamandra*; *saura*; *stellio*. It is variously translated as “gecko” or “spotted lizard.” Precision is unattainable, but its name indicates that it was covered with spots.

(11) In the Palestrina Nile Mosaic (Meyboom, 25, fig. 11), a lizard bears a label that can be restored to read ΣΑΥΡΟΣ ΠΗΧΑΙΟΙΣ (saura pēchaios, “one-cubit-lizard”). Meyboom (237, n. 54) suggests that this could be a rock.
lizard and gives a thorough list of long lizards mentioned by ancient authors. For a one-cubit lizard, see Pliny HN 8.60.141.

See also: crocodile (land crocodile krokodilopardalis), salamander.


Locust See akris, cicada.

Louse Greek: φθείρ (phthaeir); Latin: pediculus. Lice are small sucking or chewing insects of the family Pediculidae which live on the blood of their hosts. The louse is the most frequently mentioned of external human pests, others being the flea and the tick. In an age of limited hygiene and no insecticides, people of all stations suffered from them (Beavis, 112) and many were severely infested (Keil, 306–11). Humans suffer from head lice (Pediculus humanus capitis), body lice (P. b. humanus), and pubic lice (Phthirus/Pthirus pubis), which can even infest eyelashes. The body louse evolved from the head louse no more than 72,000 ± 42,000 years ago, coinciding with the invention of clothing (Kittler et al.). Other lice beset domestic birds and mammals, causing both economic hardship and personal misery. There are many names for the animals, treated in full by Beavis (113–14). Lice eggs, today called nits, also had special ancient names, κόνις (konis) and lens, lendis. Lice were thought to be generated from various bodily fluids and countless cures were offered by a wide variety of authors, though the most common cure was picking the lice out by hand (Beavis, 115–16; Hünemörder). Their life cycle was poorly understood. Aristotle knows they live on bodily fluids but thinks the nits are not eggs (D&K, 171–72). He also believes in their being generated in blisters which erupt to release lice, even to the point of being fatal (Hist. an. 556b21f.). The louse can spread other diseases and has been blamed for the great Athenian plague of 330/29 BC (D&K, 169–70; Kittler et al.).


Lynx Greek: λύγξ, λυγκίον (lynx, lynktion); Latin: lynx. The ancients would have had easy access to two types of lynx: the Iberian lynx (Lynx [Felis] pardinus), which is endangered now and is confined to Spain and Portugal, but was presumably more numerous in antiquity; and the more common Eurasian lynx (Lynx [Felis] lynx), which has a range from Western Europe to Siberia, and central Asia to the Himalayas. Its bones have been found in Bronze Age Tiryns (Driesch and Boessneck, 111). The North American bobcat (Lynx [Felis] Canadensis) was, of course, unknown (Toon and Toon, 388–90). Pliny (HN 8.30.72) tells us it was indigenous to Ethiopia. In appearance, the caracal differs from the lynx by not being spotted and the two were generally confused.

In Greek literature, the Homeric Hymn to Pan 19.24 tells us that Pan wears a spotted lynx hide and the lynx is mentioned in Euripides’ Alcestis 579. Aristotle seems familiar with its anatomy, commenting on the bones of its foot (Hist. an. 499b25, 539b23) and the fact that the animal is retromingent like the camel and the hare (Hist. an. 500b15f.). Aelian (NA 7.47) says that the young is called a skysmos. Elsewhere (NA 14.6) he quotes Euripides on the lynx’s ugliness and stresses its tufted ears. There are scattered mentions elsewhere. Meleager calls the lynx an enemy of goats (Anth. Pal. 5.179, cf. Douglas, 11–12). Horace (Odes 2.41) makes it prey for Orion, Vergil (Aen. 1.323, and Ecl. 8.4)
mentions it as an item of clothing for hunters, while Ovid relates the tale of how Lynxus was turned into a lynx for trying to kill Triptolemus (Met. 5.642f.). Pliny (HN 28.32.122) supplies us with lynx-based folklore. It was said to have the keenest sight among quadrupeds and was used in cures. The Argonauts’ helmsman was named Lynkeus and an eye salve bore the same name (LSJ, s.v. and cf. Lockwood, 42). The ashes of the nails and pelt of lynxes from the island of Carpathos were especially good at curbing lustfulness. Its urine was good for throat ailments.

Four lynxes appeared in the famous pageant of Ptolemy II (Rice, 97), probably because of their association with Dionysus, and the animal made its debut at Rome in Pompey’s games of 55 BC (Pliny HN 8.28.70). Pliny calls this animal the chama, “which the Gauls used to call rufius.” Meyboom (117) thinks this may be a spotted hyena, but comes to this conclusion with no solid evidence. Some identify Pliny’s Gallic lupus cervarius (HN 8.34.84, 11.79.202) as a lynx (cf. Wiener, 66–67). The desire for its warm spotted pelt caused it to be widely hunted in later times. The lynx does not appear frequently in art (Toynbee, 87) and thus the animal clearly marked ΛΥΝΞ (LYNX) in the painted tomb at Marisa is quite special (Jacobson, 35, pl. XV; Meyboom, 45, fig. 62). Note that the spelling is Roman, not Greek, which would have been ΛΥΓΞ. Jacobson (35) identifies this as a caracal. The palestrina Nile mosaic also has a creature labeled ΛΥΝΞ (Meyboom fig. 13). The figure is heavily restored and in its current condition seems simian, though Meyboom (25) prefers to see it as feline, either a lynx or the serval (Leptailurus serval). See “LYNX 2,” below. It was used in magic frequently: entrails (Lucan Phars. 6.672); burned claws and hide form an antaphrodisiac (Pliny HN 28.32.122); the famous lynx stone, formed from their urine (Pliny HN 37.11.34 and 13.52–53).

See also LAGALOPEX.


LYNX 2 A different sort of lynx is mentioned both by Galen (De Anatomicis Administrationibus 4.3 = Kühn 2.430; 6.1 cf. 2.535; De Usu Partium 11.2 = Kühn, 3.844,847) and Pliny (HN 8.30.72). McDermott makes a strong case for considering Galen’s lynx as an ape and not a feline (95–96). The animal depicted on the right lower side of section 6 of the palestrina Nile mosaic is labeled ΛΥΝΞ. It may be a monkey, but it is heavily restored and certainty is impossible. Evidence is collected by Meyboom (25, 238–39, n. 56).

Kühn, 1821–33.
Mannus  Latin: *mannus, mannulus, buricus*. A pony which was introduced to Rome in the first century BC from Gaul and which seems to have been a favorite of wealthy females (Lucretius 3.1063; Pliny *Ep*. 4.2.3; Horace *Carmina* 3.27.7; Propertius 4.8.15; Ovid *Amores* 2.16.49f.). The synonym *buricus* arises later (Porphyry’s commentary on Horace *Epist*. 4.14; Vegetius *Molumedicina* 3.2.2). Some rode it (Seneca *Ep*. 87.9; Ausonius *Epist*. 8.7), but others harnessed it to small wagons (Martial 12.24.8). Q. Serenus (*Liber medicinalis* 42.804–05) prescribes its dung mixed with sheep’s testicles for runny wounds. The relation of this word to Tacitus’ Germanic god named Mannus (*Germ*. 2) is debatable (Skutsch, Wagner).


Manticore  Greek: μαρτιχώρα (*martichora*), μαντιχώρας (*mantichōras*); Latin: *mantichoras*. In his *Indika*, Ctesias (frag. 45.15) describes a marvelous red animal the size of a lion, with three rows of teeth, human ears, light blue eyes, and a tail that ends in a scorpion with a 1.5 foot long stinger. It can either stab with or shoot this stinger. Many of these animals live in India where it is hunted from the back of elephants. The name, translated into Greek, means “man-killer.” It has long been stated that this is a wildly distorted version of the tiger (Ball, 1885, 310–11; 1889, 2–3). The story is found in many other authors, including Aristotle (*Hist. an.* 501a.25–31) and Pliny (*HN* 8.30.75), Pausanias 9.21.4, Philostratus (*Vit. Ap.* 3.45). For further discussion and citations see Lenfant (300–02) and Meyboom (122, n. 3). The manticore was a favorite of medieval bestiaries.

Ball, 1885, 1889; Lenfant, 2004.

Marmot The Alpine marmot (*Marmota marmota*) is likely to be the animal Pliny (*HN* 8.55.132) calls the *mus alpinus*, “Alpine mouse.” He describes well some of its hibernation techniques, such as hibernating in family groups, but also offers strange tales of its forming a chain of marmots and scooting on its back while bearing food. The marmot is a rodent in the family of *Sciuridae* and is a ground-dwelling, burrowing relative of the squirrel. *M. monax* is the American woodchuck or ground hog. It is low and squat, with a generally smallish tail and is found in a wide range of colorations (*GES*, 6.4614–15; *WMW*, 1251–53). It was used for clothing by northern European tribes but was not so favored in Italy or Greece.

See arktomys, Indian ants.

Marten See weasel.

Melanouros “Black tail,” another name, according to Aelian (NA 6.51), for the DIPSAS.

Mock epic Epic parody was popular among the Greeks (Olson and Sens, 5–12) and they often looked to animals for comic inspiration. The *Batrachomyomachia* is a mock epic of about 300 lines depicting the battle between frogs and mice when a mouse is accidentally drowned by a frog. Dating the piece is fraught with problems, and dates range from the sixth century to Hellenistic times. It is alluded to in the late third or early second century bas-relief by Archilaus depicting the apotheosis of Homer and showing a mouse and a frog carved into Homer’s footstool. Only the mouse is now visible. Compare this to the terracotta figurine depicting a mouse versus frog battle from Egypt (Mysliwiec). The author closely parodies the *Iliad*, where mice with names like “Crumb-snatcher,” or “Fat-hunter,” go to war with frogs named “Puff-jaw” or “Loud-Croaker,” clad in armor made of vegetable matter. The text is most easily found in West (262–93). West also publishes (258–63) the fragments from papyri of a mock epic in which weasels fight mice, the *Galeomyomachia* (Daris; Lenaerts; Schibli). The papyrus dates to the second or first century BC and only about 30 lines are preserved. Ahlborn has published an annotated German translations of both these humorous works. We also have mention of other animal mock epics: a *Battle of the Starlings*, *Battle of the Spiders*, and *Battle of the Cranes* (Schibli, 1983, 7–12; West, 232). There is also a fragmentary *Battle of the Cats and Mice*, studied by Aerts.

Cf. mouse.


Mole Greek: ἀσπάλαξ, σπάλαξ (aspalax, spalax); Latin: talpa. The European mole (*Talpa europaea*) was common throughout the Greco-Roman world. Other species would have been known as well, including *T. romana* (Italy) and *T. stankovic* (Greece). For species throughout the Roman Empire, see WMW, 234f. Moles are small insectivores that live in underground tunnels, subsisting on worms, grubs, and insects, though occasionally they will take lizards, snakes, and small birds. They are readily confused with the herbivorous mole-rat (cf. *spalax*) but are somewhat smaller. Thompson attempts to clarify ancient references. In general, however, when we read Aristotle or others concerning the *aspalax* or *spalax* they are most often referring to the European mole (e.g. *Hist. an.* 488a21, 533a3f.) He notes that moles are especially common near Lake Orchomenos in Boeotia (605b32f.) and states correctly that moles do have vestigial eyes which can be revealed by cutting away the membrane that covers them. (491b26f.).

Pausanias mentions mole hills (7.24.11) and Vergil (G.1.183) tells us that mole tunnels can be a nuisance on threshing floors. Pliny adds that moles have such good hearing that when they hear you talking above them as they hide submerged, they run away. Once caught, however, various bits of the mole were good against scrofula (*HN* 9.7.17, 10.88.191, 30.12.38). Seneca (QNat. 3.16.5) refers to blind animals such as *talpae* and *subterranei mures* (mole-rats). Finally, Diogenianus (8.25) preserves for us the familiar sounding “blinder than a mole.” Cf. Cicero Ac. 2.25.81.

**Mongoose** See *ichneumôn*.

**Monkey** Greek terms include κερκοπίθηκος (kerkopithēkos), κέρκωψ (kerkōps), κήβος (kēbos), σφίγξ (sphinx), σφιγγία (sphingia), σάτυρος (satyros), τίτυρος (tityros) Latin terms: *callithrix*, *cercolopis*, *cercopis*, *cercopithecus*, *clura*, *satyr*, *sphingion*, *sphinx*. The Etruscan word arimos is reported, but is of unsure veracity.

**Terminology**

Modern science makes a clear distinction between monkeys and *apes*. A certain amount of taxonomy will help to clarify matters, but one should be mindful that such taxonomies shift constantly and are heatedly debated (e.g. Grehan and Schwartz; *WMW*, 490f.; Martin, 171). When experts quarrel, non-experts can only hope to paint a general picture. The order of Primates includes a wide variety of animals descended from tree-dwelling ancestors. Some, such as lorises and tarsiers, are quite distinct from monkeys, but the higher primates, in a sub-order some call *Anthropoidea*, contain animals such as monkeys, lesser apes (gibbons, siamangs), greater apes (gibbon, chimpanzee, orangutan), and humans. Monkeys are generally divided into New and Old World monkeys. New World monkeys live in Central and South America and include such animals as marmosets and tamarins, the popular capuchin monkey, spider monkeys, and howler monkeys. Many have prehensile tails; a trait not found in Old World monkeys, which were the monkeys available to the ancients. Martin (171) lists ten genera and 59 species of Old World monkeys, which he divides into leaf monkeys (*Colobinae* such as the colobus, proboscis monkey, and langur) and cheek-pouched monkeys (*Cercopithecinae*), such as baboons, macaques, and vervet monkeys. *Cercopithecinae* are more quadrupedal in their motion, are predominantly found in Africa south of the Sahara (though macaques are found throughout Asia), and possess fairly large brains. Some common types of *Cercopithecinae* include the mandrill (*Mandrillus sphinx*), the hamadryas baboon (*Papio hamadryas*), and the Barbary macaque (*Macaca sylvanus*), the so-called Barbary ape (BARBARY MACAQUE), currently the only monkey found in Europe. This is the monkey Galen dissected in his study of human anatomy, *Anatomical Procedures* (Scarborough, 123).

The lesser apes (*Hylobatidae*; Chivers) include Asian tree dwellers such as the gibbon and the siamang. It is doubtful that the ancients knew these animals. Some greater apes (*Hominidae*; Shumacher), however, may have been known, though this is far from certain. These include the African *gorilla* and the *chimpanzee*. The orangutan was probably not known (but cf. *satyros*, *tityros*).

It should be noted that both ancient authors and Classical scholars have been fairly loose with terms. In the most general of ways, it seems the ancients used the presence or lack of a tail to divide what today’s scientists would call monkeys into two groups. Aristotle (*Hist. an.* 502a18) clearly states that a κήβος (kēbos, monkey) is a πιθήκος (pithēkos, ape) with a tail. Pliny (*HN* 8.80.215) says that the “simiarum … genera” are distinguished from each other by their tails. Yet this too leads to confusion since the tailless “Barbary ape,” of Gibraltar, is really a monkey, the *Barbary Macaque*. Reserving the term “ape,” as used today, to denote solely the higher primates, was not a concept familiar to the ancients.
McDermott used “ape” in his monograph for all infra-human primates, thus including baboons, gorillas, and monkeys under the term. Yet he states that in his work the word monkey is used for an ape with a tail and the word baboon for the hamadryas baboon (McDermott, v; cf. Montagu, 87–88). Most scholars tend to use the word “ape” in much the same way as McDermott, although this is unscientific and ultimately confusing. Moreover, in common English usage, one must remember, chimpanzees are regularly, if inaccurately, referred to as “monkeys” and few laymen are aware that baboons are not apes, but monkeys. As often, therefore, seeking precision among the ancient terms is as difficult as it is among modern ones and one should exercise caution before assigning absolute modern equivalencies to ancient terms that were fluid at best.

History

The monkey was kept throughout antiquity as a curiosity, pet, or performer. It is seen in Minoan art, most notably in the frescoes found on Santorini and Knossos and on numerous seal stones (Marinatos, 1984, 112–16). In fact, excavations on Santorini revealed the skull of a Colobinae monkey kept as a pet (Poulianos). Their depiction as saffron gatherers raises the intriguing question as to whether they were trained to do chores (Marinatos, 1987). The monkey figures less prominently in Mycenaean art, but it was surely known (Cline; Langdon 415–20). Recent excavations have revealed evidence for the trade in monkeys to Ptolemaic Egypt. A study of mummified monkeys has shown an increased trade in Barbary macaques to Egypt from about 200 BC to the fall of Carthage in 146 BC. Earlier mummified monkeys had been olive baboons (Papio anubis), imported from Sudan (Goudsmit and Brandon-Jones). It can thus be seen that the monkey was well known throughout the Classical Mediterranean for most of its history. Bodenheimer (41), for example, lists the following species that would have been known in the Middle East: Macaca sylvanus, the Barbary Macaque; Erythrocebus patas, the orange/red patas monkey, found throughout sub-Saharan Africa; Cercopithecus calitrichus, an older name for the green guenon (C. aethiops sabaenus) (Butynski, 3); the hamadryas baboon (Papio hamadryas, cf. Cynocephalus); the savanna baboon (Papio cynocephalus); the Anubis baboon (= olive baboon); the Indian hanuman (= grey langur) (Semnopithecus entellus); the gibbon (perhaps incorrectly identified); the gorilla (incorrectly included in this list). While some of his identifications are tenuous, his list does give a sense of the variety of monkeys known to the ancients.

Asiatic monkeys must have been known since the exploits of Alexander and works such as the Indika of Ctesias and Megasthenes or those of the Geographers show to what an extent the fauna of India intrigued the West. Strabo (15.1.56), quoting Megasthenes on India, mentions that the monkeys inhabiting the Caucasus are “stone-rollers.” Ball (308–09) identifies this as Inuus rhesus, today known as Macaca mulatta rhesus, the Bengal monkey or the Madras monkey, Macaca radiata. Ball claims to have witnessed such behavior. Descriptions in Classical authors are decidedly second-hand and may refer to various langurs and macaques, but precision is impossible. For example, Ctesias mentions (frag. 45.7 = Nichols, 47) a small ape with a six-foot long tail. Megasthenes (Strabo 15.1.37) tells of one larger than a dog with a three-foot tail which has a white body and a black face (cf. Aelian NA 16.10). Ball (309–10) identifies this as the Madras langur (Presbytis primus) and Megasthenes’ description is quite accurate.
While langurs do have tails, they are not that long. Similar examples are gathered by McDermott (75). An interesting story is told by Philostratus in his life of Apollonius (3.4), where he relates that certain monkeys are trained in India to help humans harvest pepper, hearkening back to the Minoan “saffron gatherers.”

Monkeys and apes were hunted by various means. Snares and pits probably played a major role but several entertaining stories from antiquity play on prevalent prejudices about the monkey’s nature. Some involve capitalizing on the animal’s fondness for wine but most stress its inquisitiveness and tendency to mimic human behavior. Thus, the hunter would perform some common act such as dressing while the monkey watched. He would then leave behind small versions of the clothing smeared with bird lime or linked to snares. Miniature shoes could be fitted with weights. When the monkey tried to put on the clothing, it was caught (Aelian NA 17.25).

### Monkey and ape in popular culture and literature

Connors traces how the monkey was used throughout antiquity in fables and proverbs, as an insult and in works of art. In all genres the supposed basic traits of the creature are played upon – sneakiness, a tendency to imitate, and mischievousness. These traits show up equally in literature.

Semonides, in his famous misogynistic poem, claims that the woman made from a monkey is the “biggest evil” that Zeus has given to men, for her face is ugly, she lacks a behind, is not graceful, and is always scheming (7. 71f., Gerber, 310). In fables, the monkey is paradigmatic for ugliness, mischief, and curiosity and is often outsmarted by the fox or is done in by its own ignorance. One of the earliest references is often given as Archilochus (frag. 184 = Aesop’s fable 81 in Perry, 435) which reads very much like a fable. In fact, though, since the fox makes fun of the rump of the *pithēkos*’ rump, the creature may more likely be a baboon such as *Papiro hamadryas*, the sacred baboon of Egypt, or the mandrill whose posterior markings are striking. Proverbs involving the monkey stress its cleverness, trickiness, and ugliness. McDermott (110–18) cites the famous proverb “an ape in purple” or “an ape’s an ape even if it wears golden sandals.” This proverb at once shows the human response to an animal that so closely resembles ourselves and McDermott cites English and German equivalents.

### The monkey in art

As mentioned above, the monkey has a long artistic presence. The monkey is to be found throughout Greek, Roman, and Etruscan art and much of McDermott’s work is devoted to a catalog of examples. Natural poses include portrayals such as the Minoan frescoes of saffron pickers or the roaming monkeys of the Thera frescoes (see evidence collected by Rehak). Mycenean monkeys are less commonly depicted but nonetheless are fairly frequent (Cline). Langdon studies the presence of the animal in Geometric art and the name vase of the Arkesilas painter (ca. 560 BC) shows a monkey on the spar of the ship where King Arkesilas II sits overseeing the measuring out of a product, either cotton or sylphium. Compare a late mosaic from Constantinope in which a trained, tailless monkey with a basket on its back picks dates (Mielsch, 80, abb. 57). In Classical times plastiform vases show the monkey engaged in a variety of natural scenes, such as eating, drinking, or suckling its young. Other representations show monkeys engaged in human
activities, such as riding other animals, reading, or even baking bread and the animal is often shown in human dress. McDermott has a wide selection of examples. Many aryballoi (perfume jars) are formed in the shape of a squatting monkey. There are monkeys throughout Etruscan (cf. ARIMOS) art as well, where they are found as figurines and on fibulas. The late fifth century Tomba della Scimmia near Chiusi has a tailed simian chained and watching funeral games from its perch in a low tree. For the monkey in Etruscan life and art, see Bonacelli.

A fascinating shard of an RF chous found at Eleusis and dating to the last years of the fifth century BC shows a young boy leading a monkey on a leash (Papaspyridi, 47–49). The monkey is notable for its anthropomorphic features.

The monkey in everyday life

Greeks, Etruscans, and Romans kept monkeys as pets or companion animals and we hear often of their presence in performances. It is frequently shown with a collar or leash (McDermott, 135). The Etruscan Golini Tomb I (ca. 350 BC) shows a monkey with a leg iron climbing a pole (Steingräber, 211). Aesop (Perry, 434, no. 73) tells us that people took Maltese dogs and monkeys on long sea voyages to help alleviate the boredom of the time at sea. In Greek times, Theophrastus pokes fun at the type of man who keeps a monkey as a pet (Char. 5.9, Rusten) and the reference to chasing a monkey in Plautus’ Miles Gloriosus may in fact refer to Hellenistic times if the monkey appeared in Plautus’ archetype (cf. Cleary). In general, however, there seems to be slightly more evidence for monkeys as pets in Roman times. Cicero (Ad Atticum 6.1.25) once met a certain Publius Vedius in Laodicea who was traveling with a baboon (Cynocephalus) and a shop sign from Ostia shows a monkey on the counter, either as an item for sale or as a companion (Toynbee, pl. 14). Pliny tells us that monkeys were tamed (mansuefacta) and could even play board games. He adds that they produced young in the houses where they were kept (8.80.216). Martial (7.87.4) derides a man who loved a cercopithecus as ugly as himself. Juvenal (5.153–55) mentions an ape that was seen in the streets, riding a goat, wearing a helmet and throwing a spear at a target. Compare the monkey or ape aryballoi in Kozloff (114 and 117, figs. 95 and 98). Another marched, dressed like Ganymede, in a procession to Isis (Apuleius Met. 11.8). Aelian (NA 6.10) claims that under the Ptolemies cynocephali were taught letters, learned how to dance and even to play the flute and harp. While these baboons performed, another passed through the crowd asking for money. Monkey bones have been found in Pompeii (Clarallo and De Carolis, 71). Toynbee (57–59) has collected many other examples.

The symbolic force of the ape and monkey was powerful and there is ample evidence for the monkey as a bad omen in dreams, as an insult, a bad physiognomic sign, and an emblem of ugliness both physical and moral. Artemidorus (2.12) relates that dreaming of an ape (pithekos) signifies a scoundrel and a cheat while a dream of a kynokephalos implies all that with the addition of impending epilepsy. The same holds true, he says, for other monkeys: the sphinx, lynx and the tailed cercopithecus. Elsewhere (4.56) he says that the mimetic ability of the pithekos foretells cheats and rogues. Plato has the soul of Thersites, the “ugliest of the Achaeans” in Homer, choose the soul of an ape (Republic 620c). Baboons were even said to be sexually aggressive toward humans. Not surprisingly, only a few names in Greece and Rome seem to be derived from words denoting apes or monkeys whereas a plethora of names beginning with “Hippo-” exist, since the horse was a favorite animal of the nobility.
Given the general confusion of the most basic terms for monkey and ape, it seems best to refer readers to individual articles, with the caveat that the ancients had many names for these animals and undoubtedly there was great overlap and confusion even among these names.

See also CEBUS, CERCOLOPSIS, CERCOPS, CLURA.


Mosquito Greek: έφυτίς, κώνωφ (empis, κόνωφ); Latin: culex. These and other words are used for a variety of blood sucking insects, such as mosquitoes, gnats, and midges. Ancient lexicographers and other authors sometimes equate empis and κόνωφ, but Aristotle clearly thinks they are separate animals (Hist. an. 490a21, cf. 532a14). Beavis (229–36) meticulously studies the various uses of the words and possible identifications. All these insects lay their eggs in water, though the ancients did not necessarily fully understand the various stages that the insect passed through (Arist. Gen. an. 721a9f.; Beavis 231–32).

Malaria, spread by the mosquito genus Anopheles, was a chronic problem in the ancient world (Porza; Burke; Jones; Sallares, 271–81) from prehistoric times (Arnott) onward. Samanidou-Voyadjoglou and Darsie have identified seven genera and 53 species of mosquito in Greece alone, but many of these have been introduced in later times (Darsie and Samanidou-Voyadjoglou). Certainly, the ancients did not differentiate according to species. If the insects are spoken of as appearing in dense swarms, gnats or midges are probably meant. Plagues of such insects are mentioned fairly frequently (Hünemörder).


Moth Greek: φάλλαινα (phallaina, Beavis 130 for other names); Latin: papilio. Moths, like the butterfly, are members of the Lepidoptera family of insects but most are nocturnal. Taken in a narrow sense, phailaina is a subset of psychē, butterfly, but the two terms were used loosely in antiquity. Note that Latin uses papilio for both insects. Surely most moths were seen as generically the same in antiquity, but Beavis, D&K, and Hünemörder list certain species, the most noteworthy being detailed below.

(1) The wax moth, Galleria mellonella and Achroia grisella, was the bane of bee-keepers since it lays eggs in hives and its larvae eat wax. Ancient authors (Aristotle Hist. an. 605b.13f., 625a5–14; Pliny HN 21.XX.65–66; Columella De Re Rustica 9.14.8) list the elaborate
pains to which bee-keepers went to prevent such infestations.

(2) The hyperion (pestle) and pênion (spindle) may be moths. They receive attention in Aristotle (Hist. an. 551b6–8) who accurately describes the motion of the caterpillar (kampê).

(3) The terms σῆς (sēs) and tinea were used, among other things for moth larvae which attack clothes or papyrus. Beavis lists several important species of both sorts (137) as well as alternative names and the names of similar larvae that eat away at other materials such as leather, hair, helmet plumes, and bows. Such destructive, little creatures elicited far more mention than did their adult phases, fluttering around lamps at night (cf. D&K, 109–10 on the Pyraustaës).

See also bembix, kranokolaptës.


Mouse Greek: μῦς (mys) and, in dialects, σμῦς (smys), σμῖς (smis), σμύνθος/α (smínthos/a); Latin mus, musculus. Mice are rodents, in the family Muridae. Welton (249) estimates that 25 per cent of all mammals are Muridae. WMW (1604) lists 38 species of Mus, of which M. musculus, M. spretus, and M. macedonicus lived in Greek or Italian lands. The Greeks tended to differentiate their local mice into those who lived in a house (oikositos, “house fed”) and those who lived in the wild (arouraios, “of the field”), not unlike Horace’s (Satires 2.6.79–117) mus rusticus and mus urbanus. The house mouse (Mus musculus), whose range included Greece and Rome, does live in homes but is also found often in fields, barns, and storage areas. It must have been the most common mouse to the ancients. Its body color is variable (white, grey, brown, black) with a lighter belly. Adults have an overall length of 3–7 inches and weigh up to an ounce, but generally less. While M. musculus will live in fields for a while, it prefers to be under cover in houses, barns, and silos (Welton, 255). There are other genera of mice. The long-tailed field mouse (Apodemus sylvaticus) is a strong candidate for the field mouse of the ancients, as is the Eurasian harvest mouse (Micromys minutus). A. sylvaticus is found throughout southern Europe, on certain Aegean islands, on Sardinia, Corsica, and Crete, and along the northern African shore (IUCN). It has been identified at Pompeii (King, 408). The Eurasian harvest mouse is reddish and very small, weighing about half of M. musculus. It occurs throughout Europe, including England (Harris), and is found in northern Italy and Greece (IUCN). It is also found along the Black Sea. Herodotus (4.192) says that there are three kinds of mice in eastern Libya – the two-footed (JERBOA), the ēγρεῖζες (Zegeries), and the ēχυνίζες (Echinées). Countless other species would have been encountered in Greek colonies and Roman conquered lands. Hünemörder is undoubtedly correct in claiming that the vole was often taken as a mouse.

For the Greeks and Romans, the mouse seems, as today, to have been a source of both amusement and annoyance, and the art reflects this. A charming Greek chous shows a child crawling toward a mouse and some grapes (Paris, Musee du Louvre: CA2505, Hoorn, no. 842, fig. 339) and a little master cup shows a mouse as part of an animal frieze with a wasp and a locust (BzArch, no. 29515). A common type of south Italian plastic vase is mouse-shaped (Heldring, 50–68 and passim). But the mouse is far more common in Roman art than in Greek (Richter, 35). The Unswept Floor Mosaic, which is a later Roman copy of a second century BC original, shows a mouse sniffing at a nut left over from the banquet. Toynbee (203–04) lists the many
small figurines that the Romans created of mice which serve no purpose other than to evoke a smile, such as crouching mice nibbling on food (Walker, 75). A third century gem in Boardman (226, pl. 751) shows a mouse, which he incorrectly identifies as a rat, bound with its hands behind it to a post. The charge is surely theft, since grains of wheat are in its mouth (cf. Calder, 61–62). A charming mouse climbing on a plant gave its name to a tomb in Tarquinia, Tomba del Tipolino (ca. 520 BC, Steingräber, 1985, 155; 2006, 68 with illustration). A Roman mosaic from Volubilis (Morocco) shows us a cat named Vincentius wearing a red collar and having slained a mouse named “Luxurius” beneath whom is the odd word “cullas” (Engels, 120; Blázquez, 4, fig. 7). Coins issued by Alexander the Great at the mint of Lampasacus, in Myia, in the Troad often have a mouse as a subtype, perhaps a pun on the name of the region. Lampsakos and Nesos also had a mouse as a subtype (IBK, 11) and a mouse is a subtype on the coins of the Quinctia family (ibid., 8; it is not a rat as Smyth, 202, would have it). Likewise, the coins of Alexandria Troas (about 300 BC) show Apollo Smintheus with a mouse at his feet. At approximately the same time (340–330 BC), staters of Metapontum, in Italy, show a mouse crawling on an ear of wheat. They are found often on gemstones (IBK, 16.16–23), either in natural poses or fanciful ones, such as two mice pulling a wagon (ibid., no. 20). This reminds us of Horace (Satires 2.3.247), where harnessing mice to a cart is listed as foolishness. This implies that mice were sometimes made into pets, as might the various depictions on gems of mice engaged in such activities. The trap mentioned below from Oppian may also imply that the animals could be taken alive and made into pets, though in the epigram, the child kills them. The mouse even appears as an amphora stamp (e.g. SEG 41 576).

Despite the fact that some found them “cute,” the mouse remained a problem due to their fertility and destructive gnawing. They seem to have been a special problem on islands (Németh). Aristotle studies them carefully and he, and later authors, report correctly on many of its attributes and habits. These are well collected by Hünemörder. Aristotle cites them for their timidity (Part. an. 667a.20f.), is very impressed by their rapid rate of both reproduction and destruction (Hist. an. 580b10–81a5) and notes how their population levels fluctuate (Egerton, 176–77). Mice, he claims, can strip a field in a single day. Ancient farmers used pigs and smoke to root them out and wild weasels (galea) and foxes also helped to control the population. Indeed, mice feed up to 20 times a day and can produce between three and twelve young five to ten times a year. Welton relates (255) that “in 1926–1927, house mice nearly took over the fields of California’s Central Valley, living in them in a density of 202,000 mice per 2.5 acres.” Vergil complains of their burrows in threshing floors (G. 1.175–83). Pliny (8.82.220f.) relates instances of their more annoying habits – he calls them “incolas domuum” (“house inhabitants”) – destroying property, interrupting sacrifices, and even driving out entire the population of towns by eating everything in sight, even iron. In fact, entire cities and towns were forced to move due to mouse incursions (Kitchell, 13–14) and metal eating became proverbial for mice (cf. Douglas, 58–59; Papadimitriou). In an ironic twist, during the siege of Casilinum by Hannibal, one man sold another a mouse to eat for 200 denarii. Mice invaded homes and destroyed property ranging from books (Anth. Pal. 3.603) to lyre strings (ibid. 9.410). Another poem from the Anthology (Didot 3.7.70 reported in Douglas, 60) has a riddle: “What small animal is inedible but if you take a letter away, becomes a large edible one?” The answer: μῦς (mys, mouse) and ὤς (hys, pig). Herodotus (2.141) relates a story in which the Egyptian king Sethos won a
battle because, as a dream had predicted, mice devoured the leather parts of his enemy’s weapons and he mentions a statue of Sethos holding a mouse with the inscription “Look on me and fear the gods.” Strabo (13.1.47) relates a similar event taking place in the founding of the town Hamaxitus in the Troad, and sees in it the rise of the relationship between Smintheus and the mouse. Aelian (NA 12.15) repeats all this and speaks of the sacred mice in Smintheus’ temple, some of which were white.

It is no surprise, then, that Latin and Greek have many names for mousetraps, which were constructed of wood. Greek: *dolos* (Batrachomyomachia 116) *myagra* (Anth. Pal. 9.410, lexicographers) and the terms *rhoptron* (Archilochus 90, Pollux 7). The word *hipos* (Pollux 10.155, on Aristophanes Plutos 815, cf 7.41), referred specifically to the part of a mousetrap that struck the mouse. Oppian (Hal. 2.156–61) describes a trap (page) which catches the mouse in a hollow dome, allowing a child to come and take it out alive. Latin words listed in L&S include *muscellarium* and *muscipulum*. On a possible Bronze Age mousetrap (which may also be a snake house or an instrument for smoking out bees) see Karageorghis and Drummond. A reconstruction of its mechanism is shown in Karageorghis (1992, fig. 11) and it would capture the mouse with a sliding door. Callimachus (frag. 177, Pfeiffer) depicts a man setting a mousetrap. The *Geoponica* offers recipes for mouse poisons (13.3.4).

Rodents were linked to disease, and Apollo Smintheus – an eastern Greek god especially popular in the Troad, whose name is variously explained as a Mysian, Cretan, or Aeolic word for mouse/rat – was associated with them (see above). The god was taken as an averter of rodent-borne diseases and the plague that begins the *Iliad* is sent by him. Conversely, the mouse was also commonly used to help cure ailments. Pliny (HN Books 29 and 30, passim) mentions mouse dung ash, ground up baby mice, burned mice, mouse brains and other oddities as cures to help eyelashes grow, to improve one’s sense of taste, to help cure rotted teeth, foot disorders, lung complaints, and much more.

Calling someone a “mouse” could be either a term of endearment (Martial 11.29.3) or the equivalent of calling them a “rat” (Petronius 58). And in later Greek, calling someone a *myōxia*, or “mouse-hole,” was also a term of reproach (Hesychios and Suidas). Several words for mouse dung existed: Greek, *myochodon* (an insult), *myskelendra*; Latin, *muscdera*. Several proverbs involved the mouse, such as the Greek “The mouse has tasted pitch,” said when someone greedily seeks something only to have it turn out poorly.

In literature the mouse is used when images of sneakiness, quick movement, timidity, and the like are required. Two of the most famous literary mice are from Horace. First is his well known telling of the city mouse and country mouse (*Satires* 2.6) but his quote “*parturient montes, nascetur ridiculus mus*,” “the mountains will go into labor, but a silly little mouse will be born,” (*Ars Poetica* 139) has endured over the ages as a catch phrase for overly ambitious literary efforts. The humor of small things acting on a grand scale was effectively employed also in the *Mock Epic* the *Batrachomyomachia*, which relates the battle between frogs and mice. The writers of fable frequently employ the mouse, emphasizing its small size, curiosity, gluttony, and other traits, often stressing that even those with less power can triumph over larger foes.

Cf. echinees, ermine, jerboa, marmot, mus araneus, mygalē, pontic mouse, rat, satherion, shrew, simōr, vole.
Mule Greek: ἴμιόνος (bēmionos, “half-ass”), ὀρεύς (oreus); Latin: mulus, mula. The mule was no less important to the ancient world than it was to pre-industrial America. These hybrid animals are ideally suited for carrying humans and objects over a wide variety of terrains. They are larger, stronger, and more tractable than a donkey, swifter than yoked oxen, and tougher than a horse. In what Gregory has called the “equine hierarchy,” it was second only to the horse and far above the donkey (Theognostus, 996). By analogy, consider that, in 1910, the United States had 4.1 million mules valued at $120 each. Horses, which had declined in number over the previous years, were worth less than $90 each (Arnold, 36). Compare the pairs of mules sold by one Euctemon, one for the enormous price of 8 mnaï and the other for 550 drachmas (Isaeus 6.3, cf. Martial 3.62). These must have been racing mules, and one doubts that working mules would have fetched such a price. Still, in Greece (much more than in Rome), while the horse might be the sign of idle rich, the mule served functions that put it at a higher level than the lowly donkey.

In English, the term “mule” should technically be reserved for the offspring of a female horse (mare) and a male donkey (jack, he-ass) and “hinny” should be reserved for the offspring of a female donkey (jenny, she-ass) and a male horse (stallion). But the term “mule” is commonly used in modern literature when speaking of the animal in general. The ancients, especially the Romans, attempted to make fine distinctions among types of mules depending on their parentage. Specialized words existed for each, even if the words were often used loosely. The following example will demonstrate this.

Varro (Rust. 2.8.1–2, Ling. 9.28) says that a mulus comes from a mare and a he-ass (cf. Isidore Etym. 12.1. 60). Pliny (HN 8.69.171) calls this offspring a mula. Yet later in the same passage he says a mula can also come from a stallion and a she-ass. Columella (6.37.3) says that a mula can be born from: (1) a mare and a he-ass; (2) from a she-ass and a stallion; (3) from a mare and a male onager (cf. Mule 2). Later Greek documents, such as papyri, introduce the Greek word moule based on the Latin.

Homer uses oreus and bēmionos interchangeably and even Aristotle uses the terms sloppily. In a long passage on the fertility and production of mules, he uses bēmionos as the term for mule throughout (Gen. an. 747a28–49a7), but in
another place (Hist. an. 577b5f.) his usage is confused. He first describes the sexual maturation and sterility of the mule (o’reus). He then switches terminology and begins to speak of the Syriophoenician female hēmionos. Although this word is used regularly of mules, here it is another animal entirely (mule 2). He then immediately refers to the γίννος (ginnos), which is is a sort of deformed and stunted mule produced when the mare carrying it is sick during pregnancy (cf. Gen. an. 748b34f.). Then he states that the hēmionos can live for up to 80 years. Such loose usage of terms plagues the study of this animal.

Strabo (4.6.2) uses the term ginnos in a looser manner, apparently just referring to stunted equids, for he says Liguria has many ginnoi, both horses and mules (ἡμίονοι). The Latin hinnus is clearly related to ginnos but, according to Varro (Rust. 2.8.1–6), it is the offspring of a stallion and a she-ass (cf. Ling. 9.28, hinnulus). Columella (6.37.5) agrees and adds that their name is onomatopoetic for the horse’s whinny. On the history of the word ginnos see Wolicki, who believes that it changed over time. The diminutive hinnulus can also refer to a newborn mule born from a stallion and a she-ass (Pliny 8.44. 172). Martial (6.77.7) uses the Latin form ginnus in a context that seems to indicate he has stunted mules in mind. A burdo is a later Latin word that also indicates the product of a stallion and a she-ass (Isidore Etym. 12.1.60). It appears in Greek as a borrowing in the Edicts of Diocletion as βορδῶν (bordōn).

The sterility of the mule caused widespread comment in antiquity. “When mules give birth,” was a saying equivalent to the English “When pigs fly,” i.e., never (Herodotus 3.153, Suetonius, Galba, 4.2). Columella, amid his lengthy report on proper mule husbandry, reports (6.37.3–4) that in parts of Africa mules give birth so commonly that it is not considered an omen. Aristotle (above and Gen. an. 748b34–49a7) discusses at length the reasons for the mule’s infertility and various factors affecting the generation of mules. He claims that a male mule can sometimes impregnate a female horse, and that while a female mule can conceive, she cannot carry to term. In fact, females can occasionally carry to term, but male mule sterility is fairly inevitable (Benirschke et al., 31; Ryder).

In literature, the mule appears as early as line 50 of the Iliad where they and dogs are the first creatures killed in Apollo’s plague, identified by Bernheim and Zener as equine encephalitis. They pull the wagon with Priam’s ransom for Hector’s body (Il. 24.277–78), are bred on Ithaca (Od. 4.635–37) and Nausicaa brings her laundry to the beach in a mule-drawn wagon (Od. 6.81–84). Herodotus (cf. Strong) capitalizes on the mule’s sterility and half-breed nature to use it as a symbol of wonders and anomalies that result from mixed race marriages, the most famous instance of which is Cyrus, the “mule” that resulted from the mating of a Median and a Persian. Thus, Croesus receives a Delphi utterance that says he will rule until a mule rules the Medes and becomes over confident. A mule giving birth is also an omen that dooms the Babylonians who revolted against Darius (1.151–53). They undoubtedly appeared on stage, drawing carts like those which carry Agamammon’s booty in Aeschylus’ play and Euripides brings Andromache on stage in a mule-cart (Troades, 572f.; Arnott, 178). In Olympian 5 and 6, Pindar praises victors in the mule race and we know from commentators on Aristophanes that Hiero of Syracuse also won a mule race at a festival sufficiently important to have merited a Pindaric ode, now lost. Mules are found throughout literature, but generally in casual references to pack animals (Romer) and farm workers. Plato (Laws 873d–e) considers the legal situation of death caused by a mule – a necessity as mules
are ferocious kickers (Burnham, 102) as illustrated on a Roman mosaic (Toynbee, 192, pl. 98).

Mules made their way into popular sayings (Köhler, 121; Otto, 232–33) such as Mutuum muli scabunt, loosely, “One mule scratches another.” To call someone a mule was definitely an insult, but the subtext of the insult is hard to pin down. The locus classicus is Catullus 83.3 where he shouts in exasperation to his rival, “Mule, nihil sentis?” Multiple explanations have been offered but certainty is hard to come by (Kitchell; Papanghelis; Rockwell; Zarker). The mule made its way into fable as well. One fable expresses the hierarchy of equids perfectly, for the mule gets twice as much to eat as the donkey, but has to carry twice the load in return (Perry, 475, no. 263, cf. also Babrius, 62; Phaedrus 2.7).

Above all else, the mule was a versatile machine for the Greeks and Romans, performing a wide variety of chores, well documented by Raepsaet and Toynbee (1973, 185–892). Aelian (NA 6.49) relates the story of a mule that worked during the construction of the Periclean Acropolis which refused to stop working, though aged, and was put on public welfare in gratitude. Their uses were many (Romer, 82–84): working on an individual farm pulling a plow (Louvre F77 = Isager and Skydsgaard, 51, pl. 3.3); working in teams to draw carts and wagons; as an individual pack animal; being used in herds to bear burdens for the Roman army. Indeed, their ability to carry heavy burdens was legendary and when Marius reformed the Roman army (ca. 107 BC), the soldiers earned the nickname muli Mariani for the heavy packs they had to bear. They turned mills, helped to pull boats along canals, dragged felled trees, firewood, and marble blocks, and carried game back from the hunt. Mules even carried the state’s mail when they powered the carts of the cursus publicus. They were invaluable for the army and followed it throughout the provinces (Armitage and Chapman, 345–49; Berger et al.). There is evidence for mules in Britain as early as AD 125 (Armitage and Chapman, 340) and they were exported from northern Italy throughout the empire (Berger et al.). Skeletal remains offer some evidence of rough treatment with an overly tight rope harness or halter. Trajan’s column has seven scenes with mules, showing them pulling artillery, pulling carts, or carrying panniers and they appear six times on the column of Marcus Aurelius (Dixon and Southern, 236). In short, mules were the non-motorized work vehicles of their age. Their surefootedness and steady gait made them favorites for drawing wagons and carts and they were commonly used as mounts (the Greeks have a verb, astrabeuo, for riding a mule and an astrabē is a mule saddle). Cf. Lysias 24.11, where it is implied that the mule is a mount for the wealthy and is to be preferred to riding a horse. With such a multiplicity of uses and an obvious economic value, it is no surprise that both Greece and Rome had thriving mule farms (Hyland, 35–36, 71–72) or that many people made livings as mule breeders, muleteers, or those who made their harnesses and bridles (Molin). A male donkey is shown mounting a mare on an RF phialē in Heidelberg (Griffith, fig. 14).

The mule is very common in both Greek and Roman art. A search under the term “mule” at the BzAr, for example, returns 1,027 records. Mule riders and mule-drawn carts are depicted on works of art ranging from Greek vases and gems to Trajan’s column, although sometimes it is difficult to differentiate between a horse and a mule in a piece of art.

In coat, height, and shape they look like a horse. But, one can always tell a mule from a horse by the tail. Horses have a short tailbone with long hair. Donkeys and mules have a long tailbone with a tassel tail. And, a mule brays more like a donkey while horses and hinnies neigh” (Arnold, 36).
Art affords opportunity neither to inspect tails nor to hear vocalizations. In general, however, the mule tends to be depicted with very long legs and medium length ears whereas a donkey is stockier with longer ears. A donkey always has a white muzzle whereas a mule can have one or not. Context is also useful. Mules are frequently the mounts of Dionysus or Maenads on Greek vases and the mule is generally ithyphallic. In the common scene of the return of Hephaestus to Olympus, the mule is the mount of choice (Seeberg). As a general rule, if the animal allows the god's feet to drag near the ground, it is probably a donkey, but if they ride high, the animal is a mule. A *biga* drawn by mules and driven by a Nike appears on fifth century BC coins from Messana and Rhegion, Sicily (Richter, 1930, 19, fig. 84), a reference to the fact that the tyrant Anaxilas had won the mule-car race at Olympia (Pollux, 5.73, quoting Aristotle). Coins from second and third century AD Ephesus show mules drawing a covered wagon or a wagon that bears the cult statue of Artemis (on which, see Hill, 87–88). Compare the Roman sestertii showing mules drawing the ritual two-wheeled covered wagon called the *carpentum* (Toynbee, 185–86). Greek rytha commonly depict mules and donkeys. Since these vessels show only the head of the animal (often in a bridle worthy of study), it is hard to determine which rhyton represents which animal. For example, the rhyton by the Colmar painter in the Petit Palais collection in Paris (ADUT00376) is called a donkey by Hoffmann (9, pl. 13–14), but a mule on the museum’s web page. Hoffman (pl. 13.3–4) identifies a rhyton in Leningrad as a mule, not a donkey. Many of these rhyta show the animal with its mouth open and teeth showing. This may well indicate braying and might therefore indicate a donkey rather than a mule. Muleteers know that a mule enjoys a good roll in the dust after a day’s work (Burnham, 102) and this is depicted in at least two gems (Boardman, no. 357, 502; Richter, 1968, no. 207–08), the second of which looks down on the animal on its back and, as a small masterpiece of naturalism, vividly captures the mule’s clear enjoyment (cf. horse). Other gems show the mule walking, sometimes in a sexually aroused state (Beazley and Boardman, no. 69, “early Classical”). Armitage and Chapman (345–49) have set forth clear evidence for the presence of the mule in the art of the northern Roman provinces where the mule appears on many funeral monuments (Toynbee, 186–88). They also had an urban presence, as shown in a mosaic from Ostia with several mule scenes, including two where names are given to the mules: *Pudes* (Bashful), *Podagrosus* (Gouty), *Potiscus* (Thirsty), and *Barosus*, which Toynbee (1948, 33; 1973, 189) translates “Mollycoddle” without explanation.

An indication of the value of this animal to the ancients is the survival of three veterinary works devoted mostly to horses, mules, and donkeys. Two are entitled *Mulomedicina* by Chiron (Oder) and Vegetius (Lommatzsch) while, another, whose title is not known, is a series of commentaries on works by Pelagonius (Adams; Fischer). All were written rather late but are essential compilations and contain centuries of lore. Indeed, Wright has shown that the presence of Roman troops in a given place brought with it the presence of “mule doctors.”

Adams, 1995; Armitage and Chapman, 1979; Arnold, 2008; Arnott, 1959; Beazley and Boardman, 2002; Benirschke et al., 1964; Berger et al., 2010; Bernheim and Zener, 1978; Boardman, 1968a; Bodson, L., “Veterinary Medicine,” in *OCD*; Burnham, 2002; Dixon and Southern, 1992; Fischer, 1980; Gregory, 2007; Griffith, 2006; Hill, 1897; Hoffmann, 1962; Hyland, 1990; Keller, 1.259–70; Kitchell, 1979; Köhler, 1881; Lommatzsch, 1903; Martin, 1990; Molin, 1995; Nachtergaele, 1898; Oder, 1901; Otto, 1890; Papanghelis, 1978; Perry,

**Mule**

Homer mentions the “wild she asses” (*Il.* 2.852) from the land of the “Eneti.” This land was later Illyria, though Homer is speaking of Paphlygonia at the time. Aristotle (*Hist. an.* 577b24f.) refers to a *hēmionos* from Syriaphoenicia which is not sterile. Elsewhere (*Hist. an.* 580b1f.) he places it in Syria and tells us that it is extremely swift like the wild ass (*oonas agrios*), a term normally reserved for the /o.sc/n.sc/a.sc/g.sc/e.sc/r.sc/. According to Aristotle, nine of these “Syrian mules” were sent to the Persian satrap Pharnakes, indicating they were rare or hard to catch. This puts one in mind of the third century BC Zenon papyrus (cf. DONKEY, ONAGER) that mentions a “wild mule (*hēmonagrion*) out of an ass,” and three foals of a wild mule, all sent to PTOLEMY II as a rarity for his collection. Devereux has attempted to sort out the tangled skein of allusions to wild asses, onagers, wild mules, and domestic mules. Aristotle’s wild mule, therefore, might be a hybrid of a horse, wild or tame, and an onager. Columella (8.37.3) specifically says that a *mula* can be bred from a wild ass (*oonas*) and a mare (*equa*).

Devereux, 1965; Thompson, 1910.

**Mus araneus** A small mouse, most likely a type of shrewmouse, whose bite is especially troubling (Columella 6.17.1; Pliny *HN* 20.34.89, 29.27.89). The name literally means “spidery-mouse.” Cf. shrew.

**Mus(i)mo** This wild sheep was located in Spain and Corsica (Lucilius 256; Pliny *HN* 8.75.199). An excellent candidate for this animal is the modern mouflon (*Ovis musimon*) which today is confined to Corsica, Sardinia, and Cyprus (WMW, 1231–35). Isidore (*Etym.* 12.1. 60) says that this animal a hybrid produced from the mating of a she-goat and a ram.

**Myagros** Greek: μύγαρος (“mouser”). Nicander (*Th.* 490) classifies this as a harmless snake. Philoumenos (22.7), however, thinks it is venomous and recommends the same antidotes for its poison as for the AMMODYTES. There is no physical description so identification is tenuous. G&St. (546) suggest *Vipera ursinii* (see VIPER), one subspecies of which (*V. u. graeca*) is found in Greece and Albania.

Gow, 1967; Leitz, 137–38.

**Mygalē** See SHREW.

**Myops** See HORSELY.

**Myothēras** μυοθῆρας A mouse-catching snake, Aristotle *Hist. an.* 612b3, scholia on Nicander *Th.* 490.

**Myrmēkon** Greek: μυρμήκειον; Latin: *myrmecion*. Listed as a PHALANGION in antiquity, this animal got its name from its resemblance to an ant (*myrmēx*). Nicander (*Th.* 747–51) gives a careful description: bright red neck, sooty black head, dust-colored body covered all over the “starry” back with spots. The scholia on Nicander preserve the same description but also provide some information from the lamentably lost work of Stratoz (*ca. 70 BC to AD 10*), *On Strikers and Biters*, including the alternative names of *myrmēkoides* (“ant-shaped”) and *myrmēx hērakleōtikos* (“Heraclean ant”). Philoumenos (15.3 = Aetius 13.20) repeats the report of Nicander, specifying that it resembles a large ant. Pliny (*HN* 29.27.84 and 87) seems to describe it twice. In the first passage he does not name it but gives a description that matches Nicander’s. In the second passage the description is very similar and names the animal. The σιφών (*siphōn*) defined by Hesychius as “an ant-like” type of beast may be this animal as...
well. What, then, is this consistently described animal? Keller (2.467) identifies it as *Salticus formicarius (= Myrmarachne formicaria)*, a jumping spider. G&S (ad loc., p. 185) add the identification of Koch and Brenning as *Galeodes aranoides*. This would have been known from Egypt, Israel, and the near East. Another possibility discussed is *Mutilla europea*, the velvet ant, on which see /s.sc/p.sc/h.sc/e.sc_. Beavis (48) is quite confident in accepting this identification.

**Myrme koleo** Greek: μυρμηκόλεων (myrme koleo̱n, “ant-lion”). Agatharchides (frg. 70a = Burstein, 118) speaks of Aethiopian lions that are called “ants” and says they resemble other lions except for the fact that their genitals face backwards. Strabo (16.4.15) repeats the story. These descriptions seem to be based on real animals, and being retromingent and leonine, they are mammals. Meyboom (45, 127–28) suggests an identification with the “dassie,” i.e. the rock hyrax. This is not to be confused with the dassie rat (family *Petromuridae*), which lives in far southwestern Africa and is a ground dwelling rodent which resembles a squirrel with a less fluffy tail (WMW, 1649–50). The rock hyrax (genus *Procavia*), is a ground dwelling, herbivorous mammal which rather resembles a prairie dog (WMW, 1043–44). Despite its appearance, it is not a rodent, being more closely related to the elephant (Hoeck, 177–78). The species in question is probably the Syrian hyrax (*Procavia syriacus*), found from southwest and northeast Africa, to Sinai and Lebanon, and on the southeast Arabian Peninsula. Its size is from 10 to 12 inches long and it is 5 to 8 pounds in weight. It tends to live alone, not in colonies. The claim that the sexual organs point backward is undoubtedly a reference to a gland beneath a raised patch on its back, surrounded by hairs which are erected during mating behavior. The gland itself is exposed by the hairs and is globular and odoriferous. The ancients may well have encountered the gray hyrax (*Heterobryax*), since *H. brucei* is still found in Egypt and *H. antineae* in the interior of Algeria.

A different sort of ant-lion arises from the Septuagint translation of Job 4.11, where an obscure Hebrew word for lion is translated μυρμηκολεων. The Vulgate translates the same word as *tigris* (Beavis, 249; D&K, 45), and other translations of the passage have simply “lion.” Different sorts of animals arose from this mistranslation. The Physiologus (Curley, 49), thinks of this animal as having a lion’s face and the body of an ant. Composed as it is of two opposed natures it can find no common diet and perishes. The moralization, that we humans cannot follow two paths at once, is more important than any attempt to describe a real animal. Isidore (*Etym.* 12.3.10) speaks of an animal that hides in the dust to hunt ants. Gregory the Great (*Moralia in Job* 5.20.40), writing in the sixth century AD, clearly knows the animal as an insect and offers an accurate account of how it captures ants. This animal is identifiable as the larval stage of *Myrmeleontidae* and *Acanthoc利sinae*, insects known as Lacewings (order *Neuroptera*). These larvae can dwell in the sand and track prey. The ant-lion of some species construct conical pits and lie with only their jaws extending from the pit (Winterton). The *myrmecoleon* enjoyed a lively interest throughout the Middle Ages (Beavis, 250–51; Druce), also being called *Formicaleon*, *Formicoleon* or *Mirmicoleon* (Druce).

See also Indian ant.

Nabun Greek: ναβοῦς (nabous); Latin: nabun (accusative, for nabus). The Latin form comes from Pliny (HN 8.27.69) who clearly states that this is the Ethiopian word for camelopardalis, giraffe. The Greek inscription VABOYC (NABOUS) appears on the Palestrina Nile Mosaic in section 5, next to a quadruped with yellowish-brown skin but no spots (cf. IG 14.1302). The animal depicted on the mosaic most closely resembles a single humped dromedary, see camel, which puts the mosaic’s identification at odds with that of Pliny. Moreover, there are well labeled and identifiable giraffes elsewhere in the mosaic. The simplest explanation is that either Pliny or the artist misused the Ethiopian term. Scholars, however, have argued over the identification of the animal on the mosaic, also identifying it as an eland or a zebu. Meyboom (119–21) collects the scholarly evidence and sensibly concludes that it is a camel. Of interest is the fact that there exist pictures of camels, both one- and two-humped, which bear spots, indicating that, since few had seen a camel, and fewer still a giraffe, the two animals could easily be blurred together.

Names, given to animals Both literary and archaeological sources preserve for us many names given to animals by humans. As would be expected, animals that share a close relationship with humans, such as the dog, most frequently receive names. Yet, as in modern times, the ancients also gave names to work animals. Evidence for naming animals comes as early as the Linear B tablets from Knossos (the Ch series) which record the names of oxherds as well as the names of their cattle (Killen; McInerney, 50; cf. DOCS2, 105, 213, 438 and Furumark, 28–29, who incorrectly took them to be horses). Notable examples include: Aiolos (cf. Homer Od. 10.2, “Nimble”; Kelainos, “Blacky”; Xouthos, “Swifty” or “Tawny”; Podargos, “Swift-foot”; Stomargos, “Noisy”; Oinops, “Wine-faced.”

Homer offers names of several animals such as Argos (Swifty, Od. 17.292), the long suffering dog of Odysseus. Hector’s horses are named Xanthos, Podargos, Aithon, and Lampos (Tawny, Swiftfoot, Blaze, and Bright, Il. 8.185). Podargos was also the name of a horse of Menelaus which he yoked with Agamemnon’s mare, Aithē (Fiery?, Il. 23.295). Achilles’ own horses, Xanthos and Balios (Dappled? cf. Athanasakis) were famous since they were immortal (Il. 16.148f., 17.426f.) and wept at Patroclus’ death. Theocritus provides the names of two horses, Lepargos (Whitecoat) and Kymaitha (Plumping) (4.45–46), and of a bull, Phaethon (Bright) (25.139), perhaps related to mythology.
For more names from literature and mythology see Toynbee (1948, 61).

Between the evidence from the authors and from the remains of antiquity, we have many names for dogs. Jeschonnek (3) lists six dogs’ names from inscriptions, the most notable being *Chrysis* (Goldie), *Dromos* (Runner), and *Theia* (Heavenly), and provides an extensive list of other names throughout (3–30). Xenophon (*Cyn. 7.5*) lists 47 names for hounds which are all two-syllable names and are thus, he says, easy both to call out and for the dogs to remember. Pollux (5.42, 45–48) offers 15 names, many of which are from mythology. Ovid, recounting the death of Actaeon at the jaws of his own hounds, gives 36 names, mostly of Greek origin (*Met. 3.143–253*). Columella (7.12.13–14) offers names in both Latin and Greek. An interesting source is the Calydonian Boar hunt scene on the François vase (ca. 550 BC): *Labros* (Boisterous); *Methepon* (Tracker); *Egertes* (Rouser); *E[ub]olos* (Lucky-Dice-Throw); *Korax* (Raven); *Marpsas* (Snatcher); and *Hormenos* (Rusher) who lies dead beneath the boar (Cristofani et al., pl. 148–580. Names also come to us through numerous inscriptions and from poems such as those in the *Palatine Anthology* which preserves a number of epitaphs for animals, some real and many, such as that for an ant (7.209), merely artistic exercises. Anth. Pal. 7.211 commemorates the final resting place of a white Maltese named “Bull.” Many dog names describe actual or desired traits in the animal: *Ferox* (Fierce); *Alkē* (Courage); *Rhōmē* (Strength); *Oribasus* (Mountain Traveler). Other names are purely descriptive such as *Leucon* (Whitey), *Hylactor* (Barker) and *Pamphagos* (Voracious). Some are as whimsical as today’s names: *Tigris* (Tigress); *Skylax* (Pup); *Margarita* (Pearl). A Roman mosaic in the Bardo museum shows two dogs named *Ederatus* (Ivied) and *Mustela* (Weasel) (Blanchard-Lemée et al., 112–13, fig. 74) and another hunt scene (184–85, fig. 132) is filled with horse and dog names.

The names of the animals of famous people are left to us. Alexander the Great’s noble horse, *Boukephalos* (Ox-head) was renowned for his bravery (Plutarch *Alexander*, 6.1f.; Arrian *Anabasis Alexandri* 5.19). When he died in battle at Hydaspes, Alexander erected a city in his honor (Quintus Curtius, 9.3.23; Justin, 12.8), an honor he also bestowed on his dog *Peritas* (Plutarch *Alexander*, 61). We know the name of Hannibal’s favorite elephant (*Syrus*, “Syrian”) because Cato famously refused to name any generals in his account of the Punic Wars, and named only this animal (Pliny *HN* 8.5.11–12). The same passage of Pliny tells us that Antiochus had elephants named *Ajax* and *Patroclus*. *Nikon* was the name of Pyrrhus’ elephant (Plutarch, *Pyrhurus* 33.4). Caligula famously coddled his horse *Incitatus* (“Charger”) and was rumored to be planning to run it for consul (Suetonius, *Caligula* 55). Hadrian even wrote a poem to honor his favorite hunting horse, *Borysthenes* (Dio Cassius 69.10.2), and the inscription has been preserved (*CIL* XII 1122; Henderson, 16).

The Greek names of many horses are preserved (Jeschonnek, 31–55). These too largely tend to be named for physical attributes such as color or speed and thus several overlap with dog names. During the Roman period, our knowledge of the names of horses increases dramatically due to the widespread interest in chariot racing. They are far too numerous to list here, but some samples from Toynbee’s lists will be illustrative. Some names are based on appearance or markings, such as *Maculosus* (Dappled), *Altus* (Tall), and *Aster* (Star). Others relate more the horse’s disposition or abilities: *Celer* (Swift), *Dromus* (Runner), *Ferox* (Ferocious), and *Volens* (Willing). An unknown Roman erected a statue of his horse named *Samis* at a water-based
healing spa near Tivoli. The inscription (CIL XIV, 3911) commemorates the cure of the horse and gives a bit of its history (Frizell, Kitchell). Compare to this the epitaph of the mare Aethyia (Anth. Pal. 7.212). Animals from the gladiatorial arena could also be given names. A famous example is to be found in a third century AD mosaic from Smirat in Africa which commemorates the venatio given by one Magerius. Four named gladiators confront four leopards named Victor, Crispinus, Romanus, and Luxurius. Victor is battling a venator named Spittara, who seems to be fighting on short stilts (Mazzucchi 73, n. 3; Blanchard-Lemée et al., 209–14, fig. 162).

At the Hunting Baths at Lepcis Magna there is a similar leopard hunt where the venatores are named, as are three of the six leopards: Rapidus, Fulgentius, and Gabatius (Toynbee, 83–84).

Some other, less common, animals were named by their owners (Jeschonnek, 55–59). Jeschonnek reports an unedited early fifth century plaque in Berlin that bears the name of a mule, Phalios (= Phalaros, “Whitepatch”). Fighting cocks named on vases bear names such as Chaitos (Crested) and Sphekis (Wasp), and Aelian (NA 12.37; cf. Athenaeus 13.606b) tells of a cock named Kentauros (Centaur) that formed an attachment to the cupbearer of Nicomedes of Bithynia. Theocritus and his scholia preserve the names of some goats: Kissaitha (1.51, “White-ivy?”); Knakon (3.5, “Tawny”); Konaros (Pinecone, relating to the shape of its horns). Theocritus (4.45–46) also passes on the names of calves: Lepargos (Whitecoat); Kymaitha (sense unsure) and a bull, Phaethon (Phaethon, mythological). Plutarch (Antony 65) tells of a donkey named Nikon (Victor) that gave Augustus a good omen before Actium. The emperor Antoninus (not Caracalla, as Lazenby, 305) had several pet lions, one of which was called Acinaces, the name of a type of Persian sword (Dio Cassius 78.7.2–3) and Valentinian (Ammianus Marcellinus, 29.3.9) had two pet bears named Mica Aurea (Goldflake) and Innocentia (Harmless). The first name may simply be a name, Mica, and an adjective describing the bear itself, “golden.” Not to be outdone, Domitius kept fish in a pond at Baiai, according to Martial (4.30), which came to him when called by name. We even know the names of some “sea monsters.”Procopius (7.29.9–16) speaks of a whale that harassed the inhabitants of the shore near Byzantium for over 50 years until it beached itself and died. It had been given the name Porphyrios for its dark bluish purple color (Papadopoulos and Ruscillo, 206). The scholiast to Lycophron 344 (Jeschonnek, 59) felt compelled to name the two sea serpents that devoured Laocoön and his children – Porkes (Ring, Hoop) and Chariboioa (Delights in Shouting?). We even have the names of two tamed crocodiles (q.v.), Petesuchos and Suchos.

Athanassakis, 2002; Baecker, 1884; Blanchard-Lemée et al., 1996; Cristofani et al., 1981; Darder Lissón 1996; Friedländer, 1875; Frizell, 2004a; Furumark, 1954; Henderson, 1923; Jeschonnek, 1885; Killen, 1992–93; Kitchell, 2004; Lazenby, F., 1949; McInerney, 2010; Mazzucchi, 2002; Mentz, 1933; Papadopoulos and Ruscillo, 2002, Toynbee, 1948.

**Names, specialty** English has a vast specialized lexicon for animals, many of which are confined to use on the farm or by experts. They may refer to the age, gender, or condition of the animals. Most people are familiar with words like puppy, kitten, calf, foal, and duckling but fewer would recognize kit (fox), poult (chicken/turkey), or smolt (salmon). Likewise, it may come as a surprise that “calf” can refer equally to cows, rhinoceroses, and whales. Commercial needs often create a series of names, as is clear in the case of pigs: a shoat is an unweaned young pig, a “sucker” is a pig between birth and weaning; a boar is a male pig of breeding age; a barrow, is a male pig castrated before
sexual maturity and a stag one castrated after puberty; a gilt is a young female that has not mated; and a sow is a breeding female, or a female after the first or second litter. Antiquity had an equal plethora of names for the young of animals.

Aelian (NA 7.47) has a fairly long list of names for animal young. A full list would be useful, but the following sample will suffice for the present. All Greek is transliterated and citations may be sought in LSJ or OLD. The names for young are often formed as a diminutive. In Greek they may end in: -ideus, as in αἰδόνιδεσ (nightingale), αλόπεκιδεσ (fox), γαλίδεσ (weasel), λυκίδεσ (wolf), παρδαλίδεσ (leopard); in -idion as in εχιδίον (young viper) or τραγίδιον (young goat, kid); in -iskion as in ελεφαντίσκιον (elephant). Many specialized names also exist: αρκίλος (bear cub); δαμαλίς (young cow, heifer); κυνίσκος, σκύλακιον (puppy); μοσχός and πορτίς (calf); πῦλος and πολάριον (foal); πσακάλος (birds, snakes, crocodiles); ελαφίνης, ελές, νεβρός (fawn). Latin diminutives tend to end in -eus, as in διδήνος (deer) and εχελέιος or -ulus as in αστελλολός, βουκόλος, πορκίολος. The word pullus, often modified by an adjective, was a generic term for young. Several Greek words carried directly over into Latin: γυρινός (tadpole); σκυμνός (generic and for adults); πελαμίς (tuna).

As in English, animals with a specific husbandry attracted many specialized names. To return to pigs, note the following Greek terms: δελφάκιον and χοιροδελφακίον, piglet (but cf. Schaps); χαπάλας, τηλαζόν χοίρος, and ορθογαρίκος, suckling pig; κολαβρός and χοιροπόρομα, piglet; μεταχοίρον, runt. The same is true in Latin: sus and porcusla (generic and for adults); porcellusla and porculus (piglet); porcilia (sow); porcetra (a sow that has given birth to one litter); aper (boar, especially wild, cf. apra); scrofa (breeding sow); verres (a boar-pig); maialis, a castrated boar. Some names pertaining only to cooking: traganus (the name for a way to serve suckling pig); steriligula (womb of a sow that has not littered); sumen (sow’s udder); volva (sow’s womb).


Natrix Lucan 9.720 calls it “violator aquae” and Wick (2.301, ad loc.) suggests that the name is the Latin form of hydros (cf. cherysydrōs, chelydros). No solid identification is possible, but Wick suggests the non-venomous European grass snake (Natrix natrix) or dice snake (Natrix tessellata). Leitz (115–19) suggests Vipera lebetina.


Nilgai The nilgai, or bluebuck (Boselaphus tragocamelus), lives in Eastern Pakistan and India, though its ancient range was broader, perhaps living in the Near East until ca. 500 BC (WMW, 1145–46). A member of the Bovidae, it resembles a large, stocky deer or an eland, with a mane. It can stand almost 5 feet at the shoulder and weigh over 500 pounds. It has been associated with various ancient animal names, but with no certainty.

See hippocaphos, oxen, wild, trage-laphos.

Nitela Also nitella, nitedula. Pliny (HN 8.82.224) says this animal hibernates like a dormouse, and some take it as such. Martial (5.37.8) compares a maiden’s hair to that of a “golden” nitela. Identification remains elusive.

See also hamster, vulpecula.

Okapi *Okapia johnstoni*, a forest giraffe of striking appearance that was not discovered in its Congo forest home until modern times. Stanley had heard of it during his famous trek but it was not until a skull and two skins were retrieved by Sir Harry Johnston in 1899–1900 that it was identified as a separate species (Lankester, 279–82). It stands 5 to 5.5 feet tall and has the giraffe’s long tongue for browsing. Its coat is brownish/black with white stripes on its rump and legs, which also have white “stockings” (WMW, 1085–86). Its remote location in the dense Congo forests and its solitary, shy nature make it very unlikely that the okapi was known to the ancients, despite the efforts of some to equate it to the onokentauros (Meyboom, 112).


Onager Greek: ὄναγρος (onagros), var.: onagron, onagron, onagra, onos agrios (“wild ass”, cf. Isidore *Etym*. 12.1.39); Latin: onager. The onager (*Equus hemionus*), or wild ass, is a member of the family *Equidae* (WMW, 1013–14). It stands between 3 feet 7 inches and 4 feet 2 inches at the shoulder and weighs between 441 and 573 pounds. It has long ears and legs and a short coat that is tan to reddish in color with a white belly and chest. It has an erect mane that continues along its spine as a dorsal black stripe edged in white. There are distinctive markings on shoulder and rump (Moehlman, 234). It is currently listed as “endangered” by the IUCN.

It is almost a surety that the ancients did not differentiate between the true wild ass and the onager. Wild asses include animals such as the Nubian wild ass (*Equus africanus africanus*) and the Somali wild ass (*E. a. somaliensis*). Such animals resembled onagers and were easier to tame and interbreed with the domestic donkey (Clutton-Brock, 92–95). Moreover, feral herds of asses would commonly have been established by runaway animals. Thus, not everything identified today as an onager is, in fact, one. But the ancients certainly would have been familiar with at least two sub-species of true onager, the Persian onager (*Equus hemionus onager*), which is endangered, and the Syrian ass (*E. h. hemippus*) which became extinct in the 1920s. They may well have encountered the kulan (*E. b. kulan*) in what is modern Turkmenistan and the khur (*E. b. khur*) in India. Oppian (*Cyn.* 3.183–250) describes them minutely and speaks at length of the story that male onagers love their newborn females but castrate newborn males. In ancient times their range extended
throughout the Near East and around the Black Sea. In fact, Strabo (12.6.1) calls the area of inner Asia Minor “onager grazing land.” Varro (Rust. 2.6.3) and Pliny (below) say they are numerous in places such as Phrygia and Lycaonia. Scenes depicting onager hunts are common in antiquity (Toynbee, 192–93, cf. Strabo 7.4.8 on onager hunting by the Scythians and Sarmatians). Captured alive, they may have been interbred with tamed asses and were shown in animal hunts in the games. The term ἡμιόνος, normally taken as a mule, can also refer to onagers. LSJ identifies the wild mules noted by Aristotle (Hist. an. 491a2–3) as onagers, and this might be correct, since elsewhere (Hist. an. 580b1–2) he specifies that this animal is not just the product of a horse and an ass. Likewise, LSJ identifies the wild she-mules of Homer (Il. 2.852) as onagers. Varro (Rust. 2.6.3, cf. Columella 6.37.3) says that onagers are good for breeding since they are easily tamed. This is not the case, however, and they were probably never domesticated (Clutton-Brock, 100–01). Celsus (2.18.2) carefully places the onager among the wild animals, separating it from domesticated animals. A Zenon papyrus (cf. donkey) mentions a “wild mule out of a horse” sent to Ptolemy II as a rarity for his collection (cf. mule 2). Ptolemy also had four pairs of them harnessed in his famous animal procession. Pliny (HN 8.69.174f.) offers many interesting bits of information. She-mules bred from a mare and a tame male onager are very swift and have hard hooves, but they also have an unbreakable spirit. In Africa, young onagers are called lalisiones and are delicious. This might be the African wild ass (Equus africanus), whose range today is on the African shore at the south end of the Red Sea. Compare Xenophon (An. 1.5.2) where the flesh of Arabian wild asses resembles venison, but is tenderer (cf. Dalby, 32, “Ass”). Martial describes the animal as “pretty” (13.100). In Babrius (67) an onager, though swift, gives way to a lion’s power. Vergil (G. 3.409) speaks of using dogs to hunt “timid onagers,” an odd adjective to describe an animal known for its biting and kicking. This ability to put up a good fight led to its inclusion in the animal games, such as those of Severus (Jennison, 89, Dio Cassius 76.1.3–5). Roman denarii issued between AD 206 and AD 210 seem to show an onager (zebra?) under attack in the games, probably those of Severus. Finally, a type of catapult was called an onager due to the kick backward it gave when fired (Cherretté; Ammianus 23.4.7).

It is generally difficult to differentiate between an onager and a donkey in art unless the scene is clearly in the wild, as in a second century AD mosaic with a lion attacking an onager (Parrish) or another from Nenning bei Trier or El Djem where a tiger attacks an onager on which the distinctive shoulder stripes are clearly delineated (Blanchard-Lemée; 205–06, fig. 150–51). Yet even here, given the lack of background scenery, one must consider the possibility that the fight occurred in the games. An onager appears on the palestra of the Nile mosaic (Meyboom, 25, fig. 11) and a terrified pair of onagers is attacked in a Roman mosaic from El Djem (Blanchard-Lemée, 205, fig. 150). A scene such as the one that IBK (97, 62–63) identified as two wolves attacking a donkey may just as easily show an onager. But in the painted tombs of Marisa an animal is clearly labeled ONAGRIOS (ONAGRIO). It sits and tears a snake apart, a story reminiscent of deer eating snakes or of the flesh-eating bull.


**Onelaphos** Greek: ὄνελαφος (onelaphos), “ass-deer.” Seven teams of this animal marched in harness in the great animal parade of ἐπτολεμύς II (Athenaeus 5.200f.). Toynbee (193) suggests that they were a sub-species of wild ass (ονάγης) and Jennison (32), citing Xenophon (An. 1.5.2) as the source of the name, goes so far as to identify this tentatively as the Persian onager (Equus asinus persicus = Equus hemionus onager). Rodríguez-Noriega Guillén identifies it as the roan antelope (Hippotragus equinus). Meyboom (113) suggests the onokentauros. See also hippagros, hipelaphos.

Rice, 1983, 89–90; Rodríguez-Noriega Guillén, 2002–03.

**Onokentauros** Greek: ὄνοκένταυρος, -αυρος (onokentauros, -aura, “ass-centaur”). This animal is mentioned by Aelian (NA 17.9), who is quoting Pythagoras in the time of ἐπτολεμύς II. His description seems clearly mythical, a version of the regular centaur which was part human and part horse. He states that it has breasts on its chest, a trait that Aristotle (Hist. an. 497b32f.) reserves for the human. A female ass-centaur is shown and labeled on the palestrina nile mosaic, leading Meyboom to devote an appendix to the animal (111–14, figs. 9, 10, 14). Meyboom lists the identifications that have been attempted based on Aelian and the mosaic: a conflation of a large monkey and a hoofed animal; the okapi (geographically untenable); and a gnu (wildebeest). Meyboom favors the latter since it has a mane, which he equates to the flowing hair of Aelian’s wildebeest. His arguments, though ingenious, are not persuasive and it is best to consider the onokentauros as mythical. In the Septuagint, the Greek onokentauros is used for the jackal.


**Orca** See whale.

**Orys** Greek: ὀρυξ. This animal appears in a list of Libyan antelope-like creatures in Herodotus (4.192), dwelling “between Egypt and the Tritonian lake” in Libya (4.186). Herodotus says it is a θηρίον (wild beast) approximately the size of a cow and says that its horns are used to make the sides of lyres. LSJ, s.v., tentatively identifies it as an oryx. Asheri et al. (714) suggest either an oryx or addax while How and Wells (ad loc. 1.366–67) cite older identifications as a buffalo but decide upon the Arabian oryx (Oryx leucoryx). Its horns are rather straight and not well suited for a lyre. The horns of the scimitar-horned oryx do curve, but are so long as to rule out any practical use in lyre making. If one simply considers the shape of the horns, the hartebeest (Alcelaphus buselaphus) or waterbuck (Kobus ellipsiprymnus) come to mind, for their horns already resemble a lyre. The IUCN places the range of each as reaching the southwest shore of the Red Sea. The addax has spectacular lyre-shaped horns (a nickname is screwhorn antelope) and once roamed all of northern Africa. Its horns could have been incorporated into the lyre. Males’ horns range from 2 to 3.6 feet long and females’ from 1.8 to 2.6 feet. It once was kept by the Egyptians but became extinct in the wild in the 1970s due to the demand for its meat and horns. It has since been bred in captivity and reintroduced into animal parks.

Asheri et al., 2007; How and Wells, 1967.

**Oryx** Greek: ὀρυξ (oryx); Latin: oryx. The oryx is a member of the family Bovidae, noted for a fairly large body size (up to 4.5 feet at the shoulder and over 400 pounds) and long, sweeping horns in both males and females (WMW, 1175). There were
several species of oryx which the ancients would have had opportunity to observe: the scimitar-horned oryx (*Oryx dammah*), the Arabian oryx (*O. leucoryx*), and the gemsbok (*O. gazella*). The beisa oryx (*Oryx beisa*), also called the East African Oryx, was once considered a subspecies of the gemsbok but some now consider it to be a separate species. Marinatos (113) claimed that the famous “antelopes” in the frescoes on Thera were of this species but others have argued that they are *kri-kri* (Porter, 306–15). It is generally impossible to be sure which animal is meant when any ancient author uses the word “oryx” and the waters are muddied when Classical scholars over the years have used a variety of terms to label the species and to translate the Latin or Greek word. Rackham and Jones, for example, translate *orygem* as “antelope” (Pliny *HN* 2.40.107). Oppian (Cyn. 2.445–88) speaks glowingly of the oryx’s courage and its skill in using its sharp horns against hounds, boar, and even the lion and bear. Its body, he says, is white as milk and it has black only on its cheeks. Mair’s note ad loc. is confused in calling the sable antelope the *Oryx leucoryx*. *O. leucoryx* is in fact the Arabian oryx and it fits Oppian’s description very well. The body of the gemsbok and the beisa oryx is brownish. The scimitar-horned oryx (Toynbee’s sabre-horned oryx) has the most impressive horns, but they curve back over its spine, rendering them less effective weapons, and although its body is light colored it has no cheek patches.

The scimitar-horned oryx is listed as currently extinct in the wild, but its long, swept back horns still delight visitors to zoos, where it is commonly kept. The Arabian oryx is endangered, having been over-hunted in the nineteenth and twentieth centuries (Mallon and Kingswood, 58–59) but is also to be seen in zoos. The gemsbok is now found in east and southwest Africa and the beisa roamed the lands adjacent to the eastern shore of the Red Sea. The oryx prefers dry climates and often rests in scrapes during the day to avoid the heat. The oryx was at least partially domesticated, as herds were kept in ancient Egypt. Herodotus (4.192) describes an animal alongside the *dorcas* that he calls the *δορκς* (*oryx*), which has been taken to be an oryx. Aristotle (*Hist. an.* 499b19–20; *Part. an.* 663a23) claims it has but a single horn. In both passages the oryx is mentioned along with the rhinoceros and both may have been involved in the creation of the unicorn myth. Note that Oppian (Cyn. 2.460–66) claims that the oryx liked to do battle with bears and boar alike, an improbability for the slender-legged oryx species. This might be confusion with the rhinoceros as well. Eight pairs of oryxes marched in the parade of Ptolemy II (Athenaeus 200f; Rice, 89). Pliny (8.79.214) tells us that it is reported to be the only known animal whose hair lies the wrong way, i.e. pointing toward the head, and says that it was imported to Rome. Columella (9.1.pref. and 1) describes how the rich Romans kept *vivaria* (see *zoos*) filled with exotic game for pleasure, harvesting, and profit. Among the animals kept were *oryges*. Plutarch (*Moralia* 974d–e) tells us that Libyans laugh at the belief of the Egyptians that the oryx cries out when the dogstar rises. Pliny (*HN* 2.40.107) and Aelian (7.8) say they sneeze. Juvenal (11.140) lists the Gaetulian oryx as a delicacy and Martial (13.95) says it appeared in the games, where it was pitted against dogs. Diodorus Siculus (3.28.6) adds that the Ethiopians use the horns as weapons. In art, the oryx, or, at least, straight horned antelope, are often shown in Roman times as the prey of large cats or, as in the Great Hunt Mosaic (Toynbee, Gawlikowski). The Marisa (Israel) painted frieze of hunting is probably dated to the last quarter of the third century BC and depicts what may be a scimitar-horned oryx with the label *OPYE* (Jacobson, 29, pl. 17; Meyboom, 45–46, 284, n. 13 for parallels). IBK (109, XVII.44) shows a gem
which clearly shows a scimitar-horned oryx, but the date is left as “sehr alt.”

See also onelaphos.

Dalby, 2003, 114; Gawlikowski, 1977; Jacobson et al., 2007; Keller, 1.292–93; Mair, 1987; Mallon and Kingswood, 2001; Marinatos, 1984; Porter, 1996; Rackham and Jones, 1940f.; Rice, 1983; Toynbee, 146–47.

Otter Greek: ἐνυδρὶς and ἐνυδρὶς (enydris=enhydris, “in the water”); Latin: lutra. Herodotus (2.72) speaks of Egyptian otters which live in the water and which are considered sacred. This is probably not a fact and could be a confusion with the mongoose (Asheri et al., 287 ad loc.; Houlihan, 126–27). Elsewhere (4.109) he speaks of otters living in the rivers with beavers in the land of the Budini. According to von Bredow, this tribe lived in the vicinity of modern Iran. Aristotle (Hist. an. 594b31–35) passes on a folkloric belief that the otter, like the beaver, will bite and not relent until it hears the crunch of bone. Varro (Ling. 5.79) places the otter in Latium and provides an etymology for the name. Pliny (HN 8.47.109) says that the beaver resembles the otter except for the tail. Elsewhere (32.53.144), he makes it clear that he thinks the otter is of the genus of beaver and adds that they do not enter the ocean. The animal in question is the European otter (Lutra lutra) which resembles the American otter. All four feet are webbed, its fur ranges from dark brown to black, and it can reach up to 4.5 feet in length (including the tail) and 33 pounds in weight. It is found throughout Europe, Asia, and North Africa (Lariviè re, 330; WMW 737–39). It will venture into salt-water but needs access to fresh. It was thus well known to the ancients and its fur would have been useful in more northerly countries. It is surprising that so little is found about it in the literature. Meyboom (23, fig. 9) plausibly identifies two animals swimming in the river of the palestrina nile mosaic with fish in their mouths as otters. One is marked with the inscription ΕΝΥΔΡΙΚ (enydris).

See also beaver.


Oxen, wild Greek: βίσων, βισων ταύρος (bisôn, bisôn tauros, “bison bull”) ταύρος ἄγριος (tauros agrios, “wild bull”), βοῦς ἄγριος (bous agrios, “wild cow/ox”); Latin: bubalus, bublus, bufalus, bison, vison, bonasus. That herds of wild, cattle-like animals were known to the ancient Greeks and Romans is clear. Equally clear is the general confusion among ancient authors and modern commentators alike as to which ancient names correspond to which modern identifications. The evidence is so muddled that certainty is impossible, but a clear setting forth of the possibilities can be undertaken. First, let us look at the actual animals under consideration. Clutton-Brock (84–90) provides a useful survey.

(1) The aurochs’ scientific name is Bos primigenius but many modern scientists use Bos taurus or Bos primigenius taurus to stress its supposed role as the ancestor of domesticated cattle (Vuure, 32). It was a huge (up to 6 feet tall at the shoulder and 11–12 feet long) breed of wild cattle that is now extinct, but which once roamed throughout Europe and extended its range east throughout many lands that would have been known to the ancient Greeks and Romans, including parts of India. A subspecies (B. primigenius mauretanicus) inhabited northern parts of Africa. It should be noted that one cannot be sure when
the aurochs became extinct in certain areas. In northern Europe, the adult males were black-brown with a white streak along the back and the females and calves were reddish. Their muzzles were lighter in color than their bodies, which are not said to have been particularly shaggy and there is no mention of a mane. The horns are front facing, rising upward at about a 60 degree angle. The last aurochs, a cow, died in Poland in 1627. They were hunted to extinction because of their fierce nature and were thus prized trophies. Scientists are attempting to breed descendants of the aurochs back to its original form, a project begun by the Heck brothers (Vuure, 323–59, 364–69).

(2) The European bison (Bison bonasus), also called the wisent, was hunted to near extinction like its relative the American bison (Bison bison). Today, a small protected population continues to exist in Bialowieza, Poland (Shackleton and Harestad). The very similar Caucasian bison (Bison bonasus caucasicus) would have been known to the ancients through Black Sea contact. Their appearance is essentially that of the American bison (which is often called a buffalo in error), with a sturdy chest, a shoulder hump, beard, a shaggy coat that includes a short mane running midway down its back and short, strong horns that arise laterally and then turn up and toward each other. Their size was impressive, with the European bison reaching 7–10 feet long and weighing up to a ton. Meyboom (113) thinks it may be depicted in the wall painting of the house of Romulus and Remus at Pompeii and sees it in the Great Hunt Mosaic of Piazza Amerina.

(3) The zebu (Bos primigenius indicus or B. indicus) is a generic name for all humped cattle of the world and includes the familiar Brahman cattle, often miscalled the “Brahama bull.” They are marked by traits not found in European cattle, such as a large dewlap, a pronounced hump on the shoulders and droopy ears. They thrive in hot climates and do well on poor fodder. They are depicted on gems (IBK, pl. 18.58, 60) and the coins of Magnesia (Richter, 23).

(4) The water buffalo enters the equation as the domesticated form of the Asian water buffalo (Bubalus bubalis arnee) (Shackleton and Harestad, 20–21). The water buffalo was most likely introduced into the West from India’s water buffalo, which now survives only in scattered wild populations protected in a few areas of India, Nepal, Bhutan, and neighboring countries (IUCN). The African buffalo (Syncerus caffer) is not related to the Indian version and is found in internal and southern areas of Africa, making it a less likely import. The domesticated water buffalo is much smaller than its wild counterpart and has shorter horns (Clutton-Brock, 172–75). Its milk is best known, especially in Italy, for mozzarella di bufala.

We turn now to the evidence from antiquity.

Mutually exclusive terms

Certain authors help us by making it clear that particular terms stand for different animals. (1) Martial 1.23.3 shows the gladiator Carpophorus facing both a bubalus and a vison. (2) Pliny (HN 28.45.159) says the Greeks use neither uros or bisones “in experimentis.” (3) Calpurnius Siculus (Ecl. 7.60–63) saw, in the games, two kinds of oxen. One had a deformed hump on its shoulders and the other was hairy and had both a beard and
shaggy hair. (4) Seneca knew about *villosi terga bisontes latisque feri cornibus uri,* “shaggy backed bisontes and fierce uri with widespread horns”) (*Hippolytus* 64–65). Therefore, if every author is using his terms properly, we know the following: the *bubalus* and the *vison* are different animals; the *urus* is different from the *bison*. Therefore, the *urus* is probably different from the *bubalus*. Therefore, at least in these authors, *bison*, *urus*, and *bubalus* refer to different animals. This neat distinction, unfortunately, was not universal.

(5) **Paeonian oxen** A particular type of oxen was linked to Paeonia, an area in northern Greece bounded by Illyria to the west, Macedonia to the east, and Thrace to the north. Herodotus (7.126) says that Paeonian areas have *boes agrioi* with enormous horns, which are imported into Greece. Pausanias (9.21.2) has seen Paeonian bulls (*taurous*) in the amphitheater and says they are shaggy all over, but especially so on the breast and neck. He adds (10.13.1–3) that at Delphi there was a bronze bull’s head sent by the Paeonian king Dropion (*bisōnos taurou*). He says they are extremely difficult to capture since no nets could hold them. Hunters must drive them into a hollow they have fenced off and whose sides are lined with greased hides. Only after 4 or 5 days can they approach and tie them up. Toynbee (148) suggests, quite unnecessarily, that this might be a musk ox (*Ovibos moschatus*), whose closest range to the Mediterranean is Greenland. Aristotle speaks of the the *bonas(s)os* (the spelling varies among the manuscripts) in five places. He gives its location as Paeonia and Maedica (*Hist. an.* 499b33–500a3) and claims it has a mane (as at *Hist. an.* 498b29–32). He also states that its insides are like those of an ox (*bous*) (*Hist. an.* 506b31). The lengthiest description (*Hist. an.* 630a18–30b18) is so detailed as to make one think it is based on first-hand observation. It dwells in Paeonia in the Messapian Mountains, which mark the border between the Paeonian and Maedican country. This indicates northern Macedonia and on the border of Thrace. Aristotle may have seen it during his time in this area. Paonians call it *monapos* (*μοναποσ*). It has the size of a bull (*tauros*) but, since it is not a long animal, it is bulkier than an ox (*bous*). When its skin is stretched out it covers a seven-couch dining room. It is shaped like an ox, except for the mane down its back to its withers (*akrōmía*), which resembles those of a horse, but the hair is softer and shorter than a horse’s. The color of the hair is “*xantbos,“* usually taken to mean “tawny.” Its thick mane reaches down to the eyes. The animal’s color is midway between ashen and red, unlike the horses called *paroai* (cf. *PAROAS*). Its hair that is “below” (belly or undercoat?) is rather rough. They do not occur as black or very red. It has a voice like an ox, and its horns are crooked and curved toward each other rendering them not useful for self-defense. The horns are black and shiny, about a span in size, and hold about half a chous (ca. 1.7 liters, 3.5 pints). Its forelock droops into its eyes so it moves to the side, rather than straight ahead. It has shaggy legs, is cloven hoofed, its tail is too small for its body and resembles that of an ox. It has no upper teeth like oxen and other horned animals. It tosses dust and paws the ground like a bull. Its skin is very strong, its flesh tastes good and, if hit, it runs away until it tires, then voids dung which, when it is distressed, can burn the coat off a dog. The females give birth in a group,
in a circle formed of their dung. Compare Aristotle (Part. an. 663a13f.) where the bonasos has horns that curve in toward one another and protects itself by shooting its excrement. Pseudo-Aristotle (Mir. ausc. 1) is another variant of this, but the mountain is now Hesainos, the beast is a βόλινθον (bolinthon), and the Paeonian name is monaipos (μόναιπος). Aelian (NA 7.3) gives the Paeonian name as monops (μονόψ). Athenaeus (11.100.51) cites Theopompus as saying that oxen in Paeonia had horns so big they made cups that held 3–4 choes (9–12 quarts). People adorned the rims with gold or silver. Finally, poems in the Greek Anthology talk of killing bulls in the Paeonian wilds (Anth. Pal. 6.115 and 9.300; Douglas, 42–48). Pliny (HN 8.16.40) describes a “fera quae bonasus vocatur equina iuba,” “a wild beast with an equine mane which is called the bonasus.”

The bison/vison has multiple versions. In the games, Martial (1.104.8) saw “ugly visons” (turpes visontes) drawing Gallic war chariots. Also for the games, Septimius Severus had a ship made that fell apart, spilling out its animal “passengers” (Dio Cassius 76.1.1–5; Cary) among which were “bisons, a kind of cattle, but foreign in species and appearance” (βισωντες, bisontes). Note that these ships are shown on the reverses of Severan coins. Oppian (Cyn. 2.159–75) says the bison’s name came from inhabiting Bistonian Thrace. It has a tawny mane, like a lion. Its horns are pointed and oddly shaped, Unlike those of other such animals. Its tongue is narrow and rough. An inscription from Moesia (southwest of modern Bulgaria) set up for Diana as a thank offering by a Roman soldier, dates to 147 BC and names visones as among the animals caught (Velko and Aleksandrov; Purnelle, 570–71).

Lewis (2), after a review of this evidence says, “The Paeonian bull of Herodotus and Theopompus, the Paeonian bonasus of Aristotle, the Paeonian bison of Pausanias and the Thracian bison of Oppian, are evidently the same animal.” This may be an overstatement, but general guidelines emerge. Any mention of a mane, beard, or shaggy coat is surely the European bison. Horns described as short and turned toward each other also evoke the bison, but enormous horns belong rather to the aurochs (below). This might also help to explain Aristotle’s strange statement that “They do not occur as black or very red,” a true statement for the bison, but not for the aurochs, which follows. His statement that it is not a long animal and is therefore bulky also seems aimed at differentiating the bison from the aurochs. On the perpetual confusion of the European bison with the aurochs in literature, see Vuure (83–88).

The urus is clearly the aurochs and would appear to be a Latinization of the Old Germanic ur, which was used for the aurochs. Caesar describes these enormous, wild oxen (BGall. 6.28) with great enthusiasm, and more than a touch of hyperbole. The German type, he says, is a bit smaller than an elephant, but like a bull in shape, appearance and color. It is very fast and fierce. Germans hunt them and take their horns as trophies. Even if captured young, they cannot be tamed. Germans use their horns, which are unlike those of Italian cattle, for drinking cups, having put silver on the rim (for a study of this, Wiener 11–18, cf. 68f., cf. Pliny HN 11.45.126). In fact, a drinking cup was made of the last
aurochs bull, which died in 1620 (Vuure, 98, photo 7). Caesar says the Germans hunt them zealously (studi-o)se by driving them into pits or trenches (foveis). Pliny (HN 8.15.38) says that the ignorant masses call the aurochs a bubalus, which he knows is actually from Africa. Vergil (G. 2.374) knew of uri, which Servius (ad loc.) says are wild bulls living in the Pyrenees between Gaul and Spain (cf. his comments at 3.532 where Vergil speaks of harnessing the aurochs).

(8) The Greek boubalis boubalos and the Latin bubalus, bublus, and bufalus are much confused. The terms began by referring to a harte-beest and then, through confusion with the stem “bou,” began to be used to indicate a bovid animal, most commonly the water buffalo. Cf. boubalos.

(9) We also have several references to Indian oxen. Twenty-six all-white Indian oxen (βόες Ἰνδικοί) were in Ptolemy II’s animal parade, as were eight Ethiopian oxen (boes Aithiopikoi). The Ethiopian oxen may be aurochs or simply cattle, but the Indian ones are almost surely zebras, which do occur in all-white versions (Athenaeus 5.201c). Toynbee (376, n. 15) claims that the earliest sculptural rendering of a zebu would seem to be that on the lowest register of the Apotheosis of Homer relief in the British Museum dating from the second century BC. Here a humped cow looks out at the spectator from behind an altar. A well known mosaic from El Djem in North Africa clearly shows 16 zebus which closely resemble today’s Brahman cattle (Blanchard-Lemée, 210, fig. 155). We hear that an Indian ox whose horns held three amphorae (6–7 gallons) was brought to Ptolemy II (Aelian NA 3.84).

Zebu horns are not small, but if this number is correct the animal may have been an aurochs. If it was a zebu, the number is exaggerated. Pliny HN 8.30.72 lists Indian oxen in Ethiopia which are both one-horned and three-horned. The latter is improbable and the former may well be the rhinoceros. There is one more reference to what must be an Indian wild ox with the common confusion of Indian and Ethiopia as countries with exotic animals. Aristotle (Hist. an. 499a1f.) talks of boes agrioi, which, like the hippo-laphos (nilgai?) are found in the land of Arachotae, which is Baluchistan, now part of Pakistan. He then says that wild oxen differ from cattle in the same way that a wild boar differs from domestic pigs. He then adds that “they” are black, strong, have a hooked muzzle, and their horns tilt back a bit. Note that the “they” (όι) can grammatically refer either to the nilgai or these oxen. Since zebu horns do not tilt backward, but rather come out to the side of the animal’s head, this description may well be of the nilgai which has short horns that tilt backward. Neither has an oddly shaped muzzle. Lewis (1) assigns this passage to the bonasus, but the word does not appear in the passage.

Some other wild oxen deserve mention. Varro (Rust. 2.1.5) reports that wild oxen, very fierce, were found in his day in Dardania, Media, and Thrace. Theopompos the historian (Athenaeus 11.468d) says that Molossian oxen had enormous horns suitable for making drinking cups. This is probably an aurochs. The huge horns of a Sabine ox were displayed in the temple of Diana on the Aventine (Livy 1.45, Valerius Maximus 8.3.1, Plutarch Moralia 264c). But the sources make it clear that this was simply
a very large ox from a domestic herd. Several authors relate reports of a flesh-eating ox which Pliny calls the eale. Meyboom (22–23) suggests this as an identification for a fantastic creature in the Palestrina Nile mosaic which bears the nonsensical inscription ΞΙΟΙΓ (XIOG) or ΞΙΦΟΣ (ZIPHOS), “sword,” Meyboom, 228, n. 22). There is no basis for this identification, however, and the creature, which seems to be part crocodile and part hippopotamus (Meyboom, fig. 11), is best seen as a composite, mythical one. Compare this to the ox/buffalo lowering its head to a snake in the paintings at Marisa. Jacobson (28, pl. VII, cf. Meyboom, 45, fig. 59) suggests that this may be the African buffalo (Syncerus caffer).

Palestrina Nile Mosaic Constructed about 120–110 BC (Meyboom, 16–19) in Palestrina (ancient Praeneste), this large (4.31 m x 5.85 m) mosaic is the earliest version of what was to become a popular Roman motif – the Nilotic scene. Some animal-related mosaics take the form of a hunt for exotic animals (e.g. the Great Hunt at Piazza Amerina) but this mosaic is largely a “snapshot” of a broad spectrum of activities that occurred along the Nile. Many animals are depicted and quite a few are labeled. The most thorough study is that of Meyboom and the most vivid color photographs are to be found in Andreae (78–110). It should be noted that the mosaic has been extensively restored and that current reconstructions rely on the drawings of the mosaic done for Cassiano dal Pozzo before restoration began. Another notable Nile mosaic, to be found in the House of the Faun in Pompeii (ca. 90 BC), the mosaic in the so-called Villa Maccarani near the church of San Saba on the Aventine, and the scenes on the Vatican Nile (Swetnam-Burland) are often of use in animal studies.


Pangolin φαττάγης (phattagēs). Aelian (NA 16.6) describes an Indian animal as somewhat like the land crocodile (crocodile (6). He gives its size as that of the small Melitean dog. What is most remarkable about it is its scales, which are so sharp that they can be used as a file. It can cut through bronze and eat its way through iron. This is a good description of the pangolin (Ball, 321; Jennison; 190–93), specifically the Indian pangolin (Manis crassicaudata), with an appropriate size of about 20 lb and an overall length of about 4 feet. Pangolins form the only family (Manidae) and genus (Manis) of the order Pholidota. WMW (1,239) lists four subgenera that are found mainly throughout India, Nepal, Bangladesh, and Sri Lanka, but also in Africa. The pangolin is a striking animal with many odd adaptations. It has no teeth as it lives on a diet of insects, preferably termites and ants, and its stomach works to crush the insects. It captures them with a tongue that in some species can reach 27 inches (9–10 in M. crassicaudata) and is attached to its pelvis. Its tail is prehensile and its body is protected with overlapping rows of armored plates resembling the outside of an artichoke or pine cone. When confronted it curls up into a ball like the armadillo or, if possible, dives into water where it can stay submerged for a long time. It has strong claws and anyone seeing it tear at a termite mound would think it could attack bronze or iron. The claws impede
walking and it often puts most of its weight on its rear two legs, especially when running. Basically nocturnal, pangolins live in tunnels as solitary animals until mating time. It has been suggested that the pangolin is the INDIAN ANT, but this is unlikely.


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Panther Greek: πάνθηρ (panthēr, “all beast/wild”); Latin: panther. The use of this term was quite erratic in antiquity. Today, the term is only correct as a synonym for the mountain lion (Panthera concoloris, WMW, 818). Modern scientific names use Panthera for the genus of large cats, including the lion (Panthera leo) tiger (Panthera tigris), jaguar (Panthera onca) and leopard (Panthera pardus), whereas the rare Florida panther bears the scientific name Felis concolor coryi. Amid such confusion, this entry will, therefore, focus on the problems surrounding the nomenclature of large cats in antiquity. Consult individual articles on the cats for specific information on them.

Jennison has devoted an appendix to his work on the confusion of these terms. He makes a strong case for the use of the term panther to refer to a lesser animal, identified by Jennison as a GENET. He states that Aelian (NA 15.14) uses πάνθηρ τιθασός (panthēr tithasos, “tamed panther”) to indicate a CHEETAH, while the Latin panthera did the same in the late imperial period. Earlier, however, he states that panthera was used by Cicero (Fam. 2.11.2, 8.4.5) to indicate a LEOPARD. He believes that Pliny generally used panther to indicate a cheetah and pardus and varia (male and female?) for leopard. The word pardus is based, he believes, on the Greek πάρδαλις (pardalis) and increasingly became the term of choice for leopard in the imperial period. Toynbee generally follows Jennison but uses the term “leopard” to refer to any spotted cat as it appears in art. Ashmead avoids a lexicological study but stresses that it is often impossible to differentiate between a leopard and a cheetah in Greek art (cf. Fermum; Nicholas; Préchac). Moreover, the tawny, maned animal lacking spots that appears in the Marisa tomb paintings (Meyboom, 27, fig. 58) is clearly a lion although it is labeled ΠΑΝΘΗΡΟΣ (PANTHEROS). In short, extreme caution is required before identifying uses of this word in antiquity.


Parandrus See REINDEER.

Pardion Greek: πάρδιον. According to Aristotle (Hist. an. 498b34f.) this horned, cloven-hoofed animal has a mane from head to withers. The passage is describing antelope-like animals and bovids. Further identification is impossible.

Parieas Greek: see below; Latin: parias. The word παρειας (pareias) is commonly used adjectivally with “snake,” e.g. “pareias ophis,” to indicate its reddish brown color (cf. Hesychius’ πυρφιας, pyrrhias). Philoumenos (32) calls it the πάρφως (parōs) and places it in Syria. Aelian (NA 8.12) knows it as pareias and
παρόυας (parouas). It has a wide mouth and is non-venomous. He claims it is the snake associated with Asclepius (cf. Aristophanes, Plutus, 690 with scholia). Lucan’s parias (9.721, cf. Isidore Etym. 12.4.27, Servius on Vergil G., 3.426) is “content to plow a furrow with its tail,” which probably refers to its raising its body as it travels along. Bodson (70), identifies the Asclepius snake as Elaphe longissima (so too Sommerstein, 182) but Wick (2,302) offers Elaphe quattuorlineata, Europe’s largest non-venomous snake. Leitz (34) treats the paro as a separate snake and equates the pareias and parouas with the Draco.


Paroas Greek: παρωάς. As with pareias, this word indicates a color that LSJ identifies as “chestnut.” Aristotle (Hist. an. 630a29) says the bonasos has a color midway between ashen and red, unlike the horse known as the paro hippos. Hesychius s.v. παρωάς cites this passage. Cf. the entry s.v. πάρως, “a type of fiery colored horse.”

Pelias Greek: πελιάς. Philoumenos (28.1–4) pairs this snake with the elops, indicating they are alike, but he states that his sources do not describe it and speaks only of symptoms and treatments. The only other author to mention it is Aelius Promotus (23). Leitz (134–35) identifies it as Vipera ursinii. Cf. G&St. 551.

Pets The first, if not the easiest, order of business is to determine what a pet is. This definition will vary by nationality, historical period, scientific perspective, political or philosophical agenda, and a host of other factors. Dogs are variously stroked, experimented upon, used as work or companion animals or even eaten (Kitchell, 2004). Generally, however, a pet is taken to be a domesticated animal in which a human invests time or resources, not for any tangible return (including serving as a foodstuff), but for the pleasure of the animal’s presence and toward which affection is shown (Eddy; Kitchell, 2011; Labarrière). Thus, a lap poodle is a pet, a police dog is not. It is clear that the boundaries are blurred. A horse could be used to draw a racing chariot or could be doted upon by Caligula. Officers of the law commonly bond with their dogs. We should also add the concept of “liminal animal,” that is, an animal that lives among humans but not completely with them (McDonough). A barn cat is liminal, a lap cat is a pet.

Pets or liminal animals are referred to in the following articles in this book: ape, Barbary Macaque, Bear, Cat, Cercopithecus, Cheetah, Cicada, Crocodile, Damma, Dog, Dorcas, Draco, Genet, Grasshopper, Hare, Hippopotamus, Ichneumon, Lagalope, Monkey, Mouse, Names, Animals, Python, Squirrel, Turtle, Weasel. Many animals in antiquity were given names (Baecker; Darder Lissón; Friedländer; Jeschonnek; Toynbee) but not all were pets. Likewise not all animal epitaphs (Boucher; Gutzweiler; Herrflänger; Purola) or inscriptions were more than a literary exercise, but many must have been signs of real affection (Kitchell, 2004). Greek pets were apparently often brought to the funerals of their masters and are depicted on funeral monuments (Conze, passim; Fairbanks, passim). Greek women such as Penelope clearly kept geese in the gynaikeion, and Boardman (pl. 26.1–6, 2721; cf. Robinson, pl. XXXIII–IVa) shows a woman holding out a lizard (?) to feed her pet heron. Other, smaller birds, such as Lesbia’s sparrow, were kept in cages (Jashemski, 105–08; Williams, 30, on cages) as were locusts and their kin. Parrots were well known (Lazenby,
Whether dangerous animals such as Elagabalus’ lions and leopards were ever really tamed and kept as pets (“in deliciis”, SHA Elagabalus 21.1) is open to discussion. There is some evidence that they were declawed and/or defanged (“exarmati”), as were the bears also mentioned (25.1). Lazenby has a complete list of animals, often unusual and often curiously adorned by their owners (cf. Toynbee, 15). These include snakes, quail, eels, and mullet. Jashemski (104–05) has even claimed that pigs roamed Pompeii but at best these would have been liminal.


**Phalangion** Greek: φαλάγγιον (phalangion); Latin: phalangium, phalangius, phalangus, sphalangius. This term was used generically to describe spiders with a venomous bite, as opposed to the araneus (arachnē) or araneae, which is used for non-poisonous spiders (Beavis, 34–35). The division is not hard and fast and the term phalangion seems to include certain insects which are not spiders at all. However, phalangion is often used as if it were identifying a specific spider. Beavis’ detailed study of this class of invertebrate remains the best summary (44–56).

Aristotle (*Hist. an.* 555b10–16) describes how this spider lays its eggs in a basket-shaped receptacle made of its silk only to have its young, up to 300 of them, surround it and kill it upon being born. He also states (*Hist. an.* 622b28–33) that there are many kinds of spiders (*arachniōn*) and of *phalangia*, with the latter divided into biting and non-biting. There are two kinds of biting *phalangia*, viz., the “flea” (ψυλλα, psylla) and one which is larger, black, and has long front legs. It does not jump well and is slow moving. Beavis (46) rejects earlier attempts at identification and says that a species of *Segestria* would fit the description. Plato (*Euthydemus* 290a) contains a reference to charms against the *phalangion* (translated by Lamb in the Loeb as “tarantula”). Xenophon (*Mem.1.3.12*) mentions the creature as small but quite deadly. The size is given as smaller than the coin known as the hemiobol, which was in the vicinity of 7 mm in diameter (< 0.3 inches) and it is curiously referred to as biting the tongue and holding there fast.

Pliny elsewhere differentiates between the *araneus* and the *phalangium* (*HN* 22.81.163). Likewise, he tells us (8.41.97) that deer (*cervi*), when bitten by the *phalangium*, which is a genus *araneae*, cure themselves by eating crabs. He adds the fact that it breeds in bitter vetch if the winter has been wet (18.44.156). Celsus (5.27.9) recommends that one bitten by a *phalangium* should have the poison drawn out surgically but should also be plunged into hot baths and take a variety of herbal cures. Nicander quite correctly notes that this spider most commonly bites field workers who are picking by hand (*Th. 752–58, G&S ad loc.*). A study of twelve black widow spider bite cases in Spain found that eleven of them occurred in people doing agricultural tasks and eight of these occurred in greenhouses (Díez Garcia). Vegetius (*Mulomedicina* 2.145 Lommatzsch = 3.81 Gesner) describes the symptoms of the bite in a draft animal as well as the cures. Isidore (*Etym.* 14.6.16), after listing many noxious creatures not found on Crete, says the *phalangus* does exist there. The anonymous *Medicina Plinii*
(fourth century AD) adds the interesting fact that the bite of the *phalangium* is not felt at the time but only becomes evident from later itching (3.36).

As an arachnid, this animal does not appear in D&K (1988). Beavis (34–35), like LSJ, identifies the *phalangion* as a venomous spider, *Latrodeuctus*. *Latrodectus* (best spelling) is a genus of spiders that includes the black widow spider. One species especially fits several descriptions of the ancients, *Latrodectus tredecimguttatus*, also called *L. mactans tredecimguttatus*, which, as the name indicates (“thirteen spotted”), has 13 red spots over its body, long legs, and a somewhat pointed abdomen. The female is larger than the male and her bite alone is dangerous for humans and cattle alike (Bonnet, 27).

Authors such as Pliny and Nicander list many types of *phalangium*.

*See Asterion, Kantharoeidēs, Kranokolaptēs, Kyaneon, Myrmekteion, Pithēkē, Psylla, Rhōx, Skolēkion, Spikhion,* Tetragnathion, Wolf Spider.

Bonnet, 2004; Díez-García, 1996; Gesner et al., 1735; Lamb, 1924; Steier, A., “Spinmentiere,” *RE* 3A 1790–92.

**Pheroikos Photius** (frag. 94 = Edmonds, 1.53; Storey, 101) preserves the word φέροικος from a play of Cratinus. He says it resembles a weasel, is white, lives in the roots of oak trees and eats acorns. LSJ identifies it as a squirrel and Storey so translates. Yet squirrels tend to dwell higher up in the tree and there is no mention of its tail.

Edmonds et al., 1957f.; Storey, 2011.

**Physeter** *See whale.*

**Pig** Greek: ὕσ, σῦς, χοῖρος (*bus, sus, choiros*); Latin: *porcus, sus*. Pigs belong to the family *Suidae* and the genus *Sus*, which contains eight species (WMW, 1054f.). The ancients were very involved with swine, both wild and domesticated. *Sus scrofa* (25 subspecies, Clutton-Brock, 71) represents the wild pig that still inhabits Europe today and which is the ancestor of the domesticated pig (*S. s. domesticus*). Its range was widespread in antiquity and most references to wild swine in antiquity probably refer to it (but cf. *Babirusa, wart hog*). *S. scrofa* has more bristles and more pronounced tusks than the domestic pig, and it is known for reaching great sizes (over 700 pounds) and being a fierce fighter if molested. They live in relatively small herds consisting of a male with as many sows as he can defend. They prefer forested areas with ground cover and access to wallows. They were among the first animals to be domesticated, perhaps 8,000 or 9,000 years ago (Clutton-Brock, 72) and probably independently in multiple areas, with the European and not the Near Eastern wild pig being the ancestor of today’s domestic pigs (Larson et al.).

The wild pig captivated the ancient Greek imagination. Boar hunts serve as testing grounds for Greek heroes, either in groups, as for the Calydonian Boar hunt, or for individuals, as were the Erymanthian Boar (Hercules) and the Crommyon Sow (Theseus). Mycenaean noblemen adorned their heads with boar’s tusk helmets and Odysseus’ famous scar came about as the result of a boar hunt. They continued to be hunted throughout antiquity and such scenes are found constantly in art, where the prey is often rendered with a crest (e.g. Toynbee, figs. 54–56, 61). It was most often hunted with nets and dogs, but sometimes alone (Barringer, 15f., cf. especially fig. 10, by the Sotades painter). It should be remembered that wild pigs could also represent escaped
domesticated individuals who established a feral population.

The pig was rather easy to domesticate with young being taken from slain mothers. In captivity pigs require minimal tending, eat a broad spectrum of food, and put on weight faster than other herd animals. Varro even reports that they could be trained to come to the sound of a horn (Rust. 2.4.20). Their milk is of little use but the meat was sought after, and, as today, there was a use for virtually every body part (Dalby, 168–69). In fact, Pliny (HN 8.77.209) lists 50 “flavors” of pigs and refers to sumptuary laws controlling various parts of the pig. They also served as a common sacrificial animal. There arose, as a result, a robust pig farming industry in antiquity, the earliest records of which are detailed in Linear B tablets where over 320 pigs are mentioned in a handful of tablets, most of them sows and some designated as “fattened pigs” (DOCS 2, 132, 198, 205–09; Enegren, 13–14). Such an industry demands swineherds and Odysseus’ swineherd, Eumaios, is full of information: his pigs have sties and an all-around enclosure; only sows are penned, 50 per sty, while the boars sleep outside; the suitors preferred to eat boars (not piglets); they were guarded by dogs (Od. 14.5–28; Schneider for further citations). Other Greek sources offer little on the art of swine husbandry but papyri indicate a thriving pig trade near Alexandria (Thompson). Aristotelte (Hist. an. 595a13–b5) comments on the pig’s diet and fattening regimen. He accurately notes the peculiar structure of its snout, which enables it to search for roots. The pig has a tough, cartilaginous disc at the end of its snout and a “prenasal bone” gives it further strength. As a result, Aristotle reports that they could be used to root out mice (Hist. an. 580b25–27). Aristotle also discusses breeding regimens (Hist. an. 545a23–b3; 575a31–b17). The pig occurs with some frequency in Greek literature. Semonides, in his misogynistic list of women, says the one created from a sow is dirty, keeps an unclean house, and grows fat (7.1–6; Gerber, 304). In the Moralia (985d–992e), Plutarch has Odysseus converse with his men after they have been turned into swine (Herchenroeder). Gryllus (“Grunter”) discourses on how much better his life is as a pig rather than as a human. Aristophanes’ Acharnians (758f.) brings the Megarian’s little girls onto the comic stage dressed as “piggies,” a word evoking female genitalia (Golden). As is true today, calling someone a “pig” was an insult in antiquity, especially if the pig were Boeotian (e.g. Pindar Ol. 6.89–90, with scholia ad loc. = Race, frag. 83, from the Dithyrambs; Roller, 1990). Some sense of the prevalence of the animal can be found in the number of words in the language from husbandry (see NAMES, SPECIALTY), and few would know that we have three words for a pig’s squeal (gryzo-, koizo-, hyizo-) and at least five for a pigsty: karpōn, suobaubalos (stathmos), byōn, choireōn, chorotropheion.

Roman agricultural authors, such as Varro and Columella, provide us with a wealth of detail concerning pig farming, all well summarized by White (317–21). Varro (Rust. 2.4.1–22) presents his section on swine through an interlocutor, amusingly named Tremelius Scrofa (= breeding sow). Columella (7.9.1–11.3) is full of interesting details: both males and females could be neutered; a form of branding with liquid pitch helped keep piglets with their sows; diseases and cures. Pliny (HN 8.77.205–79.213) cites earlier authors and adds several interesting “facts”: pigs hauled off by rustlers will even swim back to the voice of their swineherd; their livers can be fattened like those of geese; wild ones were kept in preserves. Romans especially liked to fatten their pigs, even to the stage where
they could not walk and there is some evidence of selective breeding in favor of this trait. Pliny (HN 8.77.208) hints at herds kept in the city, an assertion echoed by Jashemski (105) for Pompeii. Columella (7.9.2) mentions pigs kept by millers and bakers who fed them on their chaff (cf. Plautus Capt. 807–08). Italy was the primary provider of pigs, especially in the Po valley, but authors praise those also of Spain and the northern lands of the Sequani and Belgae (White, 320–21). MacKinnon believes that there were two basic breeds in Italy, a large, fat, short-legged one and a smaller, bristled, long-legged one. The smaller breed was kept in herds that foraged for food in forests and primarily provided meat for the Romans. The larger breed was, he believes, stall fed and, as a more expensive animal, represented the prosperity of its owner and, as such, is the type most commonly found in Roman art.

Roman literature has many references to pigs. Aeneas’ white sow and her 30 piglets identify the future site of Rome but the pig most commonly appears in banquets, ranging from those of Plautus to the fantastic sow served to Trimalchio’s guests. A fourth century AD Testamentum Porcelli, is the last will and testament of a pig, who is about to be cooked. His name is M. Grunnius Corocotta (OCD4 s.v.; Anderson). Large wild boars were occasionally seen in the amphitheater (Jennison, index).

The boar hunt is an extremely common theme in art, as noted above. A late Mycenaean fresco from Tiryns, though damaged, showed dogs hunting a wild boar which is striped, a coloration that exists in the young, but is lost at a later age. The François vase famously shows the Calydonian Boar hunt and countless others are depicted on vases. The domestic pig, despite being pervasive in everyday life, is somewhat less prevalent in art than its wild relative. Richter (23–24, figs. 107–19) has Greek examples both of the fierce wild boar and more domestic scenes showing pigs with their young. The spinal crests of many specimens are exaggerated, which, along with their bristles, indicates that these are wild specimens. The contrast is well shown in Richter’s fig. 117 and 118 (see also IBK, 19–20). BzAr no. 43394 (late fifth century BC bell krater) cleverly shows one of Odysseus’ “pig-men” and many vases show pigs in sacrificial settings, most notably the Hydria Ricci found in Cervetere (Villa Giulia 80983). The earlier eponymous vase of the Pig Painter shows a crested boar sniffing a piglet while two young men look on (Fitzwilliam Museum, GR.9.1917). Sparkes reproduces a sixth century BC tripod pyxis, showing a pig led to sacrifice and a contemporaneous plastic pig with boar’s crest (120 and pl. XIVA, XVa–b). Other plastic pigs are found from Sicily (Heldring, 50–51). Boar-shaped rhyta are known and one by Sotades, now lost, showed a ram on one side and a boar on the other (Hoffmann, figs. 11a–c, 31). Fierce wild boars are common on Greek coins from places such as Lycia, Phocis, Cretan Lyttos, and Cyzicus. Roman boar hunts abound on mosaics and sarcophagi. MacKinnon (559–67) traces the domestic pig in Roman art and offers several plates. Many are scenes of sacrifice, especially the suovetaurilia, where a boar, bull, and ram were offered together. He detects differences in depiction, with some pigs bristled and others smooth. Ciarallo and De Carolis (153) reproduce a weight from Pompeii in the shape of a pig.

**Pitheke** Greek: πιθήκη. The ancients classified this spider as a phalanion. Aelian (NA 6.26) describes this “monkey spider” carefully. He has heard three alternative names for it: ὄρειβατης (mountain-walker); ὑλοδρόμος (tree runner); and a few even call it ψάλλα (flea). It is born in trees, is hairy, and has a slight depression in its belly, as if it had been cut with a thread. Its bite is very dangerous and symptoms include trembling, heart pain, urine stoppage, and constipation. The only cure is river crab. Beavis (52) rejects the idea that it is the same as the psylla of Aristotle (Hist. an. 622b28–31).

**Platyceros** In a discussion of various horn/antler shapes Pliny (HN 11.45.123–24) simply lists the platyceros (“wide-horn,” taken from the Greek, πλατυκέρως, cf. LSJ). This could be an individual animal but may simply be a synonym for an animal such as the fallow deer or elk.

**Polar bear** Evidence for the polar bear (*Ursus maritimus*) is elusive. The white bear in Ptolemy II’s procession in Alexandria was perhaps an albino shown for its rareness or simply a very light Syrian bear (*Ursus arctos syriacus*) which is paler than most brown bears, sometimes being called straw-colored (Rice, 96). This interpretation is more probable than that of Fear, who suggests a brown bear (cf. the arguments of Williams, 1994). The polar bear almost surely became known to the Romans, if not seen by them, as they moved their empire further north, but Pliny does not mention the animal. Pausanias mentions that certain people have come into possession of Thracian white bears, but this too is most likely a light-colored bear or an albino since the range of the polar bear does not extend to Thrace. More intriguingly, Martial mentions a bear that was once lord of its realm under “Arctic skies” (De spec. 1.15). Calpurnius Siculus, who most likely lived in the age of Nero, specifically mentions having seen bears fighting seals (Ecl. 7.65–66) and Jennison, for one, sees polar bears in the reference (189, note his incorrect citation). Other references (Kallixeinos, FGrH 627 F 2; Oppian Hal. 5.38–40) offered by Williams are not conclusive.

Fear, 1993; Rice, 1983; Williams, 1994.

**Pontic mouse** The name comes from the area of the Pontus, i.e. the Black Sea. Pliny (HN 8.55.132) follows Aristotle (Hist. an. 600b14) and claims that the white ones hibernate and have a refined sense of taste. This animal has been identified as the ermine (*Mustela erminea*), which does turn from brown in summer to white in winter, but it does not hibernate. It has also been identified as a marmot, which does hibernate but does not have an exclusively white species. Keller would prefer to see this as an albino version of a regular weasel (1.172)

Krummbiegel, 1934, 33f.

**Porcupine** Greek: ἡστρυξ (hystrix), Latin: *hystrix*. Old World porcupines (*Hystricidae*) are three genera and eight species of slow-moving rodents with a heavyset body, a long tail, and quills of varying sizes on their back, sides, and tail (WMW, 1644–49). They do not climb trees as do New World porcupines, are nocturnal, and primarily eat vegetable matter. The porcupine most directly known to the ancients was probably the crested porcupine (*Hystrix cristata*), which is 2–3 feet in body length with a 3–6 inch tail and the longest quills (13 inches) of
the *Hystricidae*. It inhabits all of Africa along the Mediterranean and today is found in Italy and along the Adriatic coast, perhaps introduced by humans (but cf. WMW 1647–48).

Herodotus (4.192) first mentions the animal, placing it in Libya. This must be *H. cristata*. Aristotle is interested in the animal (*Hist. an.* 490b29, 579a28–30, 600a28, 623a33–34), discussing its spines as a type of hair that can be shot out (it cannot) and its hibernation (in fact, it may stay in the den during winter, but does not actually hibernate). Pliny repeats this information and adds that there are porcupines in India (*HN* 8.53.125). This is the Indian crested porcupine (*H. indica*), a larger porcupine that also possesses rattle quills. Aelian has never seen the creature, but believes in its ability to shoot quills (*NA* 1.31, 12.26). Oppian (*Cyn.* 3.392–406) speaks of the danger the porcupine presents to hunting dogs, even causing their deaths. The late poet Claudian (ca. AD 370 to ca. AD 404) was even moved to write an entire poem, 48 verses long, devoted to the *hystrix* (*Carmina minora* 9).

Porcupine quills were used as toothpicks (Pliny *HN* 30.9.27) and both the porcupine and the *hedgehog* were thought to be useful in curing baldness, an interesting sort of sympathetic magic (Pliny *HN* 29.34.107–08). The tombs of Marisa show a lively porcupine dutifully labeled ΥΣΤΡΙΕΣ in a hunting scene (Jacobson, 34, pl. 26–27; Meyboom, 43, fig. 63). Callimachus (*Hymns* 3.94–99) confirms their being hunted in Ptolemaic Egypt. The χοιρογρύλλος (*choirogryllus*, cf. *Hyrax*) was mistakenly identified as a porcupine by lexicographers (cf. LSJ, s.v.).


**Porpoise** Greek: φῶκα (phōkā); Latin: *t(h)ursio*. The porpoise is a small cetacean, in the family *Phocoenidae*. It is a relative of the *whale* and *dolphin*. In general, they are smaller and stockier than dolphins and they lack both a pronounced beak and the bulbous growth on the head that is carried by most dolphins (the “melon”).

The harbor porpoise (*Phocaena phocaena relicta*) is a well known species of porpoise that is found throughout the Northern Hemisphere. A Black Sea population, which may be a subspecies, is listed as “endangered” by the IUCN (Reeves and Notobartolo di Sciara, 39–47). They tend to stay near shore and are found all along the Black Sea shoreline, extending into the Azov Sea, but Frantzis et al. argue that there is no true population in the Mediterranean and none was present in antiquity. Such animals as are found in the northern Aegean are almost certainly strays from the Black Sea (Rosel et al.). Reeves and Notobartolo di Sciara list the harbor porpoise as a “vagrant species” for all parts of the Mediterranean except the north Aegean and, relying in part on Frantzis, list their known occurrences in the Mediterranean. Their list (124) contains three sightings from 1822 to 2006, and each is either near the Black Sea or Gibraltar. In short, these animals made their way into the Mediterranean from established populations outside the area. Frantzis’ work, based on DNA research, also establishes that the harbor porpoise was not in the Mediterranean in Classical times. What then, are we to do with the ancient evidence?

Thompson (281) calls the word “very doubtful” and says it may be a combination of φῶκη (phōkē, “seal”) and φάλαινα (phalaina, “whale”). Aristotle (*Hist. an.* 566b8–17) says that many people consider the porpoise to be a kind of dolphin. He speaks of the porpoise that lives in the
Black Sea and says it is bluish gray in color and smaller than a dolphin. He knows that it breathes air and is viviparous. Elsewhere (598a24–b2) he states that fish migrate into the Black Sea because there are fewer predators there—only the porpoise and the dolphin, and the dolphin is small. Pliny (HN 9.11.34) speaks of thursiones that look like dolphins but exhibit a sadness (tristitia) and are not as sportive. Their snouts resemble those of the dogfish (caniculae), a sort of shark (Dalby, 120–21). It thus seems that the evidence from antiquity supports the idea that the porpoise was not known in the Mediterranean proper. Athenaeus (7.310e) says that psylla refers to the sweetest part of the dog-shark (kuvwn karkariva~ kyōn karcharias). This sounds like a corruption, probably of Pliny’s source.

Dalby, 2003; Frantzis et al., 2001; Keller, 1.408; Reeves and Notarbartolo di Sciara, 2006; Rosel et al., 2003; Thompson, 1947.

**Prester** Greek: πρηστήρ; Latin: prester. Lucan (9.722, 789–804) describes this serpent as greedy with a gaping, foaming mouth and describes Nasidius’ death from its bite (Wick, 2.336–37 on the poison). The body of the victim slowly bloats and inflates until it resembles a perfect sphere causing others to flee before it bursts. Aelian (NA 6.51) lists prester as an alternative name for the diphes. Philoumenos (19) says he has not found the snakes described in previous writings, only the antidotes (cf. Pliny HN 20.81.210). Pseudo-Aristotle (Mirab. 130) mentions it in a context that suggests a water snake. For possible identifications, Wick (2.303–04) and Leitz (88–94) who offers *Echis coloratus*, the Palestine saw-scaled viper (SSW, 378). Most recently, see Bodson (121–30), including the form prestēs.


**Psylla** Greek: (ψύλλα, psylla). Aristotle *Hist. an.* 622b28–31 classifies this spider as a biting phalangion. It is like the ones called “wolves” (wolf spider) and it is small, variegated, has a pointed (δέκτυ, oxy) body and jumps well. Beavis (45) argues that here oxy means that it is swift. Yet Pliny (HN 11.28.79), seemingly patterned on this passage, uses “acuminatum,” (coming to a point). Theophrastus (HP 8.10.1) says the psylla eats the chickpea plant. These have been identified as members of the Salticidae family of jumping spiders but these are not poisonous. Others opt for *Latroductus mactans* which, while poisonous, cannot jump (Beavis 46; cf. phalangion).

**Ptolemy II Philadelphus** (ruled 282–246 BC), was the Macedonian ruler of Egypt following the death of Ptolemy I Soter who had campaigned with Alexander the Great. Soter is only known to have had a Bactrian camel in his keep, but Philadolphus, a patron of all knowledge, paid for the acquisition of exotic animals and kept these, as Diodorus Siculus tells us, to inform the Greeks about animals they had never seen before (3.36.2f.). Most of our knowledge of his animals comes from Athenaeus’ long description (5.200c–f.) of a procession Ptolemy put on as part of the festival of Dionysus (Rice). A papyrus preserves a letter to Ptolemy written by a local ruler named Tubias who sent animals to Ptolemy for his menagerie (Edgar, no. 59075; CPJ 14; Durand, 179–84, no. 29).

Durand, 1997; Edgar, 1971; Rice, 1983.

**Purple snake** Greek: ὀφίς πορφυρός (ophis porphyros). Aelian (NA 4.36) cites Ctesias (frag. 45.33 = Nichols, 52) in describing a very venomous purple snake that is a span long (the distance from one’s thumb to pinky with the fingers outstretched). Its body is deep purple but its head is extremely white. It has no fangs, but it
spits forth venom that putrefies whatever it touches. He goes on to describe in detail how apothecaries drain the animal of two sorts of venom and the effects of the poison, one of which is that the victim’s brains drain out his nose. Ball (326) hesitantly offers an identification of a gecko-like lizard of the species *Eublepharis*, but this is too far afield. The behavior described fits very well the spitting cobra, but the Asiatic spitting cobras are all found well to the east of India. If one accepts the common conflation of Africa and Asia, the red spitting cobra (*Naja pallida*) of eastern Africa might be a good candidate. Some individuals have a rather purplish coloration and their location in southern Ethiopia and Somalia would facilitate contact with Greek explorers. They are smaller than most cobras (2–4 feet).

Ball, 1885; Nichols, 2011.

**Pygargus** Greek: πῦγαργος; Latin: *pygargus*. Herodotus (4.192) first mentions the “white rump” as he describes the animals living in the nomads’ wasteland in Libya. Aelian (NA 7.19) lists it as a timid animal. Pliny (*HN* 8.79.214) simply mentions it among animals that are imported into Italy, and Bostock and Riley (ad loc. 2. 347), offer only “probably a kind of gazelle.” Juvenal (11.138) rails at those who eat sumptuous food, among which he specifies the *pygargus*. Thus, whatever animal this is (there are many antelope which have a white rump patch) it was fairly well known to the Romans. The term is also used to refer to various birds (Arnott, 204–05).

Arnott, 2007; Bostock and Riley, 155–57; Toynbee, 146–47.

**Pyktis** The form πυκτίδος (*pyktidas*) appears in a list of animals in Arisophanes (*Ach. 879*). Earlier versions of *LSJ* have suggested a badger (cf. Henderson’s translation) or a beaver. The later supplement of *LSJ* suggests that it is not a real animal, but a contrived animal name that is a pun on an identical word which means “a picture.”


*See also* beaver, latax, satherion.

**Python** There are many tales of giant African and Indian snakes from the Greco-Roman world (Barbara). They are not given specific names but are generally simply called “enormous snakes.” These are sometimes identified as a genus of boa (e.g. Hofmann) but this is far less likely than a python. The boa constrictor (*Boa constrictor*) which can reach just under 14 feet, is restricted to Central and South America. Likewise, the green anaconda (*Eunectes murinus*), while reaching 25 feet in length, lives in northern South America and Trinidad (Allen et al.). Certain boas do live near the Mediterranean, such as the East African sand boa (*Eryx colubrinus*) but it has a maximum length of 3 feet. Only a handful of the 32 python species exceed 20 feet in length. If one looks at the largest species with a range within the Greco-Roman world, one is left with the African rock python (*Python sebae*), which can reach lengths of between 28 and 32 feet (Barker, 420; Walls, 166–71). The current range of the rock python extends to modern Eritrea and Ethiopia along the southwestern shore of the Red Sea. They could easily have been seen there by the ancients. This is the giant snake of writers, such as Agatharchides, who saw or heard of it in his investigation of the Red Sea. Other pythons, such as the lesser rock python (*P. natalensis*) or the ball python (*P. regius*), live in Africa but dwell in areas not visited by the ancients and are smaller than the rock python (Walls, 142–46).

When a giant snake is reported from India there are two choices. At times it
may be yet another example of the confusion of Ethiopia/Africa and India as the home of wondrous beasts. But if a real snake is meant, the best candidate is the Asian rock python (P. molurus) (Barker, 420; Bodson, 2005, 460; Walls, 131–42). This is the snake that appears in most sideshows and movies due to its ability to be tamed. Some individuals have been recorded with a length of 31 feet and can subdue and eat wild pigs and deer. It is found throughout India and surely would have been known from the age of Alexander on. The largest snake reliably reported was a 33 foot long reticulated python (P. reticulatus) killed in Sulawesi (Indonesia) in 1912. But this python’s range is limited to the Nicobar Islands of India and from southeastern Bangladesh eastwards. It thus lies outside of expected Greco-Roman contact.

Agatharchides (frag. 80a = Diodorus Siculus 3.36–37.9 = Burstein, 125–32) tells the story of a 30 cubit snake to offer credence to Ethiopian tales of snakes reaching 100 cubits in length. If we use the measurement of a Greek cubit as 462.3 mm/1.5 feet this yields a snake with an impossible length of 150 feet. His 30 cubit snake is 45 feet long, almost surely still an exaggeration. Agatharchides relates the story of a band of hunters who hoped to profit by Ptolemy II’s generosity to those who brought him exotic animals. He vividly describes the way in which the snake, which mainly killed by constriction, was trapped and then transported to Alexandria where Ptolemy first had it tamed through the use of food deprivation and then kept it on display, often showing it to visitors. Ptolemy also received other large snakes, though much smaller than this example (Toynbee, 223). Near the end of the passage he describes its battles with the elephant, adding to the already prodigious serpent the ability to raise its head and blind the elephant with lightning-like rays from its eyes. Megasthenes, quoted by Pliny (HN 8.14.36) relates that in India snakes grow so large that they can swallow down stags and bulls whole. In the same passage he quotes Metrodorus as saying that snakes along the Rhyndacus River in the Troad (Pontus) could bring down birds flying high above them. On this see below. He also reports large boae (or bovae) in Italy.

In an earlier Roman corollary to this story we hear of the exploits of Atilius Regulus (consul 256 bc) who led his troops into Africa against the Carthaginians in the First Punic War. In Livy’s version (18.frag,10) the army came to the Bagradas river near Carthage and Utica and encountered a 120 foot long snake that was virtually immune to blows from hand weapons. It was finally killed through the use of siege engines and its skin was sent to Rome for display. Writing in the first century AD, Silius Italicus (Punica 6.140–293) expands on the account dramatically. His serpent devours humans and horses alike, tears trees out of the ground, has a crest, fiery eyes, a three-forked tongue, and, like Livy’s, poisonous breath. Pythons are not venomous, however.

Many of these traits appear in other stories about giant snakes. Lucan (9.728–33) speaks of a huge snake in Libya that sucks in air so strongly that it takes in birds from the sky and preys on bulls and elephants which it kills through constriction (cf. Draco). Interestingly, he specifies that they are not poisonous. Diodorus Siculus (3.10.5–6) also puts the elephant fighters in Ethiopia and, in speculating on how they hunt, accurately hints that they lie in wait for their prey. Strabo (17.2.2) mentions elephants fighting snakes in passing. Pliny (HN 8.11.32–12.34) places the combat in India and adds a few embellishments: the weight of the defeated elephant crushes the snake to death; the snake
falls on the elephant from trees above (a common hunting technique for constrictors); the snake plugs the elephant’s trunk with its head; some drink all of the elephant’s blood. Aelian (NA 2.21) mentions Ethiopian snakes 180 feet long and 60 foot long snakes in Phrygia which attract birds down from the air to devour them. They also attack flocks. Elsewhere (16.39) he describes giant snakes in India kept by one Abisesares (140 and 80 cubits), two brought to Ptolemy Philadelphus from Ethiopia (13 and 14 cubits), a 14 cubit long asp, and a giant snake on Chios whose story beggars belief. Pausanias (2.28.1) speaks of snakes of over 30 cubits from India and Libya which the Epidaurians do not even think are snakes.

The palestrina nile mosaic clearly shows two large snakes. One is lying in ambush and the other has a bird in its mouth (Meyboom, 21, 224–25). This is parallel to the detail given by Lucan and Aelian and is found elsewhere into the Middle Ages (Mielsch, 81–83). Such a snake battles an elephant on a Roman mosaic in the Carthage Museum (Blanchard-Lemée, fig. 158). Finally, Augustus, like Ptolemy, received large snakes as gifts, one perhaps as long as 75 feet long (Toynbee, 224). On the giving of unusual animals as gifts to royalty, see Bodson (2005, 71–75).

It is possible that the Latin draco came to be used for small pythons kept as pets (draco).

Rabbit Greek: (from the Latin) κύνικλος, κόνικλος (kyniklos, koniklos); Latin: cuniculus. The rabbit and the hare (the Leporidae) are and were often confused, but several traits separate them (WMW, 1720–21). Rabbits are born blind and naked whereas hares are born with a full coat of fur. Rabbits live in warrens with complex tunnels whereas hares live in the open. While most hares are solitary, the European rabbit (Oryctolagus cuniculus, WMW, 1729–31) lives in social groups with four males and one to nine females. When fleeing, rabbits head for the nearest hole while hares stay above ground and they can run faster than a rabbit. (Angerbjörn, 507; Hull, 60). It seems, based both on tradition and on DNA evidence, that the Greeks did not know the rabbit and that this animal, originating in Spain, was spread throughout the Mediterranean by the Romans (Angerbjörn, 513; Czeika; Monnerot et al.). On the rabbit and Spain, cf. Catullus (37.18, “Cuniculosae Celtiberiae”).

The European rabbit has a gestation of only 30 days and can bear seven litters a year, each with five or six kittens. It ranges from 14 to 20 inches in length and in weight from 3.3 to 6.6 pounds, making it smaller than the hare. The fur is brown with light and black tips and the tail is white underneath (Angerbjörn, 513).

Polybius (12.3.10) speaks of the rabbit on Corsica in the second century BC, saying that it might look like a hare from a distance but that up close they are different—and they taste different as well (cf. Athenaeus 9.400f). Varro (Rust. 3.12.5–6) lists the cuniculus as a type of hare and derives their name from the tunnels (cuniculi) they dig (cf. Martial 13.60). The word is probably a loan word from the Iberian language (Bodson). Strabo (3.2.6) speaks at length about the destruction they cause and offers the name leberidas, “peelers.” Such was their devastation that the Balearic Islands petitioned Augustus for military aid in combating them (Kitchell, 12–13). He tells us that muzzled Libyan ferrets (viverrae) were commonly used to drive rabbits out of their tunnels to be caught. Pliny (HN 8.81.217–19) follows Strabo’s account, accurately noting their fertility and resultant crop damage. In the same passage he says that only the dasypus (normally “hare”), and the hare (lepus) practice superfetation (cf. hare). Context makes it clear here and elsewhere (e.g. 10.83.179) that he is speaking of the rabbit. A young rabbit, cut out of the womb or taken before weaning, was called a laurex and was a delicacy. Aelian (NA 13.15) speaks of the “small hare,” giving it the Greek name of koniklos, saying specifically that he is reproducing the name that the Iberians
give it. His list of anatomical differences from the hare is accurate.

The rabbit was a serious threat to crops and its interaction with humans was contentious. It was especially difficult on islands (Németh). Moreover, superfetation made them doubly fertile, a fact known by the ancients such as Herodotus (3.108.3), Aristotle (Hist. an. 542b29–31, 579b30f., Gen. an. 774a 18f.), and Varro (Rust. 3.12.4). For further references see Oppian (Cyn. 3.519f.) with notes by Mair ad loc., mostly concerning the hare.

A triens issued in Rome in the second century BC has a head of Minerva on the obverse and on the reverse a ship’s prow, a griffin, and a hare’s head (ANS 1998.85.30). A sestertius issued by Hadrian shows him with Hispania, holding a rabbit or hare. Jashemski (104) reproduces a wall painting from Pompeii showing a rabbit nuzzling fruit or nuts (= Toynbee, 203, ill. 104; cf. Biers, 62, fig. 65). Levi identifies a feeding rabbit on a mosaic (304).


Reindeer Greek: Τάρανδος (tarandos); Latin: tarand(ī)rus, parandrus. Rangifer tarandus is known as the caribou in North America and as the reindeer in Europe. It is a medium-sized deer (4.5 feet shoulder height), notable for its thick fur, long migrations, and the fact that both males and females bear antlers (WMW, 1128–31). Although currently confined to arctic and sub-arctic regions, where it has been domesticated, it roamed Europe in prehistoric times and was probably found further south in Classical antiquity (Clutton-Brock, 160–66). Theophrastus (frag. 172 = Wimmer, 3.218) knows of it in Scythia and describes it carefully, although he claims it can change colors like a chameleon or an octopus to match its surroundings, almost surely a reflection of the fact that more northerly populations have whitish fur (to blend in with snow) and more southerly populations, in the tundra, tend to be brownish. See also Pseudo-Aristotle Mir. ausc. 832b7–16,
Aristotle frag. 371 (Rose), quoting Antigonus Carystius, and Pliny *HN* 8.52.123. Solinus’ *parandrus* (30.25) is clearly a reindeer despite its erroneous placement in Ethiopia and Wiener’s (54f.) theories. Roman sources knew the animal from Germany (*Caesar* *BGall*. 6.21; *Sallust* *Hist*. 3, frag. 104 f.) and Gaul (*Varro*, *Ling*. 5.167), mentioning the many uses locals made of the animal’s pelt (*reno*) for clothing and skin on shields (*Aelian* *NA* 2.16, cf. Benveniste). Evidence of their presence in animal games is slight (Jennison, 93).

Benveniste, 1964; Clutton-Brock, 1981; Hünemörder, s.v. “Reindeer”; Keller, 1.279–81; Prell, 1942; Rose, 1862; Wiener, 1921; Wimmer, 1852.

**Rhinoceros** Greek: *ρινόκερος* (*rhinokerōs*, “nose-horn”), *Ἰνδικὸς ὄνος* (*Indikos onos*, “Indian ass”), *μονὸκερον/ς* (*monokerōn/ς*, “one-horn”). There are five species of rhinoceros, within four genera (*WMW*, 1028), but the ancients surely only knew of two, perhaps three sorts. They probably knew both sorts of African rhino (Owen-Smith). The African black rhinoceros (*Diceros bicornis*; *WMW*, 1034–37), which is actually greyish, has a prehensile lip. Its front horn reaches up to 54 inches and the rear one up to 20 inches. They can weigh as much as 2,900 pounds, are 6 feet long and 5 feet high at the shoulder. While currently confined to the south of Africa, its original range extended from the southwest Cape to Somaliland, where it would have been easily encountered at the southwest entrance to the Red Sea. The African white rhinoceros (*Ceratotherium simum*) takes its name (“blunt nosed”) from not having the hooked lip of the black rhinoceros (*WMW*, 1037–40). It is a grass eater and thus holds its head lower than the black rhinoceros, which browses on bushes. It has two horns also, but the posterior horn is significantly smaller, often represented by little more than a nub, which may be the origin of some descriptions of one-horned rhinos. It is the largest rhinoceros, with males reaching 5,000 pounds and attaining a shoulder height of up to 6 feet and a total length of over 7 feet. It has a pronounced hump just behind its head. There are two subspecies: *C. s. simum* in southern Africa and *C. s. cottoni* in northeast Africa. The northern subspecies was readily available to the ancients since its former range reached as far north as Algeria (Owen-Smith, 254). There is some slight evidence that the rhinoceros was to be found closer to Egypt than generally thought (Gowers, 1950, 62–65).

The true single horned rhinoceros is the Indian rhinoceros (*Rhinoceros unicornis*; *WMW*, 1032–34). Its skin lies in plates (cf. Durer’s famous wood cut of the beast). It was formerly to be found throughout northern India. Aristotle mentions this animal twice (*Hist. an*. 499b15–20; *Part. an*. 663a20–28, cf. Pliny *HN* 11.46.126). The first is a mention of a solid-hoofed animal with a single horn, calling it a *μονὸκερον/ς* (*monokerōn/ς*) and saying it is an “Indian ass” (Ball, 316–17). In each case he is talking about animals that have one horn only. The rhinoceros’ foot does have toes (three on each foot), but they are indistinct, as are those of an elephant. Aristotle may have heard of the Indian rhinoceros from returning troops of Alexander, through travelers’ tales, or more directly from the *Indika* of Ctesias (frag. 45.45 = Lenfant, 182, 203; Bähr 255, 329–30, Toynbee, 125). Quintus Curtius (8.9.17, 9.1.5) states oddly that India has rhinos not found elsewhere. Agatharchides (72a, b = Burstein, 119–20) lists many traits that are repeated until the Middle Ages: its color is that of boxwood (the mud from wallows makes the rhinoceros’ skin appear paler than it is); it fights the elephant; it sharpens its horn on rocks (more likely a misinterpretation of how rhinos
The earliest representation of a rhinoceros occurs in the Marisa tomb paintings where a two-horned animal is clearly labeled PINEKEPOS (RHINOCEROS). Meyboom also suggests that a one-horned animal in the same group, which has a partial inscription, may be a black rhino, but the evidence is weak (Jacobson, 30, pl. 19; Meyboom, 45, figs. 61, 62). The Palestrina Nile Mosaic also shows a two-horned rhinoceros (Meyboom, 26, 241 n. 65, fig. 16), while the Great Hunt Mosaic from Armerina shows the capture of a single horned creature. The fact that the latter animal is standing in a watery area, the Indian rhinoceros’ preferred habitat, makes it hard to ignore the possibility that this is an actual Indian rhinoceros. The Pompeian relief of a single horned rhinoceros with obvious armor plates probably represents the Indian rhinoceros and, if drawn from life, is a tribute to the extent of the Romans’ animal trade (Keller, 1.388 fig. 135; King, 420; Quaranta). But it must also be remembered that picture books of exotic animals traveled in antiquity with much greater ease and frequency than the actual animals could and Toynbee (126) points out the artist’s shortcomings.

Martial (1.3.6) is the source for the phrase “nasum rhinocerotis habere,” “to turn up the nose, to sneer at every thing.” The horn of the rhinoceros was said to have special properties. Ctesias reports that drinking from a cup formed from this horn wards off epilepsy, a belief that, in the Middle Ages, morphed to the point where the horn was a protection against poisoning. This led to the death of many narwhals whose horns were passed off as rhino/unicorn horns.
See also KARTAZÖNOS.


Rhōx Greek: ῥῶξ. A spider classified by the ancients as a PHALANGION. The name indicates a resemblance to the grape (scholiast on Nicander Th. 716f.). A poisonous spider on modern Crete bears a similar name, ῥόγαλίδα (rhōgalida, “grape-spider”). Dr. Maria Chatzaki, Lecturer in the Department of Molecular Biology and Genetics, Democritus University of Thrace, and an expert on the spiders of Greece (Bosmans and Chatzaki) kindly shared her expertise in a private correspondence. She has inquired on Crete as to the nature of this animal and found that, while individuals are sure which spider is the rhogalida, very few agree. This is a cautionary tale to all those who study ancient zoology in assessing the zoological accuracy of ancient sources. Philoumenos (15.2 = Aetius 12.20) offers the alternative name ῥάγιον (rhagion) and Aelian (NA 3.36) calls it ῥάξ (rhax). Pliny HN 29.27.86 points out that it is similar to the ASTERION.

It was said to have a toothed mouth under its stomach (a fact that allows of no easy interpretation) and stubby legs that “move along in succession” (another odd phrase that makes one think more of a centipede or millipede than a spider). It possesses lethal, fast-acting venom that creates web-like filaments in the urine (Nic. Th. 716–24, Pliny HN 29.27.86). Beavis (47) is confident in identifying it as Latrodectus mactans despite the fact that its legs are not short. I summarize Professor Chatzaki on possible identifications of the rhōgalida: (1) Ctenizidae, species Cyrtocarenum cunicularium, a large spider living in tubes inside the ground. It is quite common on Crete, and found by workers when they dig the earth; (2) Lycosidae, genus Lycosa, a large spider also found on the ground which runs fast and provokes fear by its large fangs; (3) Eresidae, genus Eresusa, a large black spider; (4) Pholcidae, the spider found inside houses weaving its webs on ceilings and in wall corners. This has been called rhogalida on Crete; (5) Theridiidae, Latrodectus tredecimguttatus, the famous black widow (= Beavis above).

For other identifications, including one as a millipede, see G&S (online 716, p. 184).

Bosmans and Chatzaki, 2005.
Salamander Greek: σαλαμάνδρα (salamandra); Latin: salamandra. The term “salamander” applies to a wide variety of amphibians whose taxonomy is disputed. All are members of the order Caudata but their division into families is disputed (Wake, 323). In general, they are smallish quadrupeds that resemble lizards whose tail is as long as their head and body combined. Some have lungs, others gills, and some both. Some are viviparous, others oviparous. The IUCN lists many Mediterranean species of salamander (27 for Italy, seven for Greece), but ancient descriptions make it clear that the salamander most commonly referred to by the ancients is the fire salamander (Salamandra salamandra). It is found throughout Europe and is has striking yellow spots on its black body. Its tail is relatively short and it can reach a length of 11 inches (Halliday, 373).

There were two main beliefs about this animal: immunity to fire and toxicity. Aristotle (Hist. an. 552b15–18) reports that it was unharmed by fire and could extinguish a fire by crawling through it (cf. Nic. Th. 818–21). Aelian (NA 2.31) claims that they live near forges and bedevil craftsmen by putting out their fires. The Vienna manuscript of Dioscorides shows a salamander in the fire (Mielsch, 123–24, abb. 90; cf. Kádár, 52f.). Nicander (Alex. 537f.) calls it the “wizard’s lizard,” speaks eloquently about the effects of its poison and offers many cures for one who has happened to “drink it in.” This strange phrase is studied by Hillman, who has gathered relevant references. S. salamandra does indeed possess an alkaloid, slimy secretion which acts as a harsh skin irritant. Pliny (HN 10.86.188) says salamanders appear with the rains only to disappear in fine weather, notices the milk-like secretion, but incorrectly claims it comes from their mouths. It arises from glands along its back and behind its eyes. Predictably, the salamander was widely used in medicine (Hünemörder for references). Bodson (329–30) notes a salamander on the balance beam of a scale in a bas-relief from Pompeii (= Ciarallo and De Carolis, 178, fig. 201).
Satherion Greek: σαθέριον (satherion). An unknown animal, listed by Aristotle (Hist. an. 594b31–33) with the otter, beaver, latax, and the satyrion (also unknown, a variant of satherion?) as an aquatic quadruped. Keller (1.185–86) suggests that all four names may refer to the same animal, but this is unlikely. LSJ suggests a kind of beaver, but any kind of water rat or vole might fit the description better. The African mole-rat (Tachyoryctes macrocephalus or T. splendens) is another possible candidate. It has impressive teeth like a beaver and is found in Ethiopia and Somalia, making it possible that it was known to the Greeks through Egypt (WMW, 1443–46). It is a small rodent with a stocky body and is nocturnal, which fits the passage. They live in burrows, not rivers, as Aristotle suggests, but they are found in wet habitats.

See also beaver, latax, pyktis.

Satyrion Cf. satherion.

Satyros Greek: σάτυρος (satyros); Latin: satyrus. In mythology, a satyr is a theriomorphic creature with a man’s torso on two horse’s legs (later with goat-like legs), often seen in the company of Dionysus. Pliny mentions the gentle satyrus in his account of apes (HN 8.80.216, cf. Solinus 27.60). Elsewhere (7.2.24) he tells us that they live in the mountains in eastern India and are very swift runners, sometimes running on all fours and sometimes standing up to do so. Aelian (NA 16.21) adds that they have a horse-like tail “at their waists” and discourses on how hard they are to capture. He follows this immediately with a description of the Choromandae, a forest dwelling race (gens) with grey eyes, a horrible scream, the teeth of a dog, and a hairy body. It is hard from context to decide if he is describing a fantastic race of people (for these follow next in the text) or a race of ape. McDermott (77–78) insists that this is another name for the Satyri but is probably overzealous in his interpretation. Finally, Pliny (HN 10.92.199) tells us these satyri have cheek pouches.

The descriptions of the satyri seem to be speaking of an actual animal known to the locals of the area (Colunda in Aelian, Catarcludi in Pliny) rather than a race of humans. Scholars have identified these creatures with many animals, often strain- ing credulity. Hüinemörder equates it with the cynocephalus. Jennison (21) identifies it as a chimpanzee, Rackham and Jones (ad HN 8.80.216) suggests an orangutan, and Keller (1.10) the gibbon. McDermott also suggests that they may be gibbons (77) but this is highly unlikely if we are to take the bipedal motion seriously, for while gibbons can walk on two feet, the sight is more likely to inspire mirth than admiration. He claims that the satyr mentioned by Galen, however, was a monkey, though he cannot identify it (96). A monkey, identified by Meyboom (26, 240, n. 62) as a possible Anubis baboon, better known as an olive baboon (Papio anubis), sits in section 9 of the palestrina nile mosaic. The Dal Pozzo copy of the mosaic preserves the inscription ΣΑΤΤΥΟϹ (SATTYOS), probably for “satyros.” In his note, Meyboom, argues for the satyr/monkey as a type of guenon. Finally, one must wonder if this animal may be called a satyr from its relationship to the most common trait of satyrs on Greek and Roman art—a very erect phallus. Phallic displays, often employed as a threat (Eibl-Eibesfeldt, 63) were known to the ancients and ithyphallic apes and monkeys occur in art (McDermott, 82–83). Lissarrague has studied the positions occupied by monkeys, satyrs, and men.

Eibl-Eibesfeldt, 1983; Hüinemörder, s.v. “Monkey”; Lissarrague, 1997; Rackham and Jones, 1940f.

Scorpion Greek: σκορπίος (skorpios); Latin: scorpio. Scorpions are arthropods
related to spiders. As such, they have eight legs but are more noted for their two crab-like claws and upraised tail, which contains a stinger and a poison sac. The number (and even the names) of scorpion genera are in dispute, but the most commonly found were probably *Euscorpius carpathicus*, which may contain up to 20 subspecies, and *E. italicus* (Fet and Braunwalder, 17–18). Its sting is serious, and was feared by the ancients, but it is not generally lethal other than to the young or medically compromised. Effects of a sting range from mild swelling, redness, and soreness to breathing problems and irregular heart rate (Dutto et al., 660). Beavis lists several other species, some non-venomous, and is correct in cautioning about being overly precise in identifying individual species mentioned by authors. “Scorpion” as now, was often a generic term in antiquity. Aelian knows 11 kinds (NA 6.20). Certain “types” were mentioned, with names commonly referring to color: the white scorpion; the red; the *zophoēs*, which caused insanity in its victims; the *ehloaön*, greenish; the *empeleios*, yellowish; *karkinōdēs* (crab-like); *melichlōros* (honey-green) (Beavis, 23f. for these and others). Aristotle seems to think scorpions produced eggs and larvae (Hist. an. 555a23f.) whereas they give birth to live young that then ride their mother’s back. Aelian got this right (op. cit.) and also knows they are carnivorous (8.13). Common beliefs included their generation out of rotting wood and that scorpion young turned on their parents (citations in Beavis, 26–27 and Hünemörder). Pliny (HN 11.30.86–91) is a treasure trove of scorpion lore. He cites Apollodorus as listing nine kinds, one of which has a double stinger, and offers extensive information on their poison, striking habits, and wide distribution (Scythian scorpions even kill pigs). Nicander (Th. 769f.) offers similar information. Naturally, numerous antidotes and cures arose and the evidence is carefully presented by Beavis (28–32). Its association with astronomy and magic may account for its appearance on amulets (IBK, 24.10–16, 29–30) and its fierceness lies behind its use as a shield device (e.g. BzAr no. 1558; Williams, pl. III). It appears on late Greek and Roman coins with some regularity, especially those of Syria.


**Sea snake** Aelian (NA 16.8) states specifically that the Indian Ocean has sea snakes (*ŭdrōus thalattion, hydrousthalattious*) with broad tails. He also states that they have saw-like teeth rather than true fangs. These are the sea snakes of the Indian Ocean. Sea snakes do indeed have wider tails that serve to propel them. Members of the cobra family (*Elopidae*), true sea snakes are members of the subfamily *Hydrophiinae*. Ball (329) suggests a member of the genus *Hydrophis*, but their range is too far south. Sea snakes are very poisonous, but their fangs are quite short and they rarely pose a threat to humans. If the reference to saw-like teeth is to be taken at face value, Aelian may be referring to some sort of eel. The teeth of the Moray eel, which inhabits the Indian Ocean, fit this description well and their tails are also flattened.

Ball, 1885; Keller, 2.301.

**Seal** Greek: φῶκη (*Phōkē*); Latin: *phoca* and *vitus marinus* (sea calf). The Mediterranean monk seal *Monachus monachus*, now listed as “critically endangered” by the IUCN is found in the Black Sea. It is a large animal, up to 118 inches in length. This was the animal studied by Aristotle in detail. Since it partakes
of both land and marine traits, he considers it a “stunted” creature (Part. an. 691a8–10; Hist. an. 566b27f). He is intrigued by its lack of ears, its forked tongue, compact kidneys and large penis and this knowledge would apparently be based both on observation in the wild and, perhaps, dissection. The animal was easy to find in antiquity since it hauled itself out onto sandy beaches, though today it is to be found in more secluded caves. Despite its prevalence, the animal is but rarely shown in ancient art. The sole Greek example known to the author is on a Caeretan hydria (530–500 bc) which clearly shows the coloration of the animal as it swims behind a sea monster (Boardman, 80, pl. XXIV.14; Marangou et al., 124–33, with plates). The seal also appears in the seventh and sixth century coins of Greek Phocaia in a classic example of a “punning” type since the animal’s name mimics the town’s. Strabo (16.4.14) lists an “Island of the Seals” in his description of the Chelonophagoi (“Turtle eaters”). Toynbee (1973, 205–06; 1948, 36) lists but a single representation in Roman art, a mosaic from Cos where the seal is named “Euploia” (“Fair Swimmer”). Hünemörder collects many ancient references to seals but his assertion that Tacitus (Germ. 17) refers to a north Atlantic seal goes beyond the evidence.

Seals appear in literature as early as Homer’s Odyssey, where they are known for their strong smell (4.406). In later times there was apparently a trade in their skins as they were thought to ward off lightning. Augustus, who was afraid of lightning, always carried a piece of seal skin with him (Suetonius Augustus 90) for the supposed protection it offered. Pliny knows them well (HN 9.14.41–42) and speaks of tents made of the skins (HN 2.56.146). He also lists many medicinal uses for the animal, including as a cure for epilepsy (HN 8.49.111, 32.37.112). They were occasionally seen in the games (cf. Polar bear) and, since Pliny states they could be trained, may well have appeared in shows.


Seps Greek: σῆψ, σπεδῶν (seps, sepedon); Latin: seps. Nicander (Th. 147) locates this snake in Mount Orthys and calls it “thirsty” (perhaps “thirst-provoking” as the dipsas, G&S, 173). Pseudo-Aristotle (Mir. ausc. 164) parallels this information and indicates that the bite is unpleasant but not overly so. Lucan (9.723) calls it “tabificus” (“decay-inducing”) and then describes how a certain Sabellus is bitten by this small snake. His skin and flesh wasted away, revealing bones which themselves dissolved (9.763–88; Wick, 2.324–25 on the poison). Philoumenos (24) offers these facts: length 2 cubits; straight and slow slither; broad head; white markings throughout its body; death within three days. Pausanias (8.4.7) provides an eyewitness description: resembles the echis, but very small; ash colored with spots; broad head, narrow neck, large mid-section, short tail; moves in a side-winding motion like the cerastes. Frazer (4.193, ad loc.) identifies it as Coluber ammodytes (today, Vipera ammodytes, the nose-horned viper; SSW, 1.390–92). Yet this can grow large and has a prominent protuberance on its nose that Pausanias missed in an otherwise detailed description. Wick (2.304–05) reports several identifications as does Leitz (81–87), himself offering the carpet viper, Echis pyramidum. This snake has also been identified with the cerastes and echidna. Aelian (NA 16.40) claims its coloration changes to match its environment and describes four fangs for its lower jaw. Scarborough offers an overview (6–7).
Liliane Bodson has carefully studied all instances of the words σεψ/σεψ in antiquity and has concluded that it is used to denote four separate animals. The first is the viper, *V. ammodytes* or *V. a. meridionalis*. The second use indicates one of several lizards (e.g. Arist. *Hist. an.* 604b22–25; Nic. *Th.* 817; Pliny *HN* 29.32.102), one of which is also called the *chalchis*. The third is a millipede (cf. Pliny *HN* 20.6.12, 29.39.136) and the fourth, late use, indicates the larval stage of the pine processional caterpillar (*Thaumatocampa pityocampa*).


**Serpens Niliaca** The “Nile Serpent” is not given a more specific name by Lucan (9.815–21). One of Cato’s soldiers is bitten and dies by falling suddenly unconscious. Lucan stresses the rapidity of the coma following the bite. Wick (2.347–48) is probably correct in assuming this is the ASP.


**Serval** The serval (*Leptailurus [Felis] serval*) is a medium-sized wild cat reaching about 5 feet in total length and attaining a weight of up to 40 pounds. It is long legged and has solid black spots on its yellowish coat. Its current range is mostly sub-Saharan but it once extended into northern Africa and was surely known to the ancients (Toon and Toon, 384). It was most likely considered a type of lynx.


**Sheep** Greek: ὄις (*oïs*), μῆλον (*mēlon*, sheep or goat), πρόβατον (*probaton*, small cattle, sheep, goat), κρῖος (*krios*, ram); ἀμνὸς (*amnos*, lamb); Latin: *ovis*, *aries* (ram), *agnus* (lamb). In addition to these words, many specialty words exist connected with animal husbandry (e.g. ἀρην, ares, a lamb less than one year old). Sheep and goats were among the first animals domesticated by humans (cf. Varro *Rust.* 2.2.2). According to recent scientific investigations, the domestic sheep (*Ovis aries*) is the result of several domestication events. These began up to 8,000 years ago and involved various types of wild caprines being bred.

![Bronze shepherd bearing a ram, ca. 540–520 BC. Yale University Art Gallery, 2002.15.12, Gift of Thomas T. Solley, B.A. 1950. Photo © Yale University Art Gallery.](image)
first for meat and then for secondary products such as wool and milk (Bruford et al.; Chessa et al.; Clutton-Brock, 52–57, Pedrosa et al.). The wild sheep involved in this process include the European mouflon (*O. musimon*), originally found in the wild only in Corsica and Sardinia and the urial or Asiatic mouflon (*O. orientalis*). Wild sheep were not indigenous to Greece in the post-Pleistocene and therefore were introduced by humans. Once domesticated, the sheep provided a host of products for humans, including foodstuffs such as meat, milk and cheese (Dalby, 300), industrial products such as wool, horn, pelts, and manure, and were a common sacrificial offering. Their knucklebones were used as ancient dice.

While sheep were obviously kept by the Minoans, the Linear B tablets offer a wealth of information about the Mycenaeans, who kept enormous herds of sheep and the intricate bureaucracy surrounding them. In the Knossos tablets, sheep are tallied far more often than any other domestic animal involved in the palace economy (Enegren; Rougemont, 20–30; DOCS², 131, 195–205). In Homer too, large flocks of sheep indicate wealth *(Od.* 14.100–104, 21.18–19). In Archaic and Classical times, smaller, individual herds are more the norm. The shepherds frequently moved the flocks between higher and lower ground according to the season (transhumance), using *dogs* to protect against poachers and *wolves*. Many articles in Frizell and the work of Skydsgaard study transhumance and caprine husbandry throughout the various ages of antiquity. Sheep could subsist on poor fodder if they had to, as Aelian (NA 16.32) lists concerning sheep on Keos. Aristotle treats sheep and *goat* anatomy and husbandry at length *(Hist. an.* 573b17f.; 596a13f.; 610b22f.; Ryder, 42–43) stating that of all herd animals they are the most stupid. He puts sheep into two basic groups: broad tailed (*platykeros*) and shaggy (*makrokerkos*). Ethnographic authors often mention varieties of sheep. Herodotus, for example, speaks of Arabian sheep, one breed with tails so long they must be supported in little carts and the other with a tail one cubit wide (3.113). Strabo recounts that sheep on Euboea have white or dark wool depending upon the river from which they drink (10.1.14). Ryder studies the various types known to the Greeks (146–55) and Romans (168–70), differentiating them mostly by horn shape, leg length, body type, the sort of wool they produced (long, shaggy, fine, etc.) and where they lived. He also discusses modern breeds (321–28, 377–82). In literature, sheep herding is often associated with country life and pastoralism, beginning with the Cyclops’ herds and culminating in bucolic works such as those of Theocritus and Vergil. Theocritus even names a ram *Phalaros* (“White-spot,” 5.103).

We have a great deal of information concerning sheep in the Roman period, largely due to agricultural authors such as Pliny *(HN* 8.72.187–75.199) Varro *(Rust.* 2.2.1–20) and Columella (7.2.1–5.22). White (301–12) offers an admirable summary of the evidence, including various breeds and the qualities for which they were bred, such as quantity or fineness of wool, color, size, quality of milk (cf. Columella 7.2.1–3; Ruffing). Most writers divide sheep into those who were raised for wool and thus wore protective “jackets” (*tectus*, Pliny *HN* 8.72.189 or *pellitus* Varro *Rust.* 2.2.18) and those who were not so protected (*colonicus*, Pliny ibid.). We have reports of intentional cross-breeding (Ryder, 169–70). Pliny *(HN* 8.75.199) mentions Umbrian sheep, a cross between the Spanish/Corsican *musmo* and domesticated sheep. In a long passage on various breeds, Columella
relates in detail the attempts by his uncle Marcus to cross wild African rams with domestic ewes (7.2.4–5). White also discusses various ways in which sheep were herded, from transhumance to being integrated into the running of an average farm.

Sheep and rams are frequently found in art, often in their role as sacrificial animals. It should be pointed out that the presence of horns does not always mean that the animal is a ram. Sheep which do not have horns are called “poll’d” and while the horns can be removed or stunted, both genders may lack horns genetically. There naturally would have been a breeding preference for the hornless type since they are easier to handle. Morgan (58–60) describes sheep and goats on Theran wall paintings. Sheep and rams appear often on gems and coins (IBK, index, s.v. “Schafe,” “Widder,” “Widderkopf”). Boardman (69, no. 131) shows an elegant rendering of sheep on an Ionian gem (cf. nos. 516f.) and a striking didrachm of Elis shows an eagle attacking a lamb (not a sheep as sometimes reported, for they are too large). A search of the BzAr under “sheep” reveals 36 vases, whereas “ram(s)” yields over 600. Sicilian plastic vases are shaped like sheep or rams (Heldring, 51–52) as are larger rhyta (Hoffmann, 1962, pl. 1.1–2, 5.3–4; 1981, figs. passim) and arybaloi (Getty Museum, Malibu JPGM 86.AE.696). Sculpted sheep or rams are well known (Richter, 27–28, with figures). Roman art commonly shows sheep in sacrificial and pastoral scenes and examples are collected by Toynbee (163–64) and Ryder (170–74). Both Greek and Roman artists often take pains to show the wool accurately according to the type of sheep being depicted.

See also Aoudad, ibex, kri-kri, Mus(i)MO


Shrew Greek: μυγαλή (mygale, “mouse-weasel”); Latin: sorex, saurex, mus araneus. The shrew is a small, mouse-like animal (family Soricidae) with a long, pointed snout. It eats a wide variety of invertebrates, and is generally rather aggressive and quite vocal. They are commonly divided into red-toothed (Soricinae, 122 species, Zima) and white-toothed (Crocidurinae, 212 species, Karasov). Soricinae include: the common shrew (Sorex araneus), widely distributed throughout Europe and well known to the ancients; the Alpine shrew (S. alpinus); Eurasian water shrew (Neomys fodiens); Mediterranean shrews (genus Nesiotites) in three species. Crocidurinae include some interesting species. The common European white-toothed shrew (Crocidura russula) is especially aggressive and Savi’s pygmy shrew (Suncus etruscus) is the smallest mammal in Europe, with some as small as 2.2 inches, yet they only need to bite their prey once to conquer it. It is commonly found in vineyards and olive groves. For a list of geographically relevant shrews, cf. WMW (204–25). It is unlikely that the ancients made any special distinction among them, although water shrews are notable for their dextrous swimming.

Herodotus (2.67) includes this animal among those mummified by the Egyptians and says their bodies were taken to Buto. The shrew was worshipped by the Egyptians (Houlihan, 126–27). Two species have been identified from their mummified remains – the giant musk shrew (C. flavescens) and the dwarf shrew (C. nana).
The identification as a shrew here is preferable to How and Wells’ “fieldmouse” (1.200 ad loc., cf. Asheri et al.) although in Latin, at least, the term can indicate a generic mouse (Morland).

The shrew was feared in antiquity for its bite and, indeed, some shrews have poisonous salivary glands that cause painful bites. The ancients especially feared the effect of the bite of these tiny animals on their livestock (Arist. Hist. an. 604b18f.; Columella 6.17.1; Vegetius Mulomedicina 4.21.1) as the bite was reported to cause blistering. Pliny (HN 8.33.227) says that the Italian variety is poisonous but is not found outside the Apennines. He also relates several cures for its bite including garlic (20.23.50; 28.42.154). Nicander (Th. 815–16) adds that it is blind and often meets its death in wagon ruts. The ground-up body of a shrewmouse that had died in this manner was a cure for its bite to humans (Aelian NA 2.37). The tiny animal even had its day in the arena as Elegabulus had 10,000 mice, shrews, and weasels turned loose on one another in his presence (SHA Elegabulus 27.1).

The shrew appears infrequently in art but often in association with the mongoose (Rosén). IBK sees one above a shell on a coin of Kyme (2.9). Folklore (Diodorus Siculus 1.10.2) held that the animal was born from the mud (Agut-Labordère). On the confusion of the shrew and spider see the complete study by Perpillou (208–21).

See also Mus Araneus.


Silk worm See Bembix.

Simia Greek: πίθηκος (pithēkos), πίθακος (pithakos), πίθηξ (pithēx), πίθων (pithōn); Latin: simia, simius. In general, these terms indicate a “monkey,” or “ape” with no specificity and with great confusion and misuse of terms. However, in some cases at least, they are more precise and refer to the Barbary Macaque, the monkey most readily available to Greeks and Romans. The ancient lexicons list many examples of what constitutes a simia. For example, Isidore lists five types of simia: Cercopithecus, Sphinx, Cynocephalus, Satyros, Callithrix. Other glossaries list other definitions (McDermott, 100) which only muddy the waters.

See also Ape, Cebus, Monkey and the individual species mentioned there.

Simūr Greek: σίμυρ. Hesychius says this animal is a kind of fur-bearing “mouse” whose pelts the Parthians use for clothing. LSJ compares the Arabic sammur and makes an identification of “mustela scythica,” perhaps intending Martes scythica, an older, and difficult to verify, nomenclature for a weasel, perhaps the ermine.

Skērokephalon Greek: σκηροκέφαλον (“hard-head”). Both the name and the description of this phalanion as found in Philoumenos (15.4 = Aetius 13.20) make it clear that this is another name for Kranokolaptēs (Beavis, 54).

Skolēkion Greek: σκοληκίον (“worm-spider”). Mentioned only by Philoumenos (15.4 = Aetius 13.20) as a phalanion and described as long and spotted. There is no solid identification (Beavis, 54) although
the elongated shape might make one think of the Mutillidae (cf. sphēkeion) or the “ant spiders” (myrmēkeion).

Skölæ The term skölæ is very generic, meaning, basically, “worm, larva.” For the giant worm of the Indus River, see crocodile (1).

See also caterpillar, moth.

Skytale Greek: σκυτάλη; Latin: scytale. Nicander (Th. 384–95) and Philoumenos (27) stress its similarity to the amphisbaena since it has an equal thickness throughout its body. Its name means “cylinder,” such as the one used by Spartans to make encrypted messages. Pliny (HN 32.19.54) considers it poisonous and Lucan (9.717–18) states that it is the only serpent that can shed its skin with frost on the ground. The identification of this snake is unsure, though the sand boa (Eryx jaculus) has been offered (G&S, 178 ad. 384; Wick, 2.297). See also Ammianus Marcellinus 22.15.27; Plutarch Crassus 22.15.27; G&S, 553–54; Leitz, 18–20, 22–25; Wick, 2004.

Slug Greek: ἄρειον (areiōn); Latin: limax. Varro (Ling. 7.64) derives the word limax from limus (“mud”), probably from a belief in spontaneous generation. It is unclear how carefully the ancients differentiated between a slug and a snail. Aelian (NA 10.5) speaks of a snail called the areiōn, claiming that it can leave its shell to feed. These are probably slugs, as are Pliny’s “naked snails,” used as a headache cure (HN 29.36.112). Wiktor has catalogued the slugs of Greece, giving some sense of their diversity throughout the Mediterranean.


Snail Greek: κοχλίας (kochlias); Latin: coc(h)lea. The term “snail” is (and was) used loosely for any gastropod mollusc, terrestrial or aquatic (freshwater or salt), that lives in a spiral shell and glides along on its “stomach” (hence the term “gastropod”). In today’s terminology, snails are divided into those with lungs or gills and a slug can be seen as a snail lacking a shell. The most common types of land snails are lunged and belong to the subclass Pulmonata of the class Gastropoda. The ancients clearly knew many species of snails, living in all sorts of habitats, and caution should be exercised in making overly precise identifications, as does Keller. One of the more common and well known species would have been the large, edible Roman snail (Helix pomatia) (Dalby, 305). Reese (312–13) notes this, as well as H. aspersa and Eobania vermiculata at Pompeii and Otalia lactea from Oplontis.

Aristotle studied them closely (Arist. Hist. an. 527b35f.), using kochlias for a land snail and kochlos for a sea snail (but cf. Pseudo-Arist. Mir. ausc. 846b13). He classifies them as ostrakoderma (“shell-skin”) and as monothyra (“one-door”, i.e. univalves), describing their “horns” (antennae), their ability to withdraw into their shells, and even their teeth (today called “radulas”). Elsewhere he states that of similar creatures only snails have been seen to mate, but is unsure whether this produces young or whether young are produced by spontaneous generation from the mud (Gen. an. 762a34f.). Mating occurs in winter (Hist. an. 544a23–24, cf. Pliny HN 9.74.164).

Varro (Rust. 3.14.1–4) speaks at length about snails and the way to raise them as
a crop. He lists several kinds: small white ones from Reate, large ones from Illyricum; medium-sized from Africa. Pliny (HN 8.59.139–41) describes their dormant phases in winter and summer (cf. Plautus Capt. 80) and lists several varieties; cave snails from the Balearic Islands; one that has a hard “door” with which it closes off its shell (called today the operculum), formerly found in the Alps but lately found in Italy; the best are from Astypalaea, a small island off Crete. Crete is known today for its wide variety of snail species (Welter and Williams). He also, inaccurately, says (9.51.101, 11.52.140) that snails have no eyes, whereas they are on the end of the antennae.

The snail’s predominant features gave rise to flowery language and folklore. Hesiod (Op. 571) calls them “house-carriers,” a phrase found in Cicero (Dit. 2.64.133) as dormiporta, along with terrigena (“earth-born”) and herbigrada (“grass-goer”). Its slowness was proverbial (e.g. Plautus Poen. 531) and it could stand for an impoverished life (Plutarch Moralia 525e). It is also the subject of a famous riddle by Symphosius (no. 18, cf. Apthorp). A well drawn snail is found in Pompeii on the wall of the House of the Golden Bracelet (Ciarallo and De Carolis, 58).

Apthorp, 2007; Ciarallo and De Carolis, 1999; Dalby, 2003; Reese, D., 2002; Welter and Williams, 1999.

Snake Greek: δράκων, ὀφῖς (drakōn, ophis); Latin: anguis, serpens, coluber, colubra. Few animals appear in Greek and Latin literature and art as frequently as snakes. Leitz (16–17) lists 33 Greek names alone. They appear in art as early as the well known Snake Goddesses of the Minoans and persevere until late Roman times (Bodson, 335–48). They serve as genius of the dead, as fertility symbol, house companion, ancestors of famous heroes, attendants upon the healing arts (Asclepius, the caduceus) and were associated with sanctuaries (e.g. Python at Delphi; Orr). They served as guardians of tombs and houses and were liminal animals who contributed greatly to rodent control. In shedding their skin they were seen as symbols of rebirth, appear frequently in mythology, and are used in folk medicine (Gaillard-Seux). Yet poisonous snakes were known and fear of them seems to have fed into a general fear of snakes in the population of Greece and Rome. Thus, in the Iliad (3.30–37) Paris draws back in fear at the sight of Menelaus like a traveler coming unexpectedly across a snake (drakōn) in a ravine. The number of species of snakes available to the ancients was large. Italy and Greece each have over 20 species, some of which are venomous. Certain areas were thought to have no snakes. Heracles, for example, was said to have driven snakes out of Crete, though several species reside there (Diodorus Siculus 4.17.3) and Poseidon was said to have driven snakes out of Tenos, whose name used to be “Snake Island,” or Ophiusa (Pliny HN 4.12.65; and the island Colubaria, Pomponius Mela 2.126, ed. Frick). As the ancients explored the world, special snakes entered their folklore. Tales of giant snakes abounded in countries like Africa and India (Python) and poisonous snakes with mythic toxicity are routinely mentioned from countries like Libya, Egypt, and India (Viper, Cobra). Lucan, describing the march of Cato through Libya, famously lists Aspis, Dipsas, Haemorrhhois, Chersydros, Cheledros, Cenchris, Ammodytēs, Cerastes, Skytalē, Amphisaena, Natrix, Iaculus, Parias, Prēstēr, Sēps and Basilisk, each with a particularly deadly way of killing humans. Wick (280–82) speaks eloquently of the dangers involved in identifying such snakes.

Snake anatomy was studied with both accurate and inaccurate observations (Hünemörder, 554) and many authors
were intrigued by their mating habits (e.g. Arist. Hist. an. 540a33–b3, Gen. an. 718a27f., cf. the episode of Tiresias and the snakes). Snakes are the animals most commonly found illustrated in Greek manuscripts, and mating is often depicted (Kádár, passim).

The Latin and Greek terms at the head of this article are mostly employed by the authors as generic terms, rather like the English “snake” or “serpent.” Servius (on Aen. 2.204) says “angues aquarum sunt, serpentes terrarum, dracones templorum,” (there are water snakes, land snakes, and temple snakes), but this is clearly wrong. Jones (Rackham and Jones, 8.231, on Pliny HN 29.22.72) discusses potential differences between *anguis* and *serpens*. Curiel Ramírez del Prado tries to distinguish among terms in Vergil. The Latin *coluber* and *colubra* seem mostly confined to poisonous snakes (cf. viper). Individual species are accessed under their ancient name.

*See also* ASP, DRACO, VIPER.


**Snake, flying** See FLYING SERPENT.

**Solifuga** See SOLIPUGA.

**Solipuga** Latin: *salpuga, solipuga, solipugna*. This word, and variants of it, have been interpreted as referring to a poisonous animal, either a spider, a snake, or an ant. Pliny (HN 8.43.104) lists it among the animals that have caused the destruction or moving of entire cities. He refers to a strip of desert north of the Cynamolgi where the entire population was wiped out by *solipugis*, which are not described. Later (HN 29.29.92) he cites Cicero as using the word *solipuga* for a poisonous sort of ant not found in Italy and adds that in Baetica (the southernmost section of Spain, including today’s Gibraltar, Cadiz, and Cordoba) its name is *salpuga*. Elsewhere (22.81.163) he mentions poisonous *bestiae* of the genus of *solipugae* which live on leguminous plants, bite the hand, and can be lethal. He does not describe them but says that remedies against spiders (aranei) and the phalan- gion are also good against it. Lucan (9.837) uses the *salpuga* as an example of how something very small can be extremely poisonous, but he does not describe it or say what it is. He refers to their home as a *latebra*, indicating some sort of hidden place.

Paul the Deacon, in his epitome of Festus’ work (Thewrewk and Lindsay, 389), calls the *solipugna* a sort of malevolent little beasty (*genus bestiolae maleficae*) that is stirred up into a fury by the sun. Solinus (4.3 and 6) speaks of the *solipuga*, a spider-like creature that lives especially in silver mines and which is the only venomous animal on Sardinia. It can cause discomfort for one who sits on it and, should it be ingested, it has the strange effect of making its victim grin even in death. Isidore (*Etym*. 12.3.4; 14.6.40) follows Solinus closely on the *solifuga* but elsewhere (*Etym*. 12.4.33) lists the *salpuga* as an eyeless snake which is not easily seen.

Although the *salpugasolipuga* and the *solipuga* are often taken as the same animal, it is possible to mount an argument that they are distinct creatures due to their vastly different behaviors and habitats (Moog). Isidore’s identification of the *salpuga* as a snake seems to be a simple error arising from the surrounding names in Lucan’s list, which is the source that Isidore is using at that point in his work. To further complicate the issue, several scholars think that the phalan- gion called
the **tetragnathon** was a type of **salpuga** (Beavis, 50) and that the animal appearing in a single lexical gloss as ἰλιοκεντρίς (heíliokentris) as a type of fly might be the same as the **solipuga** (Alessio, 152–156; Beavis, 51). In modern taxonomies, **Solifugae** is an order of arachnid (but not a true spider) which is subdivided into over 150 genera and over 1,000 species.

Alessio, 1938; Moog, 2002; Steier, A., “Spinnentiere,” **RE** 3A, 1798–801; Thewrewk and Lindsay, 1913.

**Sounds, animal** Several manuscripts contain lists of the Latin verbs said to represent the sounds made by various animals. The most famous one is a fragment of Suetonius that was reprinted in the edition of Reifferscheid (cf. Finch). Along with the Suetonius text, Reifferscheid also prints lists from other sources which follow, and fill out, the Suetonius list (cf. Benediktson). Most of the words are onomatopoetic: e.g. *rugire* (lions); *rancare* (tigers); *mugilare* (onagers); *crocitare* (crows); *blatterare* (rams); *balare* (sheep); *hinnire* (horses). Others sound strange to our ears: e.g. *desticare* (shrewmouse); *drindare* (weasel); *drensare* (swans). Another list, restricted to bird sounds appears in the **Anthologia Latina** (Riese, I.2, no. 762, 246–50 = Reifferscheid, 308–11). Finch has published a previously unknown list based on Suetonius. No such list has appeared for Greek animals. A few words can be found in ancient texts: *trizein* (mouse); *onkaomai* and *onkēthos* (donkey’s bray) or *phryagma* (horse’s whimney) (Griffith, 223 with references). Dogs also growl onomatopoetically, *arbazō*, *arrha* (Aelian NA 5.51).

We know less about the actual sounds the ancients thought animals made. This does not refer to *rugitus* from *rugire*, but rather sounds such as “moo,” “baaa,” or “cheep-cheep.” Aristophanes provides *au au* for dogs (**Wasps** 903), the famous *brekekekēx koax koax* (**Frogs**, 209) and the complicated bird songs in the play of that name. Thompson has collected sounds that represent buzzing. Most recently, Bettini has studied the subject, and his appendix (265–85) conveniently collects many texts.

Benediktson, 2000; Bettini, 2008; Finch, 1969; Griffith, 2006; Kádár, 1978; Reifferscheid, 1860; Riese, 1906; Thompson, 1946.

**Spalax** Greek: σπάλαξ, also ἀσπάλαξ, σφάλαξ (*spalax, aspalax, sphalax*). LSJ lists this as the “blind-rat, *Spalax typhlus,*” which is the Palestine mole-rat, *Nannospalax ehrenbergi.* Two other species of this burrowing rodent, *N. leucodon* and *N. nehringi,* are also found along the Mediterranean coast from Lybia to Syria (**WMW**, 1427–28). It has atrophied eyes and is often confused with the mole. Thompson attempts to clarify ancient references. Keller points out that the name in modern Greek for each is identical. Aelian (NA 11.37) says the teeth of the *spalax* project like those of the boar, a clear reference to the mole-rat (cf. ill. in **WMW**). Oppian claims the *aspalax* eats grass, which would indicate the herbivorous mole-rat, since true moles are insectivores. He gives a lengthy mythological story of their origin to explain their blindness. The information collected by Hünemörder on the damage moles did to plant matter refers to this animal.


**Sphēkeion** Greek: σφήκειον. This spider is classed as a type of **phalangion** by the ancients. As its name indicates, it bore a resemblance to a wasp and this is probably Pliny’s (**HN** 27.29.86) unnamed spider, which has a worse bite than the **kyaneon** and which resembles a hornet in
every respect other than having wings (Moog). Nicander (Th. 738–46) says it is reddish in color. G&S (ad loc. p. 184) list identifications, including *Aranea sacculata* and *A. retiaria*, citing others who identify it not as a spider, but as an insect, e.g. *Asilus crabroniformis* and *Scolia haemorrhoidalis* (= *Megascolia maculata*). The former is known as the hornet robber fly and it is found today only Western Europe and in southern England and Wales. The latter is reddish and and is a large, solitary wasp that paralyzes beetles as hosts for its larvae. Beavis (48) offers that the sphēkion might be “one of the wingless hymenoptera of the family Mutillidae.” There are over 3,000 species of these wasps whose females resemble ants. Many are red and the females’ sting is formidable. The so called “velvet ant” is a candidate but, while its legs are widely spread, it clearly has only six of them. It is worth noting, however, that ancient descriptions of the phalangion are not as concerned as moderns with the fact that spiders have eight legs and insects six. An illustration of the animal in a Dioscorides manuscript depicts it with eight legs and two forward crab-like pincers (Kádár, pl. 26.3).


*Sphinx* Greek: σφίγξ (sphinx), σφίγγον (sphingion); Latin: sphinx, sphingion. This monkey was from Aethiopia and on the famous Nilotic mosaic from Palestrina a pair of tailed monkeys are labelled ΦΙΝΙΓΙΑ (SPHINGIA), probably a plural of the diminutive sphingion, using Greek letters but Roman spelling. McDermott says that the term “sphinx” is “usually given to Ethiopian tailed apes” (65). Agatharchides, in his *De mari Erythaeo* 73 (frag. 73 = Burstein, 120–22), describes a sphinx and points out its resemblance to the mythical creature, adding that it is gentle (but cf. Pomponius Mela 3.88, ed. Frick) and entirely covered with hair. This passage is paralleled in Diodorus Siculus (3.35.4) and cf. Strabo (16.4.16). Pliny (*HN* 8.30.72) says they are “fuscus” in color and have two nipples on their chest. Elsewhere he says they they (and the satyros), have cheek pouches (10.93.199). McDermott suggests that the sphinx is “probably an African guenon” (68) but admits that specificity is hard to come by. Meyboom (22 with note ad loc.) suggests the red guenon (*Cercopithecus ascaniarius*). Guenons do possess cheek pouches (WMW, 574). Others have identified it as a CHIMPANZEE (*Pan troglodytes*) or mandrill (*Mandrillus sphinx*), which McDermott refutes. It is interesting to note that Pliny (*HN* 6.34.173) speaks of their trade out of Ethiopia.

See also BABOON.

Burstein, 1989; Keller, 1.10.

*Spider* Greek: ἀράχνη (arachnē, fem.) ἀράχνης (arachnēs, masc.) ἀράχνιον (arachion, diminutive); Latin: aranea, araneus. Spiders today are classed as members of the phylum *Arthropoda*, the sub-phylum *Chelicera*, the sub-class *Arachnida* and the order *Araneae*. They are marked by their eight legs and two “teg mata” or body sections, viz., a cephalothorax or prosoma (combined head/thorax) and an opisthosoma or abdomen (rear body part). From the latter come the filaments for their webs. They are an extremely diverse species, found all over the world, with the exception of Antarctica, and are one of the more numerous types of animal found on the planet. Bosmans and Chatzaki (5) note that Hadjissarantos, in 1940, listed 316 species in Attica alone and they, while admitting that there are still many undescribed species, describe 856 species (in 49 families) in Greece, with 213 of them being known only from Greece (8–9). They further list 66 species which have been described, but poorly or incompletely, and thus cannot be verified.
The Greeks divided their spiders into two main groups. The first, dealt with here, included what most today would call spiders. This is the arachnê. Ancient sources exhibit a tendency to reserve this term for non-venomous spiders, especially those that produce webs. The second word, phalangion, refers to dangerous and poisonous vermin, most of which are spiders or spider-like, but a few of which are not. Latin makes no such distinction and, much as English, tends to use a single term (aranea) for all spiders. The Latin phalangium is used when following Greek sources for such animals. As might be expected, the ancients confused terms and animals as readily as people do today, falsely considering some creatures to be spiders and falsely classifying certain spiders as other animals. Ancient literary authors tend to use the terms with the amiable confusion that accompanies most common lore concerning animals. Thus, some authors use only a single term for all such animals and others whatever term seems expedient at the time (Beavis, 35). Aelian chose to devote two chapters to webs, one (1.26) for “spiders” and one (6.57) for phalangia. Moreover, a plethora of names undoubtedly existed for each creature, often varying by location.

Aristotle (Hist. an. 555b7) mentions λειμωνία ἄραξαι (leimöniai arachnai, “meadow spiders”) and describes how they lay their eggs on a web that is still attached to its body. This term may be very broad, designed only to designate these spiders as ones that live in the fields as opposed to those that stay close to human habitations. Aristotle then describes the basket that phalangia make for their young and contrasts the number of young that each type produces. He then describes several sorts of phalangia, and turns to a “third kind” (of spider? of phalangion?) which is “smooth.” It is an excellent spinner, waiting for prey in the middle of its web and storing the bodies elsewhere. Aristotle describes its activities as one who has sat and observed the animal for some time. Beavis reads this passage to mean that Aristotle thought there were two large groups of spiders (phalangion and arachnê) and that the latter was subdivided into two groups, the “meadow spiders” (αἱ λειμωνίαι ἄραξαι) and αἱ γλαφυραί (hai glaphyrai). The second name is usually translated as “smooth,” but Beavis may be correct in thinking it means “clever” or “skillfull,” basing his opinion on Hist. an. 623a7f. He is probably correct that this “third type” is not another sort of phalangion, but an orb-weaver spider, which makes the typical “spider’s web” with radiating spokes and cross threads. Beavis points to Araneus diadematus, which he puts in the family Araneidae but which Bosmans and Chatzaki (50) place in the Araneidae. Another candidate would be a member of the Tetragnathidae, or “long-jawed orb-weavers.” Bosmans and Chatzaki list 12 species of Tetragnathidae in Greece (48–50). This family too has many spiders which produce impressive webs. Note that the tetragnathon was, for the ancients, a phalangion. The ancients were divided on how the spider produced its silk. Some, beginning with Democritus, believed, correctly, that it was formed internally. Others, including Book 9 of Hist. an. thought it sloughed off the surface of the spider’s body. Cf. Aristotle Hist. an. 623a30–34; Pliny HN 11.28.80–81; Aelian NA 1.21.

The smooth or skillful spiders of Hist. an. 555b1–12 lay but a few eggs. If “smooth,” then they are being contrasted with hairy spiders, such as tarantulas; if “skillful,” the reference is surely to the complexity and beauty of their webs. At Hist. an. 623a25f. we are told of smooth spiders which weave a dense web. There are two sorts. The first has long legs and is rather
large, hanging below its web as it awaits prey. The other is “better proportioned” and stays on top of the web in a small lair it has woven for itself. To this, compare Pliny’s ode to its skill (HN 29.28.80–84). The *araneus muscarius*, “fly spider,” of Pliny (HN 29.38.131) has been identified as the house spider, *Tegnarius domestica* (Beavis 37) but could, in fact, be one of dozens.

Many other spiders are mentioned, but cannot be identified due to the simplicity of the descriptions, such as “white and with long forelegs” (Pliny HN 29.38.132) and the fact that so few are given names (see the list at Beavis, 37–38). The spider was an everyday sort of animal, inhabiting houses, fields, stone walls, sheds, mines, and many other places. It is natural that the more feared and poisonous varieties received the most detailed descriptions. Such proximity to humans also made it natural that the spider became part of folklore and folk medicine. Spider bite and its cures are mentioned by many authors (refs. at Scarborough, 80). Both the spider itself and especially its webs were employed in curing a wide variety of illnesses and complaints (Beavis, 43–44). Webs were especially useful for staunching blood flow and creating an impromptu bandage. Spiders, like HEDGEHOGS, were thought to be accurate weather forecasters. Spiderlings, who could be seen floating away from their birthplace on strands of silk, were said to predict winds and storms in the future (citations at Beavis, 40). The most famous example of the spider in mythology is that of Arachne (e.g. Ovid *Met.* 6.1–146) which appears on a relief in the Forum Transitorium in Rome. Finally, the spider was part of everyday parlance. Catullus’ purse is so empty that it has cobwebs (13.8) and his enemy Furius’ house is so impoverished that the spiders have moved out (23.2). Its skill was widely admired and held as an example for humans (Bouffartigue).

In art, spiders are seen on engraved signets and rings as early as the Early Helladic on the mainland and the Prepalatial period on Crete (Boardman, 21–24, cf. fig. 101). They are not common on Greek vases, but cf. Louvre 456 (= BzAr no. 210226) where one is a shield device. The ANS identifies a counterstamp of a spider on a coin of Ptolemy I (1974.26.5392).

See also PHALANGION.


Squirrel Greek: σκίουρος (skiouros); Latin: *sciurus*. The tree squirrel is indigenous to Italy and Greece alike. The European red squirrel (*Sciurus vulgaris*) is found throughout Europe and along the Mediterranean (*WMW*, 1265–68). It is currently threatened in some spots by the gray squirrel *S. carolinensis*, which has been imported into previously non-indigenous areas, such as Britain. The Persian squirrel *S. anomalus* is currently found in the Near East and on the island of Lesbos. The European red squirrel can reach 9 inches in length and actually has a wide variety of coloration. Yet, despite its familiarity, the squirrel (if, indeed the identification is correct) is mentioned but few times and depicted even more rarely.

Some take the *pherotikos* of Cratinus as a squirrel. Pliny says that the *sciurus* stores food for the winter, can predict the weather and stops up any hole that is facing the wind, wrapping up in its bushy tail (HN 8.58.138). The same claim to forecasting is made for the HEDGEHOG. He also notes (11.99.245) that the *sciurus* sits on its hind legs and feeds itself with its front legs.
Martial (5.37.13) briefly mentions the *sciu-rus*, intimating that it is a cute pet (Lazenby, 304). The Greek form of the word first appears in Oppian (Cyn. 2.586) in the beginning of the third century AD. It mentions the animal as holding its tail up for shelter in summer, a claim made for the peacock by Aelian (NA 5.21). The squirrel has been identified on certain works of art (Keller; Willers) but the animal so identified sometimes has a long, weasel-like snout, quite different from the blunter face of a squirrel.


Strepsiceros See Oryx.

*Strix* Greek: οὐκεία (strix, styx); Latin: strix, striga. This flying monster was thought (Ovid Fasti 6.131; Petronius 63) to suck the blood out of children during the night. Most identify them as owls (Thompson, 159; Arnott, 232–33), but Riley (1.295), commenting on Plautus, Pseudolus 820, holds out the possibility that vampire bats (*Desmodus rotundus*, *Diaemus youngi*, and *Diphylla ecaudata*) may lie at the origin of the story. Since the vampire bat is confined to the Americas, found from Mexico south, this is rather unlikely. The Latin term also means “witch.”

See also BAT.

Arnott, 2007; Hünemörder, s.v. “Owls”; Oliphant, 1913, 1914; Riley, 1870; Thompson, 1936.
Termite Aelian (NA 16.15) discusses a different sort of Indian ant that may be the termite. These ants are singled out for their cleverness in choosing to live above ground in little mound-shaped houses situated on high ground in order to be safe from flooding. The houses are filled with winding passages which remind him of Egyptian galleries or the Cretan labyrinth. They leave a single hole at the top by which to enter and exit. His source, he says, is Juba. It is hard not to see the termite in this description (Ball, 320–21; Beavis, 199). Pausanias (3.26.3) mentions Laconian ants that are whiter/rather white (λευκότερον, leukoterón). Keller (2.421) identifies these as termites but is challenged by Venmans, who translates the Greek as “shiny.” Beavis (199) identifies two European termites: Koltermes flavicollis and Reticulitermes lucifugus.

Ball, 1885; Venmans, 1930, 1930a.

Tetragnathon Greek: τετράγναθον, τετράγναθος (tetragnathon/os, “four-jawed”); Latin: tetragnathius. The ancients identified this “four-jawed” spider as a type of phalangion. Philoumenos (36.1–2 = Aetius 13.19) lists two varieties. One is flattish, off-white, rough legged and has two outgrowths on its head that are opposite one another, giving the appearance of two mouths and four jaws. The other has a line dividing its mouth into two sections. Pliny (HN 29.27.87) also reports two types, the worst of which has two white lines intersecting on its head while the milder one is ash colored with a whitish posterior. Note that modern lexicons list the nominative form of Pliny’s genitive tetragnathii as ending in the masculine -ius. An ending of -ium may be preferable, as a neuter paralleling the most common Greek form. Agatharchides (frag. 59a = Burstein, 105) relates that the inhabitants of the land next to the Akridophagi (see akris) were driven out of their country by swarms of these creatures which emerged following a heavy rain. Other authors relate a similar story, although the location changes (Strabo 16.4.12; Diodorus Siculus 3.30.1; Aelian NA 17.40; Pliny HN 8.43.104). Note that the passage of Pliny just cited calls the attacking animals solipugae leading certain scholars to equate the tetragnathon with the solipuga. Burstein identifies the pests as members of the order Solifugae which are arachnids, but not real spiders. They are often called “false scorpions,” have a powerful bite, and are found from Africa to India. Today the family Tetragnathidae contains long-bodied orbweaver spiders with exaggerated mouthparts, found all over the world. The genus Tetragnatha contains scores of species.
Beavis, 49–51; Burstein, 1989.

**Thōs** Greek: θος, (thōs); Latin: thos. This animal has a bewildering number of identifications, but the one most commonly found is jackal. Much depends on the mention or depiction of spots on the thōs, for this is a rare trait in wild canids. This has led some to identify the thōs as a civet (family Viveridae) which is a weasel-like animal, or a stoat/ermine (*Mustela erminea*) (Meyboom, 114). Both are significantly smaller than a jackal and they resemble weasels more than canids. Arrian relates (8.15.3) that there are two kinds of thōes, the normal (the jackal) and the larger, spotted ones which some call “tigers.” Meyboom (114) suggests that this “tiger” may be a kind of wild, hunting dog or a spotted hyena. It is not uncommon for ancient authors to confuse stripes and spots since they were not working from first-hand observation.

The ancients would have known several species (*WMW*, 655–60; Malcolm). Most mentions of the animal can be equated to *Canis aureus*, the common or golden jackal whose current range rims the eastern Mediterranean. The most northerly of the jackals, it is a brownish, medium-sized canid that hunts alone or in packs. It commonly stays near lions, scavenging their kills, and was undoubtedly very well known to the ancients. The simian jackal or Ethiopian wolf (*C. simensis*) was probably encountered. The black-backed jackal, *C. mesomelas*, has a distinctly dark stripe on its back. Its current range is confined to southern Africa and to the western edge of the Red Sea in modern Ethiopia, Sudan, and Eritrea. The side-striped jackal (*C. adustus*) has a striking set of black and white stripes on its side and is found from Senegal to Ethiopia and points south. The jackal would have been known from earliest days from the Egyptians, who situated its head on the god Anubis (Houlihan, 78).

Unlike the hyena, with which it is too commonly confused, the jackal is a true dog, belonging to the family Canidae, which also hosts foxes, wolves, and the domestic dog. A jackal is easily distinguished from a hyena by the flat line of its spine, long legs, long bushy tail, and generally canine appearance. Hyenas have distinctly longer front than rear legs, giving them a downward sloping appearance.

Homer first uses the word thōs, and there is no reason to doubt that he is referring to jackals. In one instance (*Il.* 11.474) Trojans surround Odysseus, like thōes do a stag. This is exactly how the golden jackal often hunts gazelles. Elsewhere (*Il.* 13.103), the animal is paired with leopards and wolves, major predators. Herodotus (4.192) lists animals living in the desert areas of Libya. He specifically lists foxes, hyenas, the dikty and the thōs, which, by its company here is almost surely a jackal. The small wolf he describes at 2.67 may also be a jackal.

Aristotle uses thōs in ways that variously evoke a jackal or a civet. Peck (2.377–79) has summarized the problem, but the reader is advised to check the Greek at all times as even Peck tends to translate the word differently in different places, sometimes as “stoat,” following Krumbiegel, and at other times as “jackal.” His notes are clear, however. Thompson generally uses “thos, or civet” in the *Hist. an.* but Platt favors “jackal” in the *Gen. an.* (cf. Arist. *Hist. an.* 507b15f.; 580a24f. 610a14f. 630a9f.; *Gen. an.* 742a10, 746a30f, 774b17). Arrian (*Indica* 15.3) reports that Nearchus identifies the animals which Arrian’s contemporaries see and call tigers (*tigrias*) as jackals (*thōas*). They are dappled or spotted and they are are larger than the other jackals. *C. aureus* is found in India, but the dhole, *Cuon alpinus*, is native to India and resembles a
large jackal (WMW, 674). Its coat, however, is not dappled but solid rusty red, like that of a fox, with a white patch running from beneath the muzzle through the underbelly. Note that the word used for “dappled” is aiolos, which can also mean swift of foot. Arrian’s description does fit the spotted African hunting dog (Lycaon pictus), but this animal is not found in India (cf. Meyboom, 114; WMW, 676–78). If India has been conflated with Africa and stripes with spots (if we take aiolos in this sense), this identification is possible, for the range of the animal, even today, reaches the south western coast of the Red Sea (Malcolm, 278).

Pliny (HN 6.34.176, 8.52.123, 10.95.206) calls the thōs a type of wolf that has a longer body but shorter legs than a wolf and describes the jackal rather well. He also cites Juba on a tribe of north-eastern Africa called the Therobthoe or “Wild Jackal Folk” (the common translation of “Jackal Hunters” is misleading) whose name comes from their skill in hunting and their swiftness to spring. Oppian’s thōs (Cyn. 3.336f., cf. also 1.70, 4.212; Hal. 2.614f.) brings the confusion full circle, for he says it is the offspring of leopards and wolves, and bears a dappled coat as a result. LSJ identifies this as the African wild dog (Lycaon pictus) but Mair variously chooses the civet and the jackal. The civet is too small and does not hunt in packs as Oppian reports. The jackal seems a better choice.

Other literary references (e.g. Grattius Cyn. 253; Solinus 30.28) bring little clarity to the problem. In general, the thōs seems to be grouped with fairly large carnivores. Unless there is strong evidence to the contrary, it is best to take it, in most instances, as a jackal unless specific circumstances favor a weasel, civet, or hunting dog. Herodianus (Epim. 60) equates the offspring of a wolf and a panther, the lykopanthēros, to a thōs.

The jackal is infrequently represented in art. Toynbee (287) has recognized it in a late Roman mosaic from Carthage and a Christian one from Jerash. The spotted creatures labeled ὍΑΝΤΕΣ (THŌANTES, irregular plural) on the PÄLESTRINA NILE MOSAIC are identified as spotted hyenas by Meyboom (21–22). His study of the ὑσ in an appendix (115–18) is very thorough. Roman coins of emperors, such as Hadrian, Antoninus Pius, Commodus, and Philip I, struck at the Alexandria mint show a canid as a subtype which has been credibly identified as a jackal. The animal itself rather resembles a dog, but the presence of Hermanubis on the coins is persuasive. Likewise, King (410) has identified C. aureus on a painting from the Temple of Isis in Pompeii.

See also ONOKENTAUROS.


Tick Greek: κροτῶν (krotophn); Latin: rici
mus. Ticks are small arachnids of the order Acari (classification varies) which are divided into “hard” (Ixodidae) and “soft” ticks (Argasidae). The family Nuttalliellidae is confined to a single, South African insect. In all, there are 896 species (Guglielmone, 1). All three stages (larva, nymph, adult) and both genders suck the blood of mammals (including humans), birds, and occasionally reptiles and amphibians. They are a serious vector of human disease and must have posed health dangers and occasioned economic loss for the ancients who had numerous treatments to hand (Beavis, 59). No
particular species can be identified in a text, but Beavis (57) points out that in Europe Argasidae only infest birds. He names Ixodes ricinus as a very common species.

Odysseus’ dog, Argos (Od. 17.300), is covered in ticks (kynorrhais, “dog-destroyer”) and Aristotle (Hist. an. 556b22f.) and Pliny (HN 11.40.116) discourse at length about such parasitic animals (cf. LOUSE). Other sources (collected admirably by Beavis, 56–60) attest to infestation on birds, sheep, goats, pigs, and humans. The ancients also knew that ticks infected wild animals (Arist. Rhetoric 1393.23f.; D&K, 6). Asses were thought to be immune (Arist. Hist. an. 557a15–16). Aristotle thought ticks were spontaneously generated on grass (Hist. an. 552a.15), probably from an observation of larvae or even adults sitting on grass waiting for passing prey. Pliny (HN 30.24.82f.) lists the magical uses to which the Magi put ticks and to be “healthy as a tick” was a common phrase (Beavis, 58). Tick blood was used in medicine (Beavis, 60).


Tiger Greek: τίγρις (tigris); Latin: tigris. Five subspecies of tiger (Panthera tigris) exist today and three others have become extinct since the 1950s. The surviving subspecies include: the Bengal tiger (Panthera t. tigris) in India, Bangladesh, Bhutan, China, Myanmar and Nepal; the Amur tiger (P. t. altaica) in Russia, China, and North Korea; the South China tiger (P. t. amoyensis) in China; the Sumatran tiger (P. t. sumatrae) in Sumatra; and the Indo-Chinese tiger (P. t. corbetti) in China and Southeast Asia (Toon and Toon, 2004; WMW, 825–28). The Bengal tiger would have become known due to Alexander’s expedition and the subsequent Bactrian rulers. It would also have been known to authors such as Ctesias, who wrote works on India. The Caspian tiger (P. t. virgata) once roamed from the Caucasus and Turkey through the southern Caspian portion of Iran and the Aral Sea but has not been seen since 1958 (Firouz, 66–67). It is often called the Hysrcanian tiger in the ancient literature (Pliny HN 8.25.66; Pomponius Mela 3.43 ed. Frick; Martial 8.26.2). Varro (Ling. 5.100) tells us that “tigris” is an Armenian word for arrow, probably emphasizing its rushing attack or, as Meyboom would have it (123), from the tiger’s stripes. Varro also states that, to his day, it had not been captured alive. Vergil mentions Armeniae tigres (Ecl. 5.29–30). Thus, the Indian and Hysrcanian/Armenian tiger lay at the extreme borders of the ancient world. Moreover, the tiger is a fairly solitary animal and, as a result, it was less well known to the Mediterranean than the LION. Despite this, it does appear in art and literature with some regularity. Arrian (Indica 15.3.1–4) says that Nearchus, who was in India and sailed its coast, never saw the animal, but only its skin. Megasthenes, quoted by Strabo (15.1.37) tells of tamed tigers twice the size of lions. Depictions of the animals easily could have made their way back west through artists’ sketch books and pelts were undoubtedly traded. One example of a garbled version of the tiger is to be found in the MANTICORE. Toynbee (71) points out that the majority of tigers depicted in Roman art were female.

Its rarity made it a special gift. Quintus Curtius (9.8.1) tells us that Alexander received tigers as gifts from the Indians and Athenaeus (13.590a–b) tells us that Seleucus I (died 281 bc) presented the city of Athens with a tiger as a gift. Habicht (155) points out the fact that comic playwrights used this event as a basis for jokes, shows that the event was real, and that since one mentions a male
and another a female, the gift might have been a breeding pair. One joke even tells us that the tigers developed incessant pacing, what today is called zoochosis, compulsive and repetitive movement on the part of the caged animal caused by boredom or frustration (see zoos). Another tells us that, in return, the Athenians sent Seleucus a wild animal (θηρίον) called a τρυγέρανος (trygera-nos), but its identification is unknown (Lejeune). In the winter of 20–19 BC, Augustus was presented with tigers on Samos by an embassy from India (Dio Cassius 54.9.8). Perhaps they died or were never sent to Rome, because Pliny (HN 8.24.65) tells us that Rome saw its first tiger at the dedication of the Theater of Marcellus in 11 BC (cf. Suetonius, Augustus, 43.4), where the animal was displayed in a cage.

Later appearances of tigers in the arena were infrequent but spectacular. Claudius exhibited four of them in a show, a number designed to impress due to the animal’s scarcity. Toynbee (70–71) has an excellent list of other appearances, including tigers in harness, pulling chariots. Such scenes probably were meant to recall the presence of tigers in scenes of Bacchus in triumph (Martial 1.104, 8.26). Other scenes in art show either the hunting of tigers (Jennison, 147f.) or the abduction of tiger cubs by a method that was reported into later times (cf. Pliny HN 8.25.66; MacGregor; Nielson). A hunter/thief steals the cubs when the mother is away, mounts his horse and makes for his ship. When the mother chases him, he drops a glass ball or convex mirror which shows the tigress her own reflection in miniature. She takes the ball in her mouth to return her “cub” to her den. This is repeated until the hunter is safely away. A mosaic from Antioch in the Worcester Art Museum and another from Antioch on Orontes (Toynbee, 80, fig. 23) illustrate the scene. In mosaics, the tiger is associated with Dionysus’ triumphal procession as a symbol of the god’s eastern origins. Blanchard-Lemée et al. show examples from El Djem (e.g. 92, fig. 58, cf. Sousse 98–99, figs. 64–65). One mosaic from El Djem (103, fig. 67b) shows two tigers harnessed to a chariot and another (205, fig. 150) shows a tiger attacking an onager. A fierce tiger defends its catch of a centaur in the excellent mosaic from the triclinium of the Villa of Hadrian (Andreae, 280–82). Another centaur counter-attacks, flanked by a dead lion and a snarling leopard. Elagabalus had a penchant for harnessing unusual animals to his chariot. Besides large dogs, stags, and lions, he also did this with tigers when he wished to be viewed as Dionysus (SHA Elagabalus 28.1–2). For more examples of the tiger in art, see Toynbee (70–81) and Richter (Richter, 13–14, with plates).

Every mention of a “tiger” does not indicate what we today would call a tiger. The animal so labeled on the palestrina nile mosaic is in fact spotted, and not striped, leading Meyboom to devote an appendix to the animal (26, with n. 60, 122–24). After collecting the evidence, he suggests that some instances of the word actually refer to the cheetah and would see this animal in the mosaic. Other instances are less clear. Elagabalus supposedly had 51 “tigers” slaughtered in the circus in AD 218, a number that is out of the question for the rare tiger (Diodorus Siculus 2.50.2; Meyboom, 123). Yet 51 cheetahs in one place seems equally unlikely and leopards are probably meant. Likewise, the stripes found on the cat in the Etruscan “Tomb of the Lionesses” are probably not evidence for knowledge of tigers at this date (520 BC).

Tityros Greek: τίτυρος. The scholiast at Theophrastus Char. 21 identifies this word as a type of monkey. Toynbee (55) follows Jennison’s suggestion (128) that it is an orangutan, but this lacks any solid basis (satyros). Isidore (Etym. 12.1.60) claims that it is a hybrid produced from the union of a sheep and a male goat (tityrus ex ove et hirco).

Toad Greek: φρύνος; φρύνη (phrynos, phrynē); Latin: bufo, rubeta. True toads, though still a species of frog, can only be differentiated from true frogs by internal anatomy (GSALR). The ancients tended to think of toads as land dwellers and frogs as water dwellers (e.g. Perry, 549, no. 622). Like frogs, toads belong to the order Anura and are found across several families. A search of the ASW and the IUCN Red List for toads native to Greece and Italy yields 11 species belonging to the families Bombinatoridae and Pelobatidae with most species belonging to the Bufonidae. Notable species include the fire-bellied toad (Bombina bombina), yellow bellied-toad (B. variegata), common toad (Bufo bufo), and green toad (Pseudepidalea viridis). Numerous species are native to an island.

Pliny (HN 8.48.110, 11.116.280, 32.18.48, 25.76.123) says the rana rubeta (“bramble frog”) is amphibious, more poisonous than asps, lives in brambles (rubetum) and is called the phrynos in Greek. Its antidote is called phrynion (cf. Propertius 3.6.27; Juvenal 1.70, 6.659; Kaufman, 163; Tourlidès). Its real identification is unknown. Vergil (G. 1.184) mentions the bufo as living in holes, but cf. Leumann who thinks this might be an insect. Nicander (Alex. 567f.,) speaks of two distinct sorts of toad, one that likes hot weather and one that is mute, green, and clings to plants, licking their dew. Both are poisonous (cf. Philoumenos 37.1–4 = Aetius 13.36f.). The text may also hint at a third, marsh-dwelling type (cf. G&S on 575f.). Secure identification is impossible. Aristotle Part. an. 673b30–32 examines toad livers and Aelian (NA 9.11, 17.12, 17.15) says toads are poisonous and have two livers, one of which is deadly, the other health-inducing, adding that toads prey on bees (5.11; cf. Pliny HN 11.19.62, Cyranides 2.42.1f.). They were the prey of buzzards (Arist. Hist. an. 609a25–26). Theophratus (Sign. 15) states that bathing toads indicate rain. Toads were heavily used in magic and folk medicine (Hümèmörder). Curiously, the name Phryne was given to one of the more beautiful courtesans of ancient Greece. On the toad in art, see FROG and Sundewald.


Tortoise See TURTLE.

Tragelaphos Greek: τραγέλαφος (tragelaphos, “goat-deer”); Latin: tragelaphus. On the name see Bodson (467–68). In most Greek authors, the “goat-deer” represented another of the many compound, fanciful animals of the Greek pantheon, such as the chimaera, sphinx, and hippelektion (“horse-rooster”) (Prell, 212–27). The “goat-deer” was apparently a design frequently used by artists (Plato Republic 488a): at Alexander the Great’s funeral (Diod. Sic. 18.26); on religious conveyances (Plutarch Agesilaus 19.5); on stage (Aristophanes Frogs 937). It also formed a whimsical drinking vessel (Athenaeus 11.500e).

Pliny (HN 8.50.120) treats the animal as real and his description recalls Aristotle’s HIPPELAPHOS or NILGAI. Pliny locates the animal near the river Phasis (modern Rioni, in Georgia, east of the Black Sea)
whereas Aristotle places his in Arachotae, which is in modern Pakistan. Richter attempts to link this animal to folk memory of the extinct northern giant deer (elk).


**Turtle** Greek: χελώνη (chelōnē), ἐμύς (emys/hemys); Latin: testudo, mus marinus. Both tortoise and turtle will be discussed here. Both belong to the order Testudines and tortoises are in fact terrestrial turtles classed in the family Testudinidae. They tend to have high-domed shells and feet adapted for walking rather than swimming. Baker locates 14 families, 99 genera and at least 293 species in the Testudines. Their prominent charactaristics are their shells (of varying hardness and shapes), their lack of teeth, and the fact that they lay amniotic eggs. They are terrestrial, semi-aquatic and aquatic, with the latter including sea turtles. They range from giant land and sea dwellers, such as the Galapagos tortoise and the leatherback sea turtle, to tiny pond dwellers, such as the bog turtle. A search of the RDB shows six species of Testudines appearing both in Italy and Greece, three more in Greece and four in Italy. Buttle discusses attempts to create a list of Greek species. The tortoises from Greece and Italy are Testudo graeca (spur-thighed tortoise), T. Hermanni (Hermann’s tortoise), and T. marginata (marginated tortoise). Freshwater turtles include: Emys orbicularis (European pond turtle); Mauremys caspica (Caspian turtle or stripe-necked turtle); M. rivulata (Western Caspian turtle); Trachyumus scripta (pond slider); and Trionyx triunguuis (Nile soft-shelled turtle). Sea turtles in the Mediterranean include: Caretta caretta (loggerhead turtle); Chelonia mydas (green turtle); and Dermochelys coriacea (leatherback turtle). Other species would have been found in Mediterranean lands and exotic species would have been encountered in lands such as India, where 59 species are reported.

Modern authors such as Hünemörder are often overzealous in indentifying particular species with ancient references, and translators routinely confuse the word turtle and tortoise. L&S eccentrically defines emys as a “freshwater tortoise.” Ciarallo and De Carolis (57) note that the shell of Testudo hermanni (Hermann’s tortoise) was found in a garden in Pompeii and then say that “turtles once were common in the gardens of ancient cities.” Jashemski (103) repeats the error. Bodson (333, figs. 278–79) gets it right.

The ancients tried to differentiate between various types of turtles and tortoises but were limited by their vocabulary. Pliny (HN 32.14.32–41) describes a vigorous trade in chelonians for medicinal purposes and thinks it best to lay out the various sorts: terrestres, marinae, lutariae, et quae in dulci aqua vivunt. bas quidam e Graecis emydas appellant (land, marine, mud-dwelling, and those that live in fresh water; some of the Greeks call these latter “emydas”). He then discusses the best
cures deriving from each. Aristotle (Hist. an. 558a3–13) discusses the egg-laying habits of the chelōnē, the hemys which comes out of the water to lay its eggs, and the thalattai chelōnai (“sea turtles”) which come out of the ocean to do the same (cf. Part. an. 671a15f.). It is not hard to see here tortoise, freshwater turtle, and sea turtle. Some authors use adjectives such as “land turtle” (chelōnē chersaia) to indicate a tortoise. Aelian (NA 16.14) uses this term for improbable Indian, subterranean tortoises which shed their shells. His description leads one more to think of insects and there may be a link to the χελώνιας cited by Hesychias as a type of kantharis beetle (D&K, 170). Elsewhere (NA 14.17) Aelian mentions “mountain turtles” (chelōnai oreioi) living in Libya whose shells are good for lyres. Pliny (HN 9.12.38) discusses African, desert dwelling testudines terrestres which are called chersinae (land dwellers).

Pliny’s mus marinus (HN 11.35.71 and 62.165) comes out of the ocean and engages in egg laying that is reminiscent of sea turtles. This may represent a corruption of the Greek emys. Aelian (NA 12.41; 16.14) claims there are chelōnai potamiai (“river turtles”) in the Ganges whose shells have a capacity of 180 gallons. Scholfield (ad loc.) suggests Trionyx gangeticus, the Ganges soft-shelled turtle (cf. Ball, 325–26). This turtle has an incredibly flattened shell but the largest adults only reach over 3 feet in length. Since the passage also cites the presence of blubber-yielding kētē (WHALE) it is preferable to see the passage as referring to the Indian Ocean and take the animal as one of the larger sea turtles: the green sea turtle (Chelonia mydas) which reaches 5 feet in length; the hawksbill sea turtle (Eretmochelys imbricata), 3 feet; loggerhead turtle (Caretta caretta), 3–5 feet; leatherback turtle (Dermochelys coriacea), the largest living turtle, 6–7 feet in length and up to 1,500 pounds. The highly endangered leatherback would also be the best candidates for the enormous turtle shells turned into hut coverings or boats by the Chelonophagi (“Turtle-eaters”), who dwelled near the Persian Gulf (Pliny HN 6.28.109; Strabo 16.4.14; Diodorus Siculus 3.21.1f.). Pliny (HN 6.24.91) and Aelian (NA 16.17) note similar huts near the Indian Ocean and Quintus Curtius (9.8.2) speaks of shells from India presented to Alexander the Great. Note that leatherback shells are not hard, but somewhat flexible. Pausanias (8.23.9) notes the large size of chelōnai in a wood in Arcadia (hence, tortoises), saying that lyres made from their shells would rival those made of Indian chelōnai, probably sea turtles.

Aristotle studied the emys and both the land and marine chelōnē, classifying them as “oviparous quadrupeds.” He paid attention to their shells (Part. an. 654a9–11), internal anatomy (Part. an. 671a15–26, 673b31–32, etc.), manner of walking (De motu an. 713a15–25) and reproduction (Gen. an. 732b1–8, Hist. an. 558a 4–14).

Chelonians were put to many uses in antiquity. Pliny describes at length the hunting of sea turtles in the Indian Ocean and off Phoenicia. He indicates that they are eaten and speaks of the luxury trade in turtleshell plates for the manufacture of inlay for furniture (HN 9.12.35–39). Hünemörder collects evidence for the popularity of tortoise/turtle shell inlay. Both turtles and tortoises are routinely eaten in lands where they are found and remains of tortoises and pond turtles have been found as early as in the Franchthi cave (Dalby, 328).

The tortoise, more so than the turtle, made its way into everyday life. Tortoiseshell inlay was mentioned above. “Tortoise” was a synonym of the lyre, referring to the tortoise that baby Hermes killed and turned into Apollo’s first lyre, an instrument found from Mycenean
times onward (*Homeric Hymn to Hermes*, 33 f.; Creese, 46 f.). “Tortoise” was also the name of a children’s game (Arthur, 60–61). It was used medicinally in an astonishing variety of ways: as an antaphrodiasia; antidotes for serpents, scorpios, and salamanders; as a cure for dandruff, epilepsy and more (Pliny *HN* 32.14.32–41). Zeno’s paradox concerning Achilles and a tortoise (Simplicius *On Aristotle’s Physics*, 1014.10) and the Aesopic “Tortoise and the Hare” (Perry, 465, no. 226) both speak of its proverbial slowness. Other stories explain why it carries its house on its back (Arthur, 58–59). In Roman times, the testudo was a famous maneuver whereby a rank of soldiers formed a shell with their shields as they moved siege engines near hostile walls.

There are several chelonians in ancient art. Most famous are the sea turtles on the early coins of Aegina, clearly showing the front flippers of a sea turtle. Later the animal more closely resembles a tortoise (cf. IBK, 40, no. 24–28; Wells). Compare the Lycian coin (Dewing no. 2442 on the Perseus Web Page) where the flippers are clear yet the animal is called a tortoise. Skiron’s human-devouring turtle appears on vases, most notably on a kylix by Douris, where a tiny turtle reaches up hungrily for its snack (Berlin F2288). Another kylix in the Villa Giulia (3591 = BzAr no. 7662) shows a very large turtle/tortoise following a man in a petasos and chlamys. Arnott’s suggestion that Skiron’s turtle is a leatherback is not tenable. The Mildenberg Collection contains a sixth century BC Rhodian aryballos in the shape of a turtle (Kozloff, 116, fig. 97). Some artwork indicates that tortoises may have been kept as pets. A chous shows a small boy and girl both leaning on a tortoise (Golden, 125; Hoorn, no. 482). The cruel girl dangling a tortoise on a string in front of her dog on a vase in the British Museum, may be abusing a pet (Calder, 89, plate 14).


Typhlias Greek: τυφλίας, τυφλίνης, τυφλώψ (typhlias, typhlinēs, typhlōps). A mildly venomous snake in Philoumenos (29) who says his sources preserve no description. Hesychios gives the alternative form κωφίας (kōphias). The name implies blindness and one notes the modern name of the European blind snake (*Typhlops vermicularis*). It or a similar creature might lie behind the *typhlias*.

See also *Amphisbaena*. 
Unicorn Greek: ὀνός ἁγρός (onos agrios, “wild ass”). Ctesias (Indika frag. 45.45, Lenfant 182–83; frag. 25, Bähr, 254–55, 329–33) reports a detailed description of an Indian animal which he says is a type of wild ass. Their bodies are white but their heads are dark red and their eyes are a dark blue. They have a single, multicolored horn on their forehead, white at the base, with a black middle portion, and a pointed red tip. They are very fast and powerful, fighting with horns, teeth, and feet. The flesh is foul tasting and cannot be eaten, but it is hunted for its horn, which, as a cup, wards off epilepsy and poisons, and for its beautiful ankle bones (astragali). The story is taken up by later authors. Pliny (HN 8.31.76) cites Ctesias and adds several new details such as the “head of a stag.” Aelian, in two passages probably based on Ctesias or Megasthenes (NA 4.52, 16.20) discusses the “Indian Ass” at length. Cosmas Indicopleustes writes of the unicorn and adds that, if threatened with capture, the unicorn hurls itself off a height, absorbs its fall with its horn, and escapes unharmed.

This is usually seen as a conflation of several animals, the most obvious of which is the Indian rhinoceros, q.v. for references to the “Indian Ass.” Some ascribe the single horn to confusion with the oryx. Shepard (25–40) felt that the horn migrated from the rhinoceros’ nose to the forehead through misobservation of the Tibetan antelope named the chiru (Pantholops hodgsoni). The equine features, such as kicking and biting, he ascribes to the Persian ass or onager (Equus hemionus onager). Lavers has studied this explanation closely and notes the white and red body of the Tibetan kiang (Equus kiang).

See also kartzōnos.

Bähr, 1824; Humphries, 1953; Kitchell and Schierling, 1985; Lavers, 1999; Lenfant, 2004; Scholfield 1958–59; Shepard, 1930

Urus The aurochs. See oxen, wild.
Varia This Latin term was used by Pliny (HN 8.24.63–64) to denote spotted cats that were slaughtered in huge numbers in games given by Scaurus, Pompey, and Augustus. The leopard is probably a stronger candidate for this animal than is the cheetah, although usage may have been mixed. The text is corrupt at this point and it is possible that “varia” and “Africanae” are used in this passage not to name specific animals, but generic ones, viz., spotted (cats/animals) and “African (cats?).” The latter surely does not mean “elephants” as translated by Rackham and Jones.

Rackham and Jones, 1940f.

Viper Greek: ἐχίδνα (echidna); Latin: vipera. The Latin name reflects a correct belief (cf. Pliny HN 10.82.169–70) that this type of snake gives birth to live young, having conceived with eggs internally – internally oviparous, externally viviparous, otherwise called ovoviparous (Nilson and Gutherlet, 448). The words coluber and colubra refer to poisonous snakes, probably vipers. Vipers and pit vipers today form the family Viperidae, which contains 36 genera and 256 species found throughout the world except for cold climates and Australia. Various species dwell on the ground or in trees and they range from ca. 1 to 12 feet in length. Vipers, also called adders, form the subfamily Viperinae while pit vipers form the Crotalinae, which include the American rattlesnake. Pit vipers take their name from deep, heat-sensitive pits that are positioned between each eye and nostril. Both vipers and pit vipers are notable for the toxicity of their venom, which is generally hemotoxic, causing a burning sensation, internal bleeding and deep abscesses.

The Reptile Data Base lists the following species as found in both Greece and Italy: Montivipera xanthina (= Vipera xanthina, SSW, 1.411–12); V. ammodytes (1.390–92); V. berus (SSW, 398–403); and V. ursinii (SSW, 409–12). Macrovipera schweizeri (SSW, 386) is confined to the western Cyclades. Countless others would have been known from contact throughout the Mediterranean. For example, the RDB shows the following numbers of species for some sample modern countries: Turkey, 14; Israel, 2; Spain, 3; Morocco, 4. Libya, which Lucan (9.701f.) made famous for its snakes, hosts Macrovipera deserti, the desert or Sahara viper/adder. The most common European viper is V. berus (= Coluber berus of L&S, s.v. vipera), being found from Finland south along northern Italy and Greece and east toward the Ukraine. Its common names include the common viper and the common adder. Its bites are toxic but generally not fatal. V. ammodytes is found from Spain to Austria and east to Turkey and the Ukraine. It is noted for the
horn on the end of its snout (cf. Nic. Th. 211–12 on the Echidna and Pliny HN 11.45.125) and its venom is highly toxic. Although its scientific name indicates it lives in the sand, it prefers rocky habitats. Another common viper in southern Europe is V. aspis, whose bite is fairly dangerous. It is highly variable in coloration and thus could have been taken to be several different species. It averages about 2 feet in length. Pit vipers were probably unknown to the ancients.

In Latin, it would seem that vipera was a subset of serpens (cf. Ammianus Marcellinus 22.15.27), though some authors will use the words interchangeably. The term seems to be used by most authors as a generic term for a venomous, deadly snake. It is thus found as a term of reproach for humans (Juvenal 6.641) or in variants of the phrase “to nourish a viper in one’s bosom” (Cicero Har. resp. 24, 50; Petronius 77). It is curious that ancient authors, with the exception of Philoumenos, rarely describe the intricate colored scale patterns that are so commonly used today to differentiate species.

See also dipsas, echidna.


Vole The vole was certainly known to the ancients. The English term “vole” covers a wide variety of animals in over 100 species throughout the world (WMW, 4225). Voles are small mouse-like members of the order Rodentia and family Muridae, making them relatives of rats, mice, and the American muskrat. They have plump bodies and generally a naked, rat-like tail. They are brownish or grayish in color (GES, 6.4614). These animals are common and prolific, providing prey for many carnivores.

Water voles tend to be larger than land voles. The Magi, according to Plutarch (Moria 369f, 670d), considered “water-mice,” to belong to the Evil God. Dogs and hedgehogs, by contrast, are examples of creatures that belonged to the Good God. Compare another passage (Moria 537b) where the Magi hate water-mice as loathsome. Pliny (HN 31.10.14) quotes Theopompus as claiming that land-mice (mures terrestres) live in a fountain near Lusi (= Lysoi), Arcadia. Keller (1.207), without giving citations, seems to identify this as Arvica amphibia, the European water vole. According to the IUCN the current range of this animal extends throughout all of Italy but only into northern Greece. It does extend east, making it a candidate for the Magi’s attention. It is now considered to be a larger version of A. terrestris (WMW, 1467–68) which has been identified at Pompeii (King, 408). The bank vole (Myodes glareolus = Clethrionomys glareolus) is found throughout Italy and in Greece, extending as far south as Trikala. It is also found on the southern shore of the Black Sea. Aristotle (Hist. an. 594b31–33) lists five aquatic quadrupeds. The identification of the otter and beaver there is secure but one of the other names (satherion) may be a water vole.


Vulpecula “Little-fox.” In a fable of Horace (Epist. 1.7.29) this animal has crawled into a granary and eaten so much that it cannot get out again. Some (Bentley et al., ad loc.) have emended to nitedula, taking the meaning of the word as field mouse (cf. dormouse and Keller, 1.190). Others have suggested different emendations but it is not necessary, as the fox would naturally go where the rodents were to be found (Borzsák).

Bentley et al., 1728; Borzsák, 1969; Giangrande, 1968.
Warthog Aelian quotes Agatharchides (frag. 79 = Burstein, 125 = Aelian NA 5.27) as saying the pigs in Aethiopia have horns. Calpurnius Siculus (Ecl. 7.58) reports that he had seen a “boar, not without horns” in the arena. Jennison (71) believes this may refer to the wart hog (Phacochoerus africanus), which is notable for its protruding tusks, not horns. Its range, even today, extends to the southwestern shores of the Red Sea in northern Ethiopia where the subspecies *P. aethiopicus* is found (WMW, 1060). This impressive animal can reach over 4 feet in length, stand just under 3 feet at the shoulder, and reach a weight of 220 pounds. The Eritrean wart hog (*P. a. aelian*) lies to the north of Aethiopia (Powell, 286). Meyboom (27) identifies two animals in the *Palaestina Nile Mosaic*, section 10 (pl. 17, upper left), as warthogs. A partial inscription above them reads ΕΦΛΑΟΣ (EPHLOS), which may be emended to *choirelaphos*, “pig-deer.” Meyboom would have this refer to the warthogs below the inscription. Keller, 1.405f. suggests the BABIRUSA, whose odd tusks more closely resemble horns.


Wasp Greek: σφῆξ (*sphēx*); Latin: *vespa*. Wasps, like bees and ants, are members of the order *Hymenoptera*, suborder *Apocrita*. Most social and some solitary wasps belong to the family *Vespidae*. Social wasps build “paper” nests and many solitary species are “parasitoids,” i.e. they lay their eggs on their prey, living or dead. Many species resemble bees, but do not produce honey and have narrower waists. The subsequent confusion between wasp and bee and the resulting plethora of names are traced by Beavis (187f.) and D&K (47–83). Hornets resemble wasps closely and are, in fact, a social sort of wasp. The words ἀνθρηνη (*anthrēnē*) and *crabro* are generally translated as “hornet,” but Beavis (187–88) shows that usage was imprecise in both languages and the words were also used for wasps and bees. Hornets are members of the subfamily *Vespinae*, which also includes yellowjackets. They are larger than other wasps, are social, and build paper nests like the *Polistinae* (paper wasps). Carpenter and Kojima list 12 species for Italy and three for Greece. Numerous others inhabit areas along the Mediterranean.

Aristotle studied the wasp’s life cycle (554b22–55a12, 623b5f., 627b5–9, 23–28a10; *Gen. an.* 761a2–13; cf. Pliny *HN* 11.24.71–74). If one understands that the descriptions probably include misidentified bees and different sorts of wasps and hornets, many of the facts hold
true: queens wintering in sheltered spots; nests in trees or in the ground (cf. Homer Il. 12.167ff.); eating insects or flesh; eggs and larval stages; castes of workers, drones, and queens. He calls the parasitoid wasps “trackers” and describes their hunting (Hist. an. 552b27f., cf. ichneumōn). Other authors believed that wasps spontaneously generated from horses (Pliny HN 11.23.70; Aelian NA 1.28; McCartney, 105). In folklore, the wasp/hornet was noted for its ferocity of attack (cf. Aristophanes’ Wasp) and they appear as shield devices (e.g. Athens, Agora Museum P26544). Their venomous stings are painful and cures abound (cf. Hünemörder; Cyranides 1.21.87, 2.6.26, 2.20.18). The wasp appears in fables (Perry, index) and in dreams signifies cruel men (Artemidorus 2.22). Larew (318–19) lists the Hymenoptera found at Pompeii.

See also sphēkeion.


Water buffalo Cf. Bouvalos and oxen, wild.

Weasel Greek: γαλεή/γαλη, ικτίς (galeē/gale, iktis); Latin: mustela, viverra. See also species names below. The term “weasel” refers to various members of the family Mustelidae, genus Mustela. They are carnivores that eat small rodents and birds. Their bodies are long and slender, low to the ground, allowing them to seek prey in burrows. Common traits include: sharp teeth; bright eyes; short ears; most have a reddish or brown coat with a white underbelly. Most weasels eat rodents but they will enter a hen house and the animal is known for going into a killing fury, killing many more animals than it can eat. Ancient sources cite its rodent control benefits but commonly also mention the foul odor accompanying most mustelids. The frequency of such mentions in Aristophanes is a testament to the fact that mustelids were a commonplace of everyday life: Plutus 693; Acharnians 255–56, 880; Wasp 363. They were prone to steal meat around the house as well: Wasp 363; Peace 1151; Thesmophoriazousae 558–59 (Borthwick).

Many types of weasel were available to the ancients (cf. IUCN under scientific names; WMW 704f.). The weasel most commonly seen by the ancients was the least weasel (Mustela nivalis), which, though among the smallest weasels, is a fierce hunter. Its normal diet consists of small rodents but it will take a young rabbit on occasion. Its range covers all of Europe including Italy and Greece, the Near East, and the area around the Black Sea. The current populations on islands such as Malta and Crete were probably introduced there. It inhabits areas from sea level to mountain heights. The Egyptian weasel (Mustela subpalmata) lives in northern Egypt and dwells close to human habitations and must have been noted. The European mink (M. lutreola) is currently listed as “critically endangered” by the IUCN but its historic range extended “from Finland to east of Ural Mountains, to northern Spain and Caucasian Mountains”. The European polecat (M. putorius) must not be confused with the North American use of “polecat” to refer to a skunk, despite its strong smell. It is, instead, a stocky looking mustelid that is found throughout Europe, including all of Italy and far northern Greece. Its diet is largely based on rodents and it therefore should not be a candidate when an ancient text is speaking of depredation to domestic fowl. The steppe polecat (M. eversmanii) is often confused, even in scientific literature, with the European polecat. It is found in northwestern
Europe and east toward the steppes of Asia. The ancients would have had knowledge of it through Black Sea contacts. The ferret (*M. putorius furo*) is a domesticated version of either *M. putorius* or *M. eversmanii*. It may have been domesticated by the time of the Romans and references to hunting rabbits with muzzled “weasels,” probably refer to ferrets (Strabo 3.2.6; Clutton-Brock, 148–49). The ermine (*M. ermine*) was certainly known and is dealt with under its own name. The marten (*WMW, 716f.*) is another mustelid that resembles weasels. The European pine marten (*Martes martes*) has rich brown fur and a long tail. It is found throughout Europe, Italy, Northern Greece, Sardinia, Sicily and Corsica. The stone marten, also called the beech marten (*M. foina*) would have been known in Italy and Greece, but also throughout Europe and the Near East. It makes its abode with humans, often in attics of houses or in outbuildings and thus could be a threat to poultry. Weasels were kept in houses to help in rodent control more often than were cats. In this role they were undoubtedly liminal animals, i.e. free to come and go from the house as they wished.

Modern readers of ancient texts must not seek too much specificity when these texts refer to “weasels” or other mustelids. Only in a few instances can we specifically say which species is being described. It therefore seems best to list the testimonia for each animal under its Latin or Greek name.

(1) γαλέη, γαλη (galeē, gale). Semonides, in his misogynistic poem on women says that the woman made from a galeē has no good traits at all. She is constantly amorous but disgusts the man with whom she lies because she steals unburned sacrifices (7.50–56, Gerber 308). Anaxagoras, the fifth century philosopher and friend of Pericles, is reported as saying that weasels gave birth through the mouth (frag. 114 D = Aristotle (Gen. an. 756b13–18). This seems a simple misinterpretation of a mother weasel carrying a newborn, but the belief lasted throughout the Middle Ages and is depicted in a miniature illustration for the Physiologus, reproduced in Mielsch (100 abb. 75). Aristotle tells us that the galeē tears the throats out of birds (*Hist. an. 612b.1–2*) and that its penis is bony (*Hist. an. 500b25) as is that of the fox, wolf and the iktis. In his version of this passage, Pliny (*HN 11.109.261*) speaks of the fox, wolf, mustela, and viverra. Here, then, the mustela would seem to equal the galeē and the iktis the viverra. The penis of all of these is a remedy against kidney stones. The bird called the presbys (Arnott, 199) is an enemy of the weasel since it preys on its eggs (*Hist. an. 609a18). Aristotle says that the wild weasels (galai ... agria) are useful in controlling mice in a field overrun with them. Peck may be overzealous in translating this as “ferret.” It may simply be that some weasels were kept for the purpose and others, living wild, simply did what was natural. The *Geoponica* (13.3.1–2) attests to the predation of the animal on domestic fowl by listing a recipe for a repellent and claims that if a live galeē has its tail or testicles cut off and is then released, it will keep others away. The galeē, when fighting with snakes, eats rue, because the smell is disliked by them (*Hist. an. 612a.28–30). A γαλεάγρα (galeagra) was a trap or cage for weasels and this might imply that they were captured alive, ostensibly for use in rodent control. Theocritus (15.28) has Praxinoa tell Eunoa to pick up her
wool, because, “Galeai always lie soft” (Benton, Gow). Aelian (NA 15.11) reports that the galē was once a human female who fell foul of Hecate who turned her into a malicious, thieving animal. He adds that the galē will pluck the eyes out of a human corpse and gives the recipes for some love charms. Another story derives the animal from Galinthias, Alcmena’s maid, who interfered with Hera’s vengeance and was punished accordingly (Ovid Met. 9.273–323; Antoninus Liberalis Met. 29). Meeting a weasel could be taken as a bad omen in Roman times (Dio Cassius 58.5.5; Ammianus Marcellinus 16.8).

(2) Iktis We have seen above that Aristotle differentiates this from the galē and that Pliny says that it is a sort of mustela, but has a separate Greek name. In the famous Doloneia from the Iliad, Dolon dons a wolf’s skin but a κτίδεην κυνέην (ktideēn kyneēn) cap (10.335, 458), which is often taken to indicate the skin of an ikitis. This befits his sneaky mission, for Nicander (Th. 196–99) compares the shape of the ichneumon, or mongoose, to that of the ikitis, calling it skinny and the foe of domestic fowls, snatching them from their roosts as they sleep. The scholiast on the line says the ikitis is a sort of galē (Keil, 19). Aristophanes’ Acharnians portrays a Boeotian bringing ikitis pelts to market (879–80). Aristotle (Hist. an. 612b10–17) describes an ikitis. He says it is the size of a Maltese dog (dog, breeds) and its thick coat and white underbelly resemble those of a galē. It can become tame, but it loves honey and will ruin a hive to obtain it. Like the ailouroi (cat) it eats birds and it has a bony penis which provides a cure for strangury (cf. Pseudo-Arist. Mir. ausc. 831b1). Some would identify this with a marten. The stone marten, or white-breasted marten, species lives in close proximity to humans, as opposed to the pine marten which dwells in forests. Martens do, in fact, rob hives.

(3) Mustela Isidore (Etym. 12.3.3) repeats much of what was said before him but adds two things. He claims the mustela got its name because it was a “long mouse” (mus longus), drawing comparison between telum and –tela. He also adds to Anaxagoras’ story by saying that weasels conceive through the mouth and give birth through the ear. Pliny HN (29.1.60) says that there are two types (genera) of mustela and that the larger and wild (silvestris) one is called the icitis by the Greeks. He quotes from a lost work of Cicero to say that the other kind stays around houses, moves its nest and young daily (cf. Plautus Stich. 499–501), and chases away snakes. This sort also provides a remedy against snakebite. Pliny lists several other uses for the mustela: ash of weasel served as a weasel repellent if fed to domestic fowl (HN 30.50.144); barking dogs are kept in check if one carries the tail of a weasel that was set free after its tail was removed (HN 29.32.99); and one can attract weasels by using the gall of the lizard called the stellio. Coops for geese need to have smooth walls to hinder climbing by weasels (Varro Rust. 3.10.4).

(4) Viverra This word is commonly translated as “ferret,” and while the evidence for this is not conclusive, it is persuasive. Pliny tells us (HN 8.81.218) that the viverra was used to chase rabbits out of their burrows. Ferrets were bred for just such purposes and the identification here may be sound. The passage does not support, as Hünemörder suggests, that viverra
were to be found on the Balearic Islands. Elsewhere (HN 30.16.47) we are told that if a *viverra* is roasted like a suckling pig, it is good for liver pains. Columella (8.15.2) gives directions that the walls for a duck enclosure should be smooth to prevent cats (*feles* or *viverrae*) from climbing in. This is very close to the Varro passage just cited above concerning geese. The proper name that arose for the ferret is *furo*, which appears as early as Isidore (*Etym.* 12.2.39) and is used throughout the Middle Ages. Isidore stresses that it routs rabbits from their burrows.

(5) **Faëlis** Varro (*Rust.* 3.12.3) parallels his suggestion above concerning geese with one concerning the building of a *leporarium*, which once meant a hunting reserve populated with just hares, but later took on a broader meaning as a hunting park/nature preserve. Varro says their walls should be high to keep out wolves and smooth to prevent the *faëlis* or the *maëlis* (*badger*) from climbing in. It is more likely that Varro used *faëlis* for a mustelid here than a cat.

The weasel is not very common in ancient art. Bronze coins of Segesta sometimes show a weasel on the reverse next to the ever-present hound (Head, 146). Several works of art presumed to show weasels are in dispute, with some scholars identifying the animals as cats. Benton collects such examples, challenging Keller’s (168–69) identifications.

**See also mongoose, simör.**


**Werewolf** The metamorphosis of humans into animals is an extremely broad subject reflecting the fact that the ancients well knew that the line between animal and human was at times thin, with animals acting like humans and vice versa. Nowhere is this clearer than in the case of lycanthropy in antiquity (Crum; Johnston, 1931; Kunstler). The rapacity, greed, and perceived cowardice of the *wolf* led the ancients to believe in several levels at which men could be wolves. The first level is as old as Homer, where warriors don the pelts of various animals to reflect their stages of valor and, later, when they put images of animals on their shields. In the former category we find Dolon, who spied on the Achaeans on a night patrol (*Il.*, 10, passim; Davidson). The story is also told in the *Rhesus* ascribed to Euripides and here Dolon even creeps on all fours (Lissarrague, 1980). A curious Etruscan parallel to this apparently shows Hades wearing a cap made of wolfskin as well, perhaps a reference to his inexhaustible appetite (Chiaro). In the First Messenian War, soldiers disguised themselves in various animal pelts, among which were those of the wolf (Pausanias 4.11.304; Marcinkowski, 18 for other examples). The second level is seen in wolf shield devices, which appear only three times in Chase’s study (CCLXII–CCLXIV) compared to scores of instances of the lion. This is understandable given the animal’s reputation. The third level is the most extreme, wherein a human actually becomes a wolf. The most famous example of this is the Arcadian king Lycaon who sacrificed a child to Zeus (Plato *Republic* 8.565d; Pausanias 3.8.1; Ovid *Met.* 1.163f.) or his sons who offered the god human flesh (Apollodorus 3.8.1; Plutarch *Moralia* 300b). Pausanias (8.2.4–6) relates that some believe that at the
festival of Lykaian Zeus a man becomes a wolf but turns back into a man if he can abstain from human flesh for nine years. Pliny (HN 8.34.81–82) tells essentially the same story and adds that a certain Daemenetus of Parrhasia ate the entrails of a boy, turned into a wolf, and, ten years later, turned back to a human only to win in boxing at Olympia. He adds, “It is amazing how far Greek credulity will go. There is no lie so outrageous that it will lack someone testifying to it.” The most famous werewolf story from antiquity is the vivid description in Petronius’ Satyricon, 61–62, where, as in Pliny, the human must strip naked before the change can occur (Rini). This sort of complete transformation is stunningly portrayed in a plate from Vulci dating to ca. 520 b.c in the Villa Giulia (no. 84444; Cristofani, 167; Jannot, 226f., fig. 5) where the central picture is that of a werewolf. The werewolf also appears elsewhere. It serves as an ingredient in the potion Medea cooks up for Aeson (Ovid Met. 7.271). Harpalyce was a sort of Amazon warrior who fought against Neoptolemos. After her father’s death, she took to the woods and ravaged herds until she was killed by herdsmen (Hyginus 193). Her name means “wolf snatcher” and it is tempting to see her as a female werewolf. Vergil (Ecl. 8.95f.) recalls a werewolf named Moeris (Cro xen; Johnston, 1931a).

Whales are basically divided into Odontoceti “toothed whales” and Mysticeti “baleen whales.” The ancients knew both sorts and many species have found their way into the Mediterranean. Archaeological remains of whale bones are found as early as Late Neolithic and Minoan times (Ree se, 108). The fin whale (Balaenoptera physalus) is the most common whale in the Mediterranean throughout the year and has a significant, possibly resident, population (Notarbartolo di Sciara, 117–19; Reeves and Notarbartolo di Sciara, 11–15). They are especially common in the summer in the Ligurian Sea. It is a fairly large whale, growing up to 80 feet long and weighing between 30 and 80 tons (WMW 976–77). It is a baleen whale, sifting the waters for its food. Aristotle (Hist. an. 519a24) describes a baleen’s mouth precisely, calling it a μυστόκητος (mystokêtos) which has been restored as μυστακόκητος (mystakokêtos, “moustache-whale”) by scholars. A piece of a fin whale scapula of a young, beached individual of this species was discovered in a well in the Athenian agora, dating to
about 850 BC. It was apparently used as a cutting surface (Papadopoulos and Ruscillo).

The sperm whale (Physeter macrocephalus), enters the Mediterranean from December to February (cf. Pliny HN 9.4.12 who puts the whales’ entrance at “mid-winter”) and again in the springtime and are found throughout the basin, clustering to the west and in the Levant basin (Reeves and Notarbartolo di Sciara, 48–56). Its vertebrae were found in a purple-dye factory from the sixth/fifth century BC (Reese, 108–09 with table 1 for a complete list of historical sightings). The ancients also knew of ambergris, the excretion of the sperm whale, and used it in materia medica (Riddle).

Cuvier’s beaked whale (Ziphius cavirostris), certainly exists in the Mediterranean but it has been little studied. Most information comes from strandings. They seem to prefer deep waters in the Ligurian strait and off Crete (Reeves and Notarbartolo di Sciara, 84–90). The long-finned pilot whales (Globicephala melas) tend to be found from Gibraltar to Italy (Notarbartolo di Sciara et al., 124; Reeves and Notobartolo di Sciara, 23–28).

The Northern minke (Balaenoptera acutorostrata) has also occasionally been found in the Mediterranean and in 2010 news reports excitedly reported the sighting of a very rare gray whale off Spain and Israel. A survey of cetaceans entering or leaving the Mediterranean via the Straits of Gibraltar has confirmed the presence of a small number of killer whales (Orcinus orca) which may have been chasing tuna (de Stephanis et al.). Reeves and Notobartolo di Sciara (34–38) suggest they may be resident. O. orca is a cetacean but is a member of the family Delphinidae (WMW, 942–44). The most recent and thorough study of cetaceans in the Mediterranean also listed the following species as “visitors”: humpback whale (Megaptera novaeangliae), and false killer whale (Pseudorca crassidens), actually a member of the Delphinidae but easily mistaken for a whale (Reeves and Notarbartolo di Sciara, 91f.). Risso’s dolphin (Grampus griseus) was also probably identified as a whale in antiquity more often than as a dolphin (q.v.).

Ancient references to whales are carefully collected by Papadopoulos and Ruscillo, but a few deserve mention here. Aristophanes (Wasps 35, 39) compared the blustering Kleon to a phalaina, a reference he expected most Athenians to get. Beginning with Aristotle, the word phalaina starts to be used more specifically simply for the whale. Likewise, the ancients, from Aristotle onward, knew that the whale, like dolphins, which he classifies with phaelaina as kēte, breathed air into lungs through a blowhole, suckled its young, and was viviparous (Hist. an. 566b2f., Part. an. 669a8f., 697a15f., De respiratione 476b13f.). Arrian shifts the geographical focus when he speaks at length about the whales in the “outer ocean,” by which he means the waters from Arabia to India (Indica 30.1–9). He stresses their enormous size (25 orguiai or 150 feet) and the fact that, when whales beached, their bones were used by the locals as building material for houses. Strabo (15.2.13) , relying as did Arrian on the first-hand account of Alexander’s general Nearchus who sailed these waters, specifies that the whales are seen singly, and not in groups, and he names the tribe as the Ichthyophagi or “Fish Eaters.” He gives the size of the animals as 23 orguiai, about 130 feet. These whales could include species not found in the Mediterranean. The blue whale (Balaenoptera musculus) can reach 80 feet long and the sperm whale about 65
feet long. Both may well have been spotted in the Indian Ocean. Pliny also testifies to the size of the whales in the Indian Ocean (HN 9.2.4), naming some ballaeanae that cover four ingera each in size (ca. 3 acres). Ball (315) identifies this as the Indian fin whale (*Balaenoptera indica*, today’s *B. musculus indica*).

Pliny also gives the name of a very large whale in the “Gallic ocean” as *physeter* (spouter), which is generally taken to refer to the sperm whale (*HN* 9.3.8). This term is also found in Seneca’s *Hippolytus* (1030) and called “capax,” or “roomy,” meaning it can swallow a great deal. Elsewhere he speaks of beached whales (*HN* 9.4.11) and he reminds us that Marcus Scaurus brought back bones of such a monster from Jaffa, claiming them to be of Andromeda’s monster. Juvenal speaks of the whales around Britain (10.14) and Ausonius (*Mos.* 144f.) of Atlantic whales.

Pliny has a vivid description of the *orca* (9.5.12–15). He carefully describes their hunting habits as they prey on whale cows and calves. He also tells the story of the *orca* that came into the harbor of Ostia during the reign of Claudius. Its presence interfered with the emperor’s plans for harbor reconstruction and he, annoyed, ordered the beast to be kept in the harbor with nets while lancers staged an impromptu *venatio* of the creature for the entertainment of the masses. That *orca* indicates a killer whale (*Orcinus orca*) can be assured by the activity described by Pliny. Elsewhere he describes sea monsters stranded off Lyons when the ocean subsided. Among them was a “ram” which he describes as having white marks for horns, a good description of the *orca*s markings (cf. Oppian *Hal.* 1.372, 5.33–34). This “sea ram” – Greek: κριός [θαλάσσιος] (*krios thalassios*); Latin: *aries* (*marinus*) – would have a long life in the medieval bestiary tradition. A beached whale in Severus’ time was so huge that a model of it was created and 50 bears driven into it (*Dio Cassius* 75.16.5).

*See also physeter.*

Ball, 1885; Boardman, 1987; de Stephanis et al., 2008; Hünemörder, s.v. “Whale”; Kagan and Kritt, 1995; Keller, 1.409–14; Notarbartolo di Sciara et al., 2003; Papadopoulos and Ruscello, 2002; Reese, 2005; Reeves and Notarbartolo di Sciara, 2006; Riddle, 1964; Toynbee, 208.

*Wisent* See oxen, wild.

*Wolf* Greek: λύκος (*lykos*), λύκανα (*lykaina*, she-wolf), λυκίδες (*lykideus*, wolf cub); Latin: *lupus*, *thōs*. The grey wolf (*Canis lupus*) is a member of the *Canidae family and is the largest of the wolves (*WMW*, 664–69). It is commonly found in the literature and art of both Greece and Rome. The average urban Greek or Roman probably had little first-hand experience of the wolf, but it seems safe to say that farmers and shepherds in the country, especially near Roman denarius, 137 BC, depicting the she-wolf suckling Romulus and Remus on the reverse. Photo courtesy of CNG Coins.
mountains and forests, had fairly frequent encounters. The wolf can still be found in Greece and Italy, where a subspecies called the Italian wolf, largely found in the Appenines, has been recognized by some.

Some mentions of wolves in antiquity were reports of other canids. The Gallic “stag-wolf” (cervarius lupus) of Pliny (HN 8.34.84, 11.79.202) and displayed by Pompey in the games, is identified as a lynx by Rackham and Jones and Bostock and Riley (cf. Wiener, 66–67). The small Egyptian wolf of Herodotus (2.67 is most likely a/j.sc/a.sc/c.sc/k.sc/a.sc/l.sc, perhaps the Simien jackal, also known as the Ethiopian wolf (C. simensis; WMW, 659–60).

Oppian (Cyn. 3.294f.) lists five types of wolf. The archer (τοξευτήρ, toxeuter) is large and fierce; the falcon (κιρκος, kirkos) or robber (ἄρπας, harpast) is noted for its speed and for the fact that in winter it will approach human habitation; the golden wolf (χρυσός λύκος, chryseos lykos) lives in Cilicia (southern Turkey) and, Oppian says, is no wolf, but a tall creature superior to a wolf, with a mouth that can bite through bronze or stone and a fear of the Dog Star. He then says there are two “Akmoines,” (ακμώνες), literally “ anvils.” The singular akmōn seems to be used as group containing two types. These form a lethal race with small necks, broad backs, and small eyes. The first is called the iktinos (ικτίνος) and is gray while the other remains unnamed but is darker and a bit smaller (cf. weasel, iktis).

In antiquity, much as today, the wolf had a largely negative reputation (Mainoldi). Throughout Homer, for example, the wolf is seen as less noble than the lion and other animals, presumably because it fights in packs rather than in solitary combat and was therefore seen as less heroic (Schnapp-Gourbeillon, 50–51).

This implied cowardly nature is hinted at when the Trojan spy Dolon goes forth at night dressed in a wolf’s skin, and the bloodthirsty ferocity of wolves is well described in an extended simile (Homer II. 16. 156–63). Other traits commonly ascribed to the wolf include rage (Lincoln), insatiable hunger, thirst for blood, and ruthlessness in hunting. Aristotle (Hist. an. 488b16–19) says lions are noble and brave, but wolves are wild and scheming. He claims that lone wolves will eat humans, but that this is not the behavior of packs (Hist. an. 594a3031). This evokes Demosthenes’ comment that Alexander was a monolykos or “lone wolf” (Plutarch Demosthenes 23; Aelian NA 7.47). Aelian (NA 7.20) reports that wolves are cannibalistic and weed out their weakest members to be eaten. Such negative traits found their way also into the Aesopic tradition where the wolf is represented as rapacious, not terribly clever, and easily conquered by the lion or fooled by the fox (e.g. Babrius 105, 130). The wolf was said to breed with other wild creatures to produce fierce, monstrous animals. The corocotta was the result of the quite possible mating of a wolf and a dog, while a wolf and a panther supposedly produced a λυκοπάνθηρος (lykopanthēros), which may be a jackal (cf. LSJ, s.v.). Pliny (HN 8.61.148) claims that the Gauls deliberately mate dogs with wolves.The ultimate blending, of course, was the ancient belief in the werewolf.

Such were the threats from wolves that special breeds of dogs such as the Molossian and Laconian (dog, breeds) were bred to protect flocks and herds from wolves. As early as Homer (II. 16.352–55) we are given vivid pictures of packs attacking herds and, much later, Oppian (Cyn. 3.262f.) paints an equally negative picture. Theocritus (9.432) shows Thyrsis being soothed over the kid
that a wolf snatched away. It is not surprising, then, that wolves were hunted. Wolf hunts are sometimes depicted on vases (Marcinkowski, 14) and Servius (on Vergil G. 1.139) mentions a wolf hunter (luparius). Longus (1.11.1f.) describes the construction of pit traps, which he says, rarely fool wolves. Hesychius identifies the ὑσπλέξ (hysplex) as a wolf trap and it may have resembled one depicted on an RF askos from Italy and in the Ashmolean (Calder, pl. 6.1–b) showing a fox caught in a trap. As today, they could also be poisoned, with a fish-based powder in Armenia or with lykotktonos, i.e. “wolf-slayer,” known commonly as wolfsbane, Aconitum lycocotonum (Aelian NA 17.31, 9.18). Two poems from the Greek Anthology (6.35,106) mention dedicating wolf skins to Pan along with the equipment it took to catch and kill the wolf, including what are apparently shepherd’s staffs. Such activity is borne out in the art world where wolves attacking animals formed a common theme (IBK, 97.59–63; Richter, 1930, 13, with plates, 1971, no. 39, 372). Fear led to mistrust, and there were countless erroneous folk beliefs about them, carefully laid out in Eckels. Most notable was the easily disproven belief that the wolf’s neck consisted of a single vertebra (Arist. Part. an. 686a22ff.). It has seven, as does the dog’s. A widespread belief claimed that if a wolf saw you before you saw it, you would lose your voice (Plato Republic 1.336d, cf. Vergil Ecl. 9.53–54).

The wolf enters into Greek religion and mythology in several ways. The most notable is the epithet of Zeus Lykaios, whose cult centered on Mt. Lykaion in Arcadia and was founded by Lykaon who later turned into a wolf. The etymological link seems fairly secure, but the specifics of the cult are disputed. Likewise, the origin of the epithet Apollo Lykios, is open to debate. But he was worshipped in Athens, Sicyon and Argos and he is called “slayer of wolves” (λυκοκτόνος). Argive coins often bear the image of a wolf (IBK, 7–8). One mythical variant said that Leto, while wandering pregnant, was accompanied by wolves and/or turned into one herself (Arist. Hist. an. 58a15f, Aelian NA 10.26). Even though Diodorus Siculus (4.17.3) claims that Heracles had rid Crete of wolves, the eponymous founder of Miletus had been nursed by a wolf on Crete before coming to Ionia (Antonius Liberalis, 30). Most famously, Romulus and Remus were nursed by a wolf, a scene which appears on the art and coinage of Rome. See McCartney on this theme and King (414–15) for the wolf at Pompeii.


Wolf spider Greek: λύκος (lykos); Latin: lupus. Beavis (51–52) points out that some ancient authors classify these spiders as a phalangion or as a stand-alone group alongside phalangion and araneus. The name includes wolf spiders (family Lycosidae) but also some other types of spider-like creatures. Aristotle lists three types of wolf spider (Hist. an. 623a1–7). The first is small and weaves no web. A larger one weaves a thick web over holes in the ground or nooks and crannies in stone walls. It lies in wait under the web and pounces when it feels a vibration on the web. The third type is variegated and creates a poor web “under the trees.”
The first has been identified as a member of the Lycosidae family. The description of the second spider’s web matches the “tunnel web” of many spiders. Beavis prefers a member of the genus Segestria or a common Mediterranean spider, Filistata insidiatrix. He rejects the suggestion that this might be a member of the Agelenidae family on the grounds that “these do not build the distinctive hole-based webs described by Pseudo-Aristotle and Pliny.” This may be asking too much of the descriptions. There are a great number of spiders which make tunnel-shaped webs and precise identification may never be achieved. The variegated type has been identified as a member of the genus Theridion but there is much confusion concerning proper nomenclature in the family Theridiidae (Knoflach et al.; Knoflach and Thaler).

Yak Aelian (NA 16.11) describes a timid, grass-eating quadruped, twice the size of a horse, hunted for its soft black tail hair. Each hair is 3 feet long and as many as 30 spring from each root. Some have taken this to be the yak (Ball, 320–21; Scholfield ad loc.). The yak (*Bos grunniens*, as WMW, 1160–61, but cf. Olsen who wants to return to the Linnaean *Poephagus grunniens*) is found in the wild on the Tibetan Plateau in northern Tibet and western China (Shackleton and Harestad, 18). The domesticated version has a wider distribution. It is a very large animal (body length 8–10 feet, height at shoulder 5–6.5 feet, weight of males up to 2,600 pounds) and its long body hairs reach almost to the ground on each side (up to 27.5 inches long). The wild yak is black in color and the tail is very bushy. It is a high altitude animal, migrating within a range of about 6,000 to 16,000 feet above sea level. They have been domesticated for 4,000 years and are routinely used for their milk, meat, and hair (Clutton-Brock, 170–72). If Aelian’s source actually saw a yak, it was probably a domesticated one.

Zebra Greek: ἰππότιγρις (hippotigris, “tiger-horse,” Bodson, 464, on name). The zebra is in the family Equidae, genus Equus. WMW (1008) places zebras in three subgenera, Dolichohippus, Hippotigris, and Quagga. The mountain zebra (Equus zebra) is confined to extreme southern Africa. Grevy’s zebra (E. grevyi) is found as far north as southern Ethiopia and would have been known to the ancients. The plains zebra (E. burchellii = E. quagga) is the most common type, found in eastern sub-Saharan Africa from Sudan and Ethiopia south. As a result, it was apparently rather little known in antiquity. Plautianus, a friend and favorite of Septimius Severus, served as his praetorian prefect. Dio Cassius (76.14.1–3) says that his presumption extended to sending centuries to certain islands of the Red Sea to steal horses sacred to the Sun that were “tigroeideis,” “tiger-like.” It is hard to think of these as anything other than the Grevy’s zebras which once roamed the Ethiopian shores of the Red Sea. Thompson also identifies the onagros of Oppian (Cyn. 3.183 f.) as a Grevy’s zebra. Zebras were also killed in the games of Caracalla ca. AD 200–212 (Dio Cassius 77.6.2) and, as a result, some identify the equid on coins from this period depicting the games (ANS 1951.94.33) as a zebra, but the animal could just as easily be an ONAGER. As the range of the zebra once probably reached as far north along the Red Sea as modern Sudan (Bauer et al.) the general absence of the animal in Greek and Roman art is somewhat puzzling. One does appear in a mosaic in a synagogue from Gaza dated AD 508/09 (Mielsch, 22, abb. 9; cf. Toynbee, 167, 286–87).


Zebu See Nabus, Oxen, Wild.

Zegeries Greek: ζεγερίαι (zegeries, pl.). Herodotus (4.192) names these as one of the three types of mouse in Libya. The name, he says, is a Libyan word, meaning “mountain.” Tissot (273–74) and Paradisi find some veracity in this Libyan word. Hesychius offers the form ζεγερίαι (zegeriai). Asheri et al. (715) suggest that the animal is the gundi (genus, Ctenodactylus), a rat-like animal with a bushy tail found in the desert regions of Libya (WMW, 1624–25).

Asheri et al., 2007; Paradisi, 1962; Tissot, 1887.

Zoos and menageries A zoo is generally taken as a park in which animals are kept and exhibited to the public. A menagerie is
a looser term implying a collection of animals on exhibition. Guided by these definitions the ancients did not technically have zoos. Yet they certainly had hunting parks and animal husbandry sites, but they also had menageries, some of which approached the goal of a zoo.

Bostock traces evidence of groups of kept animals in Egyptian and Mesopotamian contexts, yet most of these were in hunting parks or animals kept for religious reasons (7–101; cf. Loisel). The royal privilege of keeping such a park, known as a paradeisos, was copied into Classical times in the area (cf. Xenophon Hell. 4.1.15; An. 1.2.7; 1.4.10; Cyr. 1.4.11). Strabo (12.3.30) speaks of such parks (zōgreion, cf. LSJ for later usages) owned by Mithridates, doing so in a context that lists hunting areas separately. This may imply that the zōgreia were solely for exhibition.

The first collector of animals who comes close to being a zookeeper was PTOLEMY II (283–46 BC) who actively collected animals and paid bounties to those who brought him unusual species. He paraded these animals in his “Grand Procession” but must have kept them in Alexandria before and after, if not for the public, then for his own pleasure and, perhaps, for study by scholars (Jennison, 28–30; Rice, 86–87). Toynbee (16) deals with the Roman love of animal parks, most commonly called vivaria and leporaria (cf. Varro Rust. 3.12.1 f.; Columella 9.1.1f.). Some of these began as ways to breed selected animals, but they often grew to include animals that were not hunted. Fulvius Lippinus was the first person of Roman nationality to invent preserves for wild pigs and other kinds of game and he introduced the practice of keeping wild animals in the district of Tarquinii. He was followed by Lucius Lucullus and Quintus Hortensius (Pliny HN 8.78.211). The large collection of animals assembled by Gordian III and exhibited by his son Philip the Arab in 248 for the millennial anniversary of Rome’s founding, featured a wide variety of animals, including elephants, hyenas, hippopotamuses, tigers, giraffes, and more.

It is clear that rare animals were put on display in both Greece and Rome alike and we even have a report of the repetitive behavioral problem commonly known as zoochosis (Tiger). Strabo (17.1.44) describes specially made pits with sunning areas for exhibiting crocodiles. In Rome, it was common for rare animals to be exhibited to the public before they were consigned to the games.

There are numerous notices of Roman emperors who kept private menageries for their amusement. Nero kept animals in his Golden House (Suetonius Nero 31.1) and kept a polyphagus (HIPPOPOTAMUS, CROCODILE) to which he fed enemies, but this was a single animal. Elagabalus (SHA 28. 1f.; Jennison, 90) had a large collection and specialized in dangerous animals, probably declawed and defanged (exarmati, 25.1). We do not know to what extent the public could view these animals.

Bostock, 1993; Loisel, 1912; Müller, S., s.v. “Zoo,” BNPO; Rice, 1983.
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