INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI

University Microfilms International
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700 800/521-0600
Herodotus' use of animals: A literary, ethnographic, and zoological study

Smith, Stephen Michael, Ph.D.

The Ohio State University, 1992

Copyright ©1992 by Smith, Stephen Michael. All rights reserved.
HERODOTUS' USE OF ANIMALS: A LITERARY, ETHNOGRAPHIC, AND ZOOLOGICAL STUDY

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Stephen Michael Smith, B.A., M.A.

* * * * *

The Ohio State University
1992

Dissertation Committee:
J.W. Allison
J.M. Balcer
J.R. Tebben

Approved by
Adviser
Department of Classics
Copyright by
Stephen Michael Smith
1992
ACKNOWLEDGMENTS

My greatest thanks go to Professor June W. Allison who provided continual guidance and encouragement throughout my research. I would also like to thank Professors Joseph R. Tebben and Jack M. Balcer for their helpful input. Gratitude is expressed to the faculty and staff of OSU's Classics Department for their financial and administrative support which enabled the completion of this work. Finally, I wish to thank my family and friends who have been so understanding of my infrequent visits and vacillating moods.
VITA

March 12, 1959 ....... Born - Enid, Oklahoma
1982 ...................... B.A. in Classics, University of Nebraska at Lincoln
1984 ...................... M.A. in Classics, The Ohio State University
1982-1988 .............. Graduate Teaching Associate, Department of Classics, The Ohio State University
1988-1989 .............. Regular Member, American School of Classical Studies at Athens, Greece
1989-1990 .............. Conference Coordinator and Editor of Nouvelles Nouvelles, Newsletter of the Center for Medieval and Renaissance Studies, The Ohio State University
1990-Present............ Lecturer in Classics, The Ohio State University, Lima Branch Campus

FIELDS OF STUDY

Major Field: Classics

# TABLE OF CONTENTS

**ACKNOWLEDGMENTS** .......................................................................................................................... ii

**VITA** .................................................................................................................................................. iii

**LIST OF TABLES** ................................................................................................................................... v

## CHAPTER

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>1</td>
</tr>
<tr>
<td>Notes to Chapter I</td>
<td>16</td>
</tr>
<tr>
<td>II.</td>
<td>18</td>
</tr>
<tr>
<td>Notes to Chapter II</td>
<td>47</td>
</tr>
<tr>
<td>III.</td>
<td>49</td>
</tr>
<tr>
<td>Notes to Chapter III</td>
<td>89</td>
</tr>
<tr>
<td>IV.</td>
<td>96</td>
</tr>
<tr>
<td>Notes to Chapter IV</td>
<td>141</td>
</tr>
<tr>
<td>V.</td>
<td>149</td>
</tr>
<tr>
<td>Notes to Chapter V</td>
<td>197</td>
</tr>
</tbody>
</table>

**SUMMARY** ........................................................................................................................................ 203

**APPENDICES**

| A. | Complete Alphabetical Listing of Animals and Animal Terms | 206 |
| B. | Proper Nouns with Animal Cognates | 210 |

**Notes to Appendix B** ......................................................................................................................... 211

**BIBLIOGRAPHY** .................................................................................................................................... 212
# LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Animal Frequency and Distribution</td>
<td>20</td>
</tr>
<tr>
<td>2. Breakdown of ἵππος</td>
<td>34</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

Introduction

Most studies devoted to animals in Herodotus, and in the ancient historians in general, are concerned primarily with the zoological aspects and the scientific identification of species, whereas those devoted to animals that occur in poetry deal more with literary imagery—similes, metaphors, and the like. Thus when scholarship turns its attention to the many animals in Herodotus' Histories, examinations are largely confined to analytical investigations of exotic wildlife and attempt to identify specific species. The Libyan boa, the Egyptian hippopotamus, the Indian ant, and the Arabian snake, for example, have been individually discussed, scientifically examined, and—successfully or not—zoologically categorized. But beyond the scientific investigation of animals in the Histories, a study of them provides a means of slipping behind the eyes of Herodotus to see the world as he saw it and to understand better what motivated him to include in his history of the Persian/Greek conflict the seemingly irrelevant descriptions of animals, peoples, and customs. Although animals represent but one aspect of this world of Herodotus, since they pervade his history and occur conspicuously in the lengthy ethnographic digressions (as will be shown), an examination of these specific occurrences is useful in determining, at least on a small scale, Herodotus' motives for inclusion of such material.
Scholars have noted which animals have been recorded by Herodotus, and tried to determine what they were, but have not asked why Herodotus chose to record the ones he did, or how the inclusion of animals (or animal imagery) in a given passage changes its tone or meaning. Even though Herodotus at times is relating simple facts acquired through autopsy, an examination of the patterns of Herodotus' types of entries and how he deals with each reveals certain characteristics of his thinking and purpose of composition.

Compositional Technique

Herodotus, writing in the last half of the 5th century B.C., asserts that he records events exactly as he received them through autopsy or from oral accounts (vid. e.g., 2.123 and 7.152). For us this seems quite objective because it removes one variable or link in the transfer of information from the original source to us. When the historian attempts to pass on information as he received it without conflation or rationalization we are on firmer ground for historical reconstruction because the task of sorting and sifting the data and evaluating its reliability falls into our hands, and as scholarship progresses, historical methods improve, and new evidence comes to light, the material can be examined afresh. Yet even the most careful historian cannot record a totally accurate, much less comprehensive, account of any period. In order to make a record of events an historian must select which events to retain and which to exclude, and in doing so moves from what may be considered empirical, first-hand observation, to a subjective condensation. The only true "scientific" history would then be a photograph or film of the occurrences as they happened. The historian is, therefore, forced to
pick and choose from the flood of information inundating him/her and must have some method to follow in order to give his/her work unity and meaning. The history of a single country, therefore, can be written from several different viewpoints (for example, an economic history, a military history, or a political history). Simply to label Herodotus as an "historian" and to try to judge the successes and failures of his work by comparison with Thucydides or with a modern historian without taking into account his own methodology would be misleading and would of course put Herodotus at a disadvantage. It is my view that Herodotus purposefully included a wide variety of research and observations, and that no analysis of the chronological layers of composition or other formative features of his work will ever reveal this purpose until we recognize that the disparate elements within his work were intended to be included in its final form. In other words, it is one thing to examine the formation of the Histories, and another to account for the fact that Herodotus passed it down to the next generation with all its tales and anecdotes included. Of course these two (formation and completion) must touch in some practical way, but if we begin with the final form of Herodotus' work and ask "Why did he choose to include these topics?" rather than "How did it come to be this way?" I believe we will not only be one step closer to understanding Herodotus' motives in production, but be better able to appreciate the unity of his work.²

What do animals have to do with all this? In order to make this study of animals more meaningful I will attempt to demonstrate that the zoological references in the Histories belong within the framework of the Persian Wars and that whether they occur in the narration of a cavalry encounter or fall within an
ethnographic digression, they contribute to the whole of the work. Herodotus is not merely an historian, nor is he simply an ethnographer who collects stories and who records various customs among various peoples. If he intended to create a viable synthesis between the two it must be detectable in his work. Herodotus includes ethnographic digressions to provide a background by which one might understand the actions, military or not, of foreign peoples. When Herodotus’ readers learn about the status of animals in Egypt and then consider Cambyses’ treatment of Apis the bull, they more fully understand the cause of Cambyses’ downfall—an incident that, needless to say, had direct bearing upon the Persian Wars. Herodotus makes this clear to his listeners when he states that Cambyses would not have insulted Egyptian customs—customs Herodotus has just described—if he had not been crazy (3.38.1). Considerations such as these will be taken up in the main body of this work.

Literary Precedents

Scholars have often argued that Herodotus used Hecataeus as a major source for his Egyptian logos (Book 2), for Porphyry specifically states that Herodotus received his information about the phoenix, the hippopotamus, and the crocodile (among other things) from Hecataeus. These three animals are described in Book 2, sections 68-73, but later in the book Herodotus seems to deny Porphyry’s assertion (2.147.1):

\[
\text{Toúta méven aútoi Aígyúptioi légyousi, ósa dé òi te álloi ánthropoi kai Aígyúptioi légyousi ómologéontes toís álloi tá toútn tìn xórtn geýnēthei, toút' èndi phrásw.}
\]
These things are what the Egyptians themselves say; but I will now relate the things about which the Egyptians and other men agree concerning this country.5

It is possible that Herodotus in this passage is only referring to what immediately preceded (i.e., the Egyptian theogony in the previous sections), or that the sections of Book 2 are not in the same chronological order as they were originally intended. But since Book 2 has come to us in its present form, it then falls to the reader to explain why Porphyry claims something that the extant text of Herodotus itself does not support. Although Hecataeus' name appears four times in Herodotus' work (2.143, 5.36, 5.125, and 6.137), at only one point does Herodotus explicitly name Hecataeus as his source for a particular incident (6.137). But even here Herodotus only uses him to provide his readers with another version of a disputed event. Herodotus may also be referring to Hecataeus, among others, at 4.36 where he criticizes geographers for their maps of the world, but if Hecataeus is being criticized in this passage we may wonder to what extent Herodotus used him as a source if he considered his geography untrustworthy.

Hecataeus is the only prose writer mentioned in the Histories. This should not go unnoticed since Herodotus certainly does not hesitate to name his sources, and there is an abundance of poets whose names appear throughout the work: Homer, Hesiod, Archilochus, Pindar, Anacreon, Solon, Aesop, Alcaeus, Sappho, Phrynichus, Aeschylus, Simonides, Olen of Lycia, and Aristeas of Proconnesus. Herodotus occupies a transitionary position between the Greek poets of the 6th and early 5th centuries B.C. and the historians and logographers
of the late 5th and early 4th centuries, so, of course, one well might see much poetic influence. Still it seems that Herodotus was more influenced by the poets in creating his work than by prose writers. This is evident from his verbatim quotations from poets and his propensity to quote the original dactyls of prophecies and oracles. Nowhere does he give any indication that he is quoting a prose writer. Contrast this with Aristotle who freely quotes verbatim from prose authors (vid. Chapter V).

But lack of direct quotation is hardly a convincing argument upon which to base a conclusion. The degree to which Herodotus borrowed from Hecataeus is an age-old debate, and no treatment here will do it justice. Only two things will be noted. First, it is possible that later writers who quote Hecataeus were unwittingly quoting a later forgery under his name. If this is the case, then Porphyry's statement is moot since the work written by this pseudo-Hecataeus would have been a paraphrase of Herodotus and not vice-versa. Second, even more significant than previous writers' influence on Herodotus, is the effect that Herodotus' writings had on later writers, particularly those that wrote zoologies. Of all the writers prior to Aristotle, Herodotus is the author most often quoted in zoological contexts. Aelian, for example, who antedates Porphyry by nearly a century, had ample opportunity to use Hecataeus when he wrote on Egyptian animals in his De Natura Animalium. Yet he connects Herodotus' name with his own account of the Egyptian bull Apis (11.10) and the Egyptian plover (τροχλος; 8.25), even though he could have quoted Hecataeus as he does in connection with the story of the Lernaean Hydra (8.21).
Many animals find their first literary appearance in Herodotus. Since the *Histories* was widely read in antiquity and used as a school text throughout the Greek and Roman periods, a study of these early occurrences will help to establish the early literary presentation of animals for comparison with their treatment among the later Greek and Roman authors. In Chapter V of this study I will fully examine Herodotus' position within and influence on the history of zoology.

**Animals and the Gods**

Religion and religious customs are topics to which Herodotus repeatedly returns when describing foreign nations. Animals appear frequently in these contexts, both literally and figuratively. In Herodotus' world animals are accorded a position where they function as mediaries between the human and divine planes. In this role they reveal certain attitudes in Herodotus' thinking and serve as "indicators" of his philosophical and religious views. The ways in which they accomplish this are much broader and more varied than through simple sacrifice and ornithomancy. For example, animals at times take on divine qualities, at other times they are placed in the human plane. Book 2 shows many connections between animals and gods through the depiction of the gods as animals, and it seems that almost all the animals of Egypt are important to Herodotus because of their religious connections. He begins his lengthy description of Egyptian animals by positing their sacred status (2.65.2; vid. Chapter III for further treatment of this passage):
Though Egypt shares its border with Libya it does not contain many wild animals; but all the animals that the Egyptians do have, both wild and tame, are considered by them to be sacred.

Using this introductory statement as a springboard Herodotus then dives into 12 continuous sections of animal descriptions. His opening remark demonstrates that the connection between animals and the divine was foremost in his mind; but one might argue that Herodotus' subject matter (the form and nature of Egyptian culture) dictates these attitudes and that he is merely relating ideas that were expressed to him. The connection between animals and sacred things is indeed explicit in Egyptian culture (vid. Chapter III), but in the Histories this is a phenomenon that occurs in every culture to varying degrees, including the Greek world, and can be demonstrated to be an implicit assumption of Herodotus. A clear example of this occurs in Book 1: Croesus is confronted by the sudden appearance of snakes that are eaten by grazing horses, and he concludes that the event is a divine sign. His response according to Herodotus' own estimation is correct (1.78.1-2; vid. Chapter III for further discussion):

ίδοντι δὲ τούτο Κροίσω, ὡσπερ καὶ ἦν, ἔδοξε τέρας εἶναι. αὐτίκα δὲ ἐπεμπε ϑεοπόπους ἐς τῶν ἐξηγητέων Τελμησσέων.

When Croesus saw this it seemed to him to be a portent, as indeed it was. He immediately dispatched messengers to the Telmessian interpreters.

Indeed, strange events involving animals are generally interpreted in the Histories as being somehow of divine origin.
As links between the human and divine planes, animals manifest their position among humans as well. Indications of this are seen in the way animals are adversely affected by the same divine curses that affect humans: in Book 1 Phocaean prisoners are unjustly stoned to death, and the place where their bodies lay caused both men and animals who passed by it to become crippled (1.167). Again, in Book 6 Herodotus describes the origin of the term "Lemnian deed" by relating how the unjustified killing of Attic women and children resulted in a curse which affected both people and flocks (6.138-139; vid. Chapter III). Delphi was consulted on both occasions for the appropriate expiation, showing that the curses were the result of the gods' intervention.

Animals provide a means of communication between gods and people in the Histories as well. In this sense they are found in a variety of settings ranging from oracles and prophecy (in the gods' messages to people) to architectural statues and dedicatory objects (as men attempt to be heard by the gods). Examples illustrating these usages include the prophecy of Cyrus as a "mule" on the throne (1.55.2), the prophecy of the net and the fish given to Peisistratus (1.62), and at least 9 other oracular utterances throughout the work that contain animals (1.47.3, 4.155.3, 4.157.2, 5.56.1, 5.92.3, 6.77.2, 7.141.3-4, 7.220.4, and 8.20.2). To Herodotus, this allows the divine will to be made known to people in such a way that its true meaning is obscured with dubious phraseology so that the actual fulfilment cannot be determined or is understood only too late. This heightens the dramatic effect—"dramatic" in the sense that Herodotus presents an unfolding drama on his own created stage much in the same way that the tragedians produced their tragedies. The similarity between Herodotus and
Sophocles, for example, has been pointed out by numerous scholars, and I simply suggest here that animals are used as one of the ways of achieving this end.

In conveying messages from men to the gods animals may be used in sacrifice or, as mentioned above, fashioned in the form of dedicatory objects such as Croesus' golden lion (1.50.3) or golden cows (1.92.1). Other examples abound: for example, Aristodicus' removal of the birds' nests from Apollo's temple at Didyma demonstrates his attempt to make known to Apollo his displeasure in the god's utterances. These are various ways in which men communicate with the gods via animals for propiation, to show gratitude, or to vent grievances, and they illustrate Herodotus' implicit view of animals as links between the human and divine planes. In Chapter III I will explore this topic at length to demonstrate how animals bridge the gap between men and gods in a wide variety of settings.

**Animals and People**

How different societies interact with animals reveals something about that people to the Greeks, and Herodotus purposefully includes material that contrasts with Greek customs because he is writing to a Greek audience. In a detailed account of Egyptian sacrifice (2.38ff) the head of the victim is loaded with curses and then sold to Greeks in the marketplace; if there are no Greeks the head is thrown into the river. Why does Herodotus include this item of interest?--to show that what is considered accursed to the Egyptians is acceptable to the Greeks. Herodotus need not point out similarities with Greek practices for he is concerned with the differences. Another example of this is the Persian custom of burial (1.140): the Persians do not bury any one until the body has
been torn by a bird or dog. Anyone familiar with Greek burial practice will immediately see the irony of this, and it is so obvious that Herodotus does not even feel the need to point it out: the Greeks at least from Homer on considered this to be one of the worst things that could happen to a corpse. Yet Herodotus does not censure the practice. Even though he is a Greek he attempts to show that "custom is the king of all," as he quotes from Pindar (3.38.4), and we see in his silence an attempt to be free of prejudice and racism.

But Herodotus also held certain presuppositions that surface throughout his works. His travels took him to many parts of the Mediterranean where he witnessed customs far different from those in Greece, and many of the cultures he encountered or heard about embraced practices that to him were distasteful or morally wrong. Since the interest in the bizarre was a common Greek phenomenon, Herodotus exploited this interest when his subject matter carried him beyond the bounds of Greek experience: the barbarism he reports often manifested itself through animal imagery, so that a remote people may dress in animal skins, eat their food raw (3.98.3), eat people (4.18.3), or copulate in the open like animals (1.202.3 and 4.180). In a few cases they are even half human and half beast (4.25.1 and 4.105.2). Herodotus clearly censures extreme animal-like behavior on both cultural and individual levels. The Persians in particular fall under Herodotus' censure for their animal-like behavior and their treatment of others as animals. In the next chapter I shall provide a zoological basis for these presuppositions of Herodotus, and in Chapter IV I will examine animal imagery in detail as it appears in foreign customs and in human behavior.
Herodotus' Veracity

A study of animals not only reveals attitudes of the author concerning his characters and the world in which they live, but it also illuminates the world "outside" Herodotus and his work. There is much information to be gleaned from the animal descriptions in Herodotus' work, and it would be superfluous at this point to cite passages merely to show how detailed Herodotus' zoological references can become. An important point to be considered when drawing zoological information from the Histories is the question of Herodotus' veracity, for his animal descriptions provide a very good means by which we can objectively measure the accuracy of his work. Just over a century ago M.R. Saint-Loup noted the following:11

J. Wright echoed this sentiment a generation later when he wrote:12

Even among more modern researchers Herodotus demands respect in light of his zoological observations; Z. Kádár concluded the first publication in a series of
articles entitled, "Some Problems Concerning the Scientific Authenticity of Classical Authors on Libyan Fauna," with the following statement:\(^{13}\)

Herodotus has enumerated both the Afro-eremic desert fauna of the western Palearctic from the regions of the nomadic Libyans, and the fauna of the Mediterranean forest and savanna regions from the land of the agrarian Libyans. This latter presents the fauna living in wood lands and savanna region of Mediterranean territory, in what was called the Mauretanian secondary centre, and which became extinct as a result of desiccation.

All this indicates that—considering his possibilities—Herodotus knew the fauna of North Africa well, and made only excellent zoological observations connected with the fauna of Africa—as has been pointed out recently by Vogel—but may even [be] regarded as the pioneer of African fauna research. So we may call him not only the "father of history" but also the "father of zoogeography and faunistics".

But even in the face of such praise we need not search far to find mistakes in Herodotus. His descriptions of the animals of Egypt, for example, contain verifiable errors. The crocodile is said to have a hinged upper jaw (2.68.3) which, in fact, it does not. Such a mistake is understandable given the nature of the crocodile: How and Wells (Vol. I, p. 201) note that "The crocodile raises its head to bite, and so presents the deceptive appearance of moving its upper jaw."

Herodotus’ description of hippopotami, however, is far less forgivable:

\[ \begin{align*}
\phiυσιν \ δε \ παρέχουνται \ ιδές \ του \ ημίδος: \ τετράπομον \ έστι, \ δίχηλον, \ όπλαι \ βοός, \ σιμών, \ λοφήν \ έχου \ έπποι, \ χαλιάδοντας \ φαίνον, \ συρήν \ έπποι \ καί \ φωνήν, \ μεγαθός \ δοσον \ τε \ βούς \ ο \ μέγιστος. \ (Hist. \ 2.72) \\
\end{align*} \]

Their appearance is as follows: four-footed, cloven-hoofed like an ox, snub-nosed, a horse’s mane, protruding tusks, a horse’s tail and neigh, and in size as large as an ox.

E. Obst leaves no doubt about the inaccuracy of Herodotus’ description:\(^{14}\)
Danach kann also wohl kein Zweifel bestehen, daß Herodot, -- oder seine Quelle, -- niemals die Stimme eines Nilpferds vernommen hat. Desgleichen wird niemand, der ein solches Tier, -- lebend, ausgestopft oder auch nur abgebildet, -- gesehen haben, jemals an einem einen Pferdemähne oder einen Pferdeschwanz wahrgenommen haben; also sind sämtliche Angaben der Spalte III, die den Vergleich mit dem Pferd enthält, völlig aus der Luft gegriffen.

Herodotus has been criticized for his lions in Greece, his dolphin-riding bard, and his long-tailed sheep, but scholars have tried to vindicate him on all three counts. Our world in the last two centuries has also seen strange and unknown animals come to light such as the okapi, the platypus, and the gorilla (once thought to be an exaggerated ape). With the recent discoveries of "living fossils" such as the coelacanth and the Australian ant we find our world less well-documented than we might expect even in the 20th century. Yet it is to Herodotus' credit that in his own age he showed a healthy skepticism when dealing with animals that were extraordinary and beyond his ability to verify (as he does with the phoenix; 2.73.1) and he at least makes it clear to us whether he sees them himself or reports them second-hand. I say this because we cannot conclusively question Herodotus' veracity simply because he reports such things as flying snakes (2.75-76), especially since (in this instance) he takes the trouble to verify his information by autopsy, describes what he saw, and even gives the best geographical information he can so that verification can be made by someone else interested in following up his reference (2.75.1ff). If and when Herodotus does err he does not mean to mislead his audience deliberately. To label him a "liar" would be to say that he intentionally deceived his listeners, and I
am convinced that this was never Herodotus’ intent; when he is mistaken it is without malice.

I have shown how the study of animals in Herodotus will help to elucidate Herodotus and his world. Studies that concern animals have helped to clarify specific zoological questions, but do not address the larger literary issues. I plan this work to fill the gap. This study will touch on a variety of subjects such as Herodotus’ presuppositions and attitudes, the goals of his research, the interaction between Greeks and barbarians, and the impact of the Histories on the history of zoology. My investigation begins in the next chapter with statistics on animals, their distribution and classifications, and a brief enquiry into the place animals occupy in the physical world of the Histories. From this starting point the subsequent chapters will attempt to uncover the meanings and patterns among the numerous zoological references which will help us to better understand Herodotus and his history of the Persian Wars.
Notes to Chapter I

1 Vid. e.g., the articles by Kádár, Obst, Jennison, and Hutchinson in the bibliography which deal with these four animals respectively.

2 Ultimately this may presuppose that Herodotus' motives were consistent throughout production, and that the work is basically finished so that there were no major revisions intended but not carried out (but how could the work have been published otherwise?). We know that Herodotus intended to include further information that did not make it into the Histories as we now have it (such as the Assyrian logos mentioned at 1.184), but an examination of these exclusions is beyond the scope of this work; the present argument simply addresses what is there.

3 These remarks of Porphyry (A.D. 233-c. 301) are preserved in a reference by Eusebius (Praep. Evang. 10.3.16).

4 Lilja (see bibliography) examines this passage in Herodotus and concludes on stylistic analysis that if Hecataeus is the source then Herodotus is merely paraphrasing.

5 Translations throughout are mine.

6 These influences are less "factual" than philosophical, ideological, or stylistic.

7 For a comparison between the extant fragments of Hecataeus and Herodotus' Histories, vid. K.A. Van Der Molen's Hecataeus, Herodotus, and Historie (Thesis, The Ohio State University, 1984).


9 E.g., 2.42, where Zeus in Egypt is pictured with the face of a ram, and 2.46, where Pan has a goat's face and limbs.

10 One is reminded of Polyphemus in the Odyssey.


Kádár, Z. "Some Problems concerning the Scientific Authenticity of Classical Authors on Libyan Fauna: A Zoological Commentary on Description of Libya by Herodotus," *ACD* 8 (1972) 16.


For a general study of plants in Herodotus, vid. E.S. Forster, "Trees and Plants in Herodotus," *CR* 56 (1942) 57-63.
CHAPTER II
DISTRIBUTION, FREQUENCY, AND CLASSIFICATION

Introduction

Animals appear in great numbers throughout the Histories and can easily be overlooked even by a close reading, for they are found in a wide variety of contexts ranging from casual mention in a simile (2.92.4) to descriptions of barbaric weapons (7.70.2). Herodotus displays an interest in many types of animals, and hence his animals come in all shapes and sizes--bats and cats, seals and eels, rams and lambs, dogs and frogs, bears and hares, mice and lice. Herodotus shows this interest not only in the large and foreign animals such as the elephant (4.191.4), but in tiny insects as well such as the mosquito (2.95).1 This wide range of zoological interest and inquiry is one of the aspects of Herodotus' work that make his history appealing and pleasurable to read.

Because of this zoological superfluity there is a need to list all the animals and show where and how often each animal appears. An index of this sort will provide a useful reference and will highlight distributional tendencies throughout the Histories. The index consists of the table on the following pages and the appendices (A and B).2 In the table (Table 1) I have divided the animals generally by habitat and listed each group alphabetically: domesticated land animals begin the list, followed by wild land animals;3 next are listed birds,4 then fish and "water" animals (i.e., animals usually associated with water), then snakes,
then insects and other invertebrates (these two as one category), and lastly mythological beasts. Appendix A again lists these animals, but in full alphabetical order.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>cat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>goat (he/she)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lamb, sheep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>herd of cattle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bull, cow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sucklings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>young pig</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mule</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>horse, mare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>herd of horses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>camel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ram</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sheep, castle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dog-pack</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dog</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>calf</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1 (continued)

<table>
<thead>
<tr>
<th>Domesticated Land Animals</th>
<th>Rise of Lydia</th>
<th>*Lands/Customs of Persia, Babylon, &amp; Massagetae</th>
<th>Empire of Darius</th>
<th>*India, Arabia, Custom &amp; of Egypt</th>
<th>*Customs of Lydia, Thrace &amp; Thrace</th>
<th>*History &amp; Demography</th>
<th>Persis of Egypt &amp; Samos</th>
<th>Ionian Revolt</th>
<th>First Invasion of Greece</th>
<th>Persian Advance to Thermopylae</th>
<th>Artesian &amp; Thermopylae</th>
<th>Total of Regular Sections</th>
<th>Total of Sections</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Donkey</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>1</td>
<td>3</td>
<td>11</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Camel</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cattle</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>The donkey</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>18</td>
<td>13</td>
<td>31</td>
</tr>
<tr>
<td>Pig</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>4</td>
<td>-</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Goat</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>4</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Pack animal</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>4</td>
<td>-</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Wild Land Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fox</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>12</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Bear</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
</tbody>
</table>

*Ethnologies/digressions
*1st mentioned in Herodotus
Table 1 (continued)

<table>
<thead>
<tr>
<th>Region</th>
<th>1st-300 BC</th>
<th>300-1000 AD</th>
<th>1000-1500 AD</th>
<th>1500-1800 AD</th>
<th>1800-1900 AD</th>
<th>1900-2000 AD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scythia, of Persia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lybia</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Babylon, Egypt</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>India, Scythia &amp; Thrace</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Egypt, Arabia, Thrace</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ethiopia, of Darius</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lydia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Egypt, Samos</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: (*) indicates species used in herbal medicine.

<table>
<thead>
<tr>
<th>Species</th>
<th>1st-300 BC</th>
<th>300-1000 AD</th>
<th>1000-1500 AD</th>
<th>1500-1800 AD</th>
<th>1800-1900 AD</th>
<th>1900-2000 AD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antelope</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Deer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Jackal</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ferret</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cheetah</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lion</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cheetah</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hyena</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wild Cat</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ostrich</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Elephant</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cheetah</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hyena</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wild Cat</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ostrich</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Elephant</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 20 species used for medicinal purposes in the given timeframe.
Table 1 (continued)

(* = ethnologies/digressions)
(* = 1st mentioned in Herodotus)

<table>
<thead>
<tr>
<th>Wild Land Animals (continued)</th>
<th>Rise of Lydia</th>
<th>*Lybian Customs of Egypt &amp; Samos</th>
<th>*Land &amp; Customs of Egypt</th>
<th>Empire of Darius</th>
<th>*India, Arab &amp; Thrac 4.1-122</th>
<th>*Scothia Thrac &amp; Thrace 4.10-102</th>
<th>*History &amp; Demog. of Lybia 4.145-149</th>
<th>First Invasion of Greece 6.62-40</th>
<th>Persian Advance to Thermopylae 7.2-124</th>
<th>Total of Regular Sections</th>
<th>Total of (*) Sections</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>λεγόμενοι, ὥρα</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>λάσιον, ἦλιος</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>λούγος, ὀσός</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>λύκος, ὄσπις</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>λυγαρί, ὁ ὄσπις</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>μῦς, ὁ ἰός</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>νείρης, ὁ ἱμαν</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>θηριό, ὁ (see ἄγος, ὄ)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>γάτος, ὁ ἀντίλοπ</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>παρόβλ, ὁ ὄτρ</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>πύραγος, ὁ ἅλατος ἄντίλοπ</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>σάλας, ἦλιος</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>σύλλομος, ὁ ἱνόπ</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>τίμος, ὁ ἄγος</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>θυριάρχος, ὁ ἑδώρ</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

23
<table>
<thead>
<tr>
<th>Birds</th>
<th>Rise of Lydia</th>
<th>*Lydian Customs</th>
<th>Career of Cyrus</th>
<th>*Lands/Customs of Persia, Babylon, &amp; Massagetae</th>
<th>Egypt, Ethiopia, &amp; Samos</th>
<th>Empire of Darius</th>
<th>*India, Arabia, Eastern peoples</th>
<th>*Customs of Scythia &amp; Thrace</th>
<th>Lybia, &amp; Thrace</th>
<th>*History &amp; Demography of Lybia</th>
<th>First Invasion of Greece</th>
<th>Persian Advance to Thermopylae</th>
<th>Artemisium &amp; Thermopylae</th>
<th>Salamis</th>
<th>Plataea, Mycale</th>
<th>Total of Regular Sections</th>
<th>Total of (*) Sections</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>eagle</td>
<td>1,121</td>
<td>1,895-130</td>
<td>1,411-191</td>
<td>1,131-140</td>
<td>1,392-203</td>
<td>3,71-96</td>
<td>1,118-160</td>
<td>3,3-10,16</td>
<td>3,83-102</td>
<td>4,300-5,23</td>
<td>4,410-92</td>
<td>4,103-119</td>
<td>4,145-149</td>
<td>9,1-122</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>raven</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>swan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vulture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eagle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>crane</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ibis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hawk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ibis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eagle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>crow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rail, crane</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>duck</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>crow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>small bird</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dove, &amp;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dove</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dove</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pigeon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 (continued)
<table>
<thead>
<tr>
<th>Birds (continued)</th>
<th>Rises of Lydia</th>
<th><em>Lydian Customs</em></th>
<th>Career of Cyrus</th>
<th><em>Land &amp; Customs of Egypt</em></th>
<th>Egypt, Ethiopia, &amp; Samos</th>
<th>Empire of Darius</th>
<th><em>India, Arabia, eastern peoples</em></th>
<th>Scythia, Lybia, &amp; Thrace</th>
<th><em>History &amp; Demography of Lybia</em></th>
<th>First Invasion of Greece</th>
<th>Persian Advance to Thermopylae</th>
<th>Artemisium &amp; Thermopylae</th>
<th>Salamis</th>
<th>Mycale</th>
<th>Total of Regular Sections</th>
<th>Total of (*) Sections</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>sparrow</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>ostrich</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>sandpiper</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>swallow</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>gooses</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>frigate</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>fin-fishes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>sea creature (?)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>dolphin</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>eel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>tuna-fish</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>fish</td>
<td></td>
<td>3</td>
<td>3</td>
<td>15</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>a fish (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>a salted fish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 1 (continued)
Table 1 (continued)

(* = ethnologies/digressions)
(= 1st mentioned in Herodotus)

<table>
<thead>
<tr>
<th>Fish (continued)</th>
<th>*Lybian Customs</th>
<th>Rise of Lydia</th>
<th>*Land &amp; Customs of Egypt &amp; Samos</th>
<th>*Lands/Custums of Persia, Babylon, &amp; Manassestis</th>
<th>Empire of Darius</th>
<th>*India, Arabia, eastern peoples</th>
<th>*Custums of Scythia &amp; Thrace</th>
<th>*History &amp; Demography of Lybia</th>
<th>Persian Advance to Thermopylae</th>
<th>Artemisium &amp; Thermopylae</th>
<th>Salamis</th>
<th>Mycale</th>
<th>Total # Regular</th>
<th>Total of Regular Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Lands/Custums of Persia, Babylon, &amp; Manassestis</td>
<td>*Land &amp; Customs of Egypt &amp; Samos</td>
<td>Empire of Darius</td>
<td>*India, Arabia, eastern peoples</td>
<td>*Custums of Scythia &amp; Thrace</td>
<td>*History &amp; Demography of Lybia</td>
<td>Persian Advance to Thermopylae</td>
<td>Artemisium &amp; Thermopylae</td>
<td>Salamis</td>
<td>Mycale</td>
<td>Total # Regular</td>
<td>Total of Regular Sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish (continued)</td>
<td>Rise of Lydia</td>
<td>*Lybian Customs</td>
<td>*Land &amp; Customs of Egypt &amp; Samos</td>
<td>*Lands/Custums of Persia, Babylon, &amp; Manassestis</td>
<td>Empire of Darius</td>
<td>*India, Arabia, eastern peoples</td>
<td>*Custums of Scythia &amp; Thrace</td>
<td>*History &amp; Demography of Lybia</td>
<td>Persian Advance to Thermopylae</td>
<td>Artemisium &amp; Thermopylae</td>
<td>Salamis</td>
<td>Mycale</td>
<td>Total # Regular</td>
<td>Total of Regular Sources</td>
</tr>
<tr>
<td>*Lands/Custums of Persia, Babylon, &amp; Manassestis</td>
<td>*Land &amp; Customs of Egypt &amp; Samos</td>
<td>Empire of Darius</td>
<td>*India, Arabia, eastern peoples</td>
<td>*Custums of Scythia &amp; Thrace</td>
<td>*History &amp; Demography of Lybia</td>
<td>Persian Advance to Thermopylae</td>
<td>Artemisium &amp; Thermopylae</td>
<td>Salamis</td>
<td>Mycale</td>
<td>Total # Regular</td>
<td>Total of Regular Sources</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Water** Animals

| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| Fish (continued) | Rise of Lydia | *Lybian Customs | *Land & Customs of Egypt & Samos | *Lands/Custums of Persia, Babylon, & Manassestis | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |

**Fish**

| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| Fish (continued) | Rise of Lydia | *Lybian Customs | *Land & Customs of Egypt & Samos | *Lands/Custums of Persia, Babylon, & Manassestis | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |

**Land**

| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| Fish (continued) | Rise of Lydia | *Lybian Customs | *Land & Customs of Egypt & Samos | *Lands/Custums of Persia, Babylon, & Manassestis | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |

**Animals**

| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| Fish (continued) | Rise of Lydia | *Lybian Customs | *Land & Customs of Egypt & Samos | *Lands/Custums of Persia, Babylon, & Manassestis | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |

**Insects & Inveterbrates**

| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| Fish (continued) | Rise of Lydia | *Lybian Customs | *Land & Customs of Egypt & Samos | *Lands/Custums of Persia, Babylon, & Manassestis | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |

**Insects & Inveterbrates**

| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| Fish (continued) | Rise of Lydia | *Lybian Customs | *Land & Customs of Egypt & Samos | *Lands/Custums of Persia, Babylon, & Manassestis | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |
| *Lands/Custums of Persia, Babylon, & Manassestis | *Land & Customs of Egypt & Samos | Empire of Darius | *India, Arabia, eastern peoples | *Custums of Scythia & Thrace | *History & Demography of Lybia | Persian Advance to Thermopylae | Artemisium & Thermopylae | Salamis | Mycale | Total # Regular | Total of Regular Sources |

2
Table 1 (continued)

<table>
<thead>
<tr>
<th>Insects &amp; (invertebrates) (continued)</th>
<th>Rise of Lydia</th>
<th>&quot;Lydian Customs&quot; &amp; Massegæae</th>
<th>Career of Cyrus</th>
<th>&quot;Lands/Customs of Persia, Babylonia, &amp; Egypt, Ethiopia, &amp; Sasanis&quot;</th>
<th>Empire of Darius</th>
<th>&quot;India, Arabia, eastern peoples&quot;</th>
<th>Scythia Lybia, &amp; Thracæ</th>
<th>Persian Empire &amp; Demography of Lydia</th>
<th>Ionian Revolt of Greece</th>
<th>First Invasion of Greece</th>
<th>Artemisia &amp; Thermopylae</th>
<th>Total of Regular Sections</th>
<th>Total of Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>ropolitan, h</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>leech</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>eMedh, h</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>worm</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>3</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>eMedh, h</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>wasp</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>bee</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>ant</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>wasp</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>louse</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Louse</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Myths &amp; Animals</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>masc-splint</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>griffæ, h</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>griffæ, h</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>splint</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>phoenix</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>TOTALS</td>
<td>56</td>
<td>1</td>
<td>22</td>
<td>30</td>
<td>189</td>
<td>31</td>
<td>31</td>
<td>50</td>
<td>86</td>
<td>51</td>
<td>59</td>
<td>23</td>
<td>16</td>
</tr>
</tbody>
</table>

Notes to Table 1:

*One occurrence of ἀνως at 7.36.3 is not included in this table since in that passage it has the specialized meaning "windlass."
Notes to Table 1 (continued):

*Only the meanings of ἄρκτος as "bear" are included here; the meanings "Bear" (the constellation) and "north" are excluded.

*One occurrence of ἀρκόπεδος at 2.148.1 is omitted since it occurs as a proper noun (Ἀρκόπεδος τῆς ἐλέους).

*The single occurrence of ἀδισφόρυζα at 2.175.1 is used to describe statues in Egypt.
Explanation of Table 1

In the table I have divided Herodotus' history in the vertical columns into two major categories: The majority of his work comprises what I shall call the "historical" sections; the remaining sections are labeled ethnographic "digressions" and have been marked with an asterisk (*).\textsuperscript{5} The reason for this division is that the majority of the animals in Herodotus do not appear randomly scattered throughout the Histories but are largely confined to sections that "digress" from the main thread of the history of the war between east and west. The digressions are Herodotus' method of filling in background material on certain peoples or countries that touch in various ways upon the central Greco-Persian conflict. By dividing the Histories into these two categories we will be able to compare the "historical" narrative to Herodotous' "digressions"; this will also help us to compare the "main thread" (the "historical" passages) of the Persian Wars to other ancient histories that do not include such ethnographic digressions.

I have further divided the Histories at logical breaks in the narrative rather than at simple book divisions because changes in the historical narrative do not necessarily coincide with the divisions between books. The result is 11 "historical" sections with the various passages of digression (which I have grouped into 6 categories) arranged sequentially. The purpose of this seemingly complicated arrangement is to allow the eye to begin at the left of each page of the table and scan the numbers across horizontally to note more easily where a specific animal tends to appear from the beginning of Herodotus' entire work to its end. The last three vertical columns at the right total all the "historical"
sections, then all the "digression" sections (marked by an *), then lastly comes the grand total of all the occurrences of that specific term. This allows one to compare quickly "historical" sections with "digressions" on a particular word, and to have the total of both these sections already computed.

A natural break occurs approximately at the center of Herodotus’ work in Book 5, between sections 27 and 28 (the beginning of the Ionic revolt). The first half (1.1-5.7) contains 802 stephanus pages and the second with its 744 stephanus pages is nearly equal in length. It is noteworthy that all the ethnographic "digressions" occur in the first half of the entire work, and that the second half is thus strictly "historical" in terms of this study. This should be remembered when looking at the total of the digression sections (*) in the next to the last column at the right.

A few more words of explanation are needed concerning these statistics. First, this table records only how often a particular word or term occurs in the text, and hence if a given passage is concerned with a particular animal at length, the name of that animal will undoubtedly appear several times in that passage. Thus, there are not, for example, exactly six cats (αλεξωροι--see first entry in Table 1) in the Histories, nor are there six separate passages where cats appear; in actuality there is only one passage containing cats--at 2.66.1ff.--and this passage speaks of a number of cats at some length. The division of the text into 17 separate columns helps to isolate passages of this type so that uneven distribution of a term can be more easily detected. On the other hand, if a passage repeats an animal term several times it is obviously more concerned with that animal. The statistics will, therefore, correctly reflect Herodotus’ attention to that animal, and
thus there need be no concern that passages of this type will make an animal appear to have more prominence in the *Histories* (by its greater occurrence) than it should have.

Second, duplication is sometimes unavoidable. For example, at 3.112 τράγος is put in apposition to αἶξ to define it as male (τῶν γὰρ αἰγῶν τῶν τράγων...), yet both terms (αἶξ and τράγος) are listed separately in the table. This type of duplication, however, occurs very rarely, and is therefore negligible in terms of the vast numbers of total occurrences.

Third, these lists do not include proper nouns which are identical to animal names. These include the following: Ἕλεστρω (the constellation; 5.10); οἱ Ἔγγειλές (a people; 5.61.2 and 9.43.1); Κροκοδείλων πόλες (a city in Egypt; 2.148.1); ὁ Κυνίσκος (a person; 6.71.1); ὁ Λέων (two individuals with this name—one at 1.65.1, 5.39.1, and 7.204, the other at 7.180); ὁ Λύκος (a person at 1.173.2 and 7.92, and two different rivers at 4.123.3 and 7.30.1); Μύρμηξ (a reef; 7.183.2); ὁ Μύς (a person; 8.133ff); and ὁ Σκύλαξ (two men—one at 4.44.1, the other at 5.33.2-3). There are also many other proper nouns partially composed of names of animals that I have collected in Appendix B; I reserve till Chapter IV my discussion on the significance of animal names that are to be found in other noun forms. I have also limited the terms in the table to nouns, excluding for the sake of brevity (and general usefulness) all adjectives, verbs, and adverbs. Five of these are derived from animals not otherwise mentioned in Herodotus: κάπριος (κάπρος--wild boar), μήλειος and μηλοτρόφος (μήλον--sheep), παρδολέη (πάρδολις--leopard), and πιθηκοφαγέω (πίθηκος--ape).
It should be noted that collective nouns and nouns denoting certain classes of animals have been included in this table. These are βουκόλιον, γαλαθηνά, θηρίον, ἱπποφόρβιον, κότα, κτήνος, κυνηγέσιον, ποίμνη, ποίμνια, πρόβατα, and ύποζύγιον. Since these words refer to animals or groups of animals not otherwise indicated by the words of the text, their exclusion would mean the exclusion of numerous animal references.

Lastly, this table does not separately list unidentified animals nor animals without specific Greek names. In other words, when Herodotus describes an animal by means of adjectives or animal characteristics with which he is familiar, these animals will only appear statistically via the animal terms that he uses to describe them. For example, at 2.74 Herodotus describes snakes that grow two horns on their heads (οἱ ὄφις... μεγάθετε ἑόντες σμικροὶ δύο κέρατα φορέουσιν πεφυκότα ἐξ ἀκρῶν τῆς κεφαλῆς). These snakes are statistically represented only under the term ὄφις in the table, but do not have their own specific entry as, say, ἀσπίς and ἔχιδνα do. Another example is the "square-faced" animal (Θηρία τετραγωνωμορφία) described at 4.109.2: since Herodotus could not identify this "square-faced" animal and call it by its Greek name, he was forced to describe it as well as he could; thus it is only represented statistically in the table under the term θηρίον.

Observations and Comparisons

When we look at these statistics we should notice immediately the vast number of animals—804 total entries signifying fauna of some type. Even if we omit every appearance of ἱππος from the text we are still left with a total of over
33

600. No other ancient history of any people or war includes this many zoological references. This fact in and of itself shows the need for a study of Herodotean animals if for no other reason than to answer the question "why so many?"

To ascertain where the majority of these terms are found let us compare the total "historical" sections with those that are "digressive" (passages marked with an *). There are 389 animal terms to be found in the former and slightly more (415) in the latter. This seems to imply fairly even distribution, but when we consider that digressions make up one-fourth of the Histories, then animal terms occur in digressions three times as often as elsewhere. This disparity is increased if we exclude ὀνος, ὀποξύγιον, and ἡμίνος, which appear frequently in the historical narrative sections since they are beasts of burden often used in war for fighting or carrying supplies. Their omission brings the totals to 183 for historical sections and 351 for digressions, changing the near equality between the two categories to a near one-to-two ratio in total occurrences. This means that "non-war" animals appear about six times as often in digressions as elsewhere.

To see this from another vantage point we can total the "war" animals themselves for both categories and compare the two: These totals come to 206 for historical sections and 64 for digressions. Allowing for the difference in total sections for each category as done above (see note 9) this means that war animals appear on the average almost as frequently in one section as in another. This seems to be incongruous with the comparison above. But let us consider in more detail the distribution of the word ὀπος when its secondary definition, "cavalry", is distinguished and plotted separately:
| Land & Customs of Persia, | Rise of Lydia | *Land & Customs of Egypt | Empire of Darius | *India, Arabia, eastern peoples | Scythia Lybia, & Thrace | *History & Demography of Lybia | Ionian Revolt | First Invasion of Greece | Persian Advance to Thermopylae | Artenisium & Thermopylae | Salamis, Mycale | Total of Regular Sections | Total of (*) Sections |
|--------------------------|---------------|--------------------------|-----------------|-----------------------------|----------------------|-------------------------------|-------------|--------------------------|-----------------------------|-----------------------|----------------|-------------------------|----------------|---|
|                          | 1.41-191      | 2.1-102                  | 3.71-96         | 4.1-82                      | 4.200-5.2            | 5.11-15                        | 4.145-149   | 5.17-27                  | 6.43-149                     | 7.6-174               | 8.3-144       | 9.2-122                 | 141            |
| Tenac, & A               | 6             | 62                       | 32              | 15                          | 13                   | 99                            | 42          | 62                       | 62                          | 0                    | 62            | 0                       |                |
| Tenac, & B               | 5             | 62                       | 32              | 15                          | 13                   | 99                            | 42          | 62                       | 62                          | 0                    | 62            | 0                       |                |

Table 2: Breakdown of Tenac

(* = anecdotes/diversions)
The breakdown in this table (Table 2) better shows where the military uses of the term ἵππος fall and where its other meanings are used. A recalculation of war animal occurrences that includes only those definitions of ἵππος meaning "cavalry" gives us totals of 107 for historical sections and only 20 for digressions. This means that animals used for warfare appear nearly twice as often in the main, historical narrative as elsewhere.\textsuperscript{11}

Admittedly, these statistics can only provide us with approximate ratios since we have not examined every appearance of ἵππος, ἡμίονος, ὄνος, and ὑποξύγιον in context. We can, nevertheless, be assured that these comparisons are accurate in determining how frequently animals appear when we consider their use in warfare. In a work that records the military conflict between Greece and Persia the results we have obtained are not surprising. We expect animals to be more frequently associated with battles and warfare in passages that carry the main historical, and therefore military, narration, and to more frequently elucidate zoological peculiarities in passages devoted to ethnography.\textsuperscript{12} On the other hand it is important to note that Herodotus did not strictly segregate subject matter into "military" and "cultural," for there is a certain percentage of occurrence of each type in both categories, thus blurring somewhat the neat dividing line between the two and showing perhaps that ethnography should not and cannot be entirely divorced from the narration of military events. The two are in fact wed in a narrative section describing the encounter between Scythian ἵπποι and Persian ὄνοι and ἡμίονοι (4.129.1-3):

\begin{quote}
τὸ δὲ τοὺς Πέρσης τε ἦν σύμμαχον καὶ τοὺς Σκύθους ἀντίξουν ἐπιτιθεμένους τῷ Δαρείου στρατοπέδῳ, θώμα μέγιστον ἔρεω, τῶν τε ὄνων ἡ ὕππη καὶ τῶν ἡμίονων τὸ εἶδος. οὔτε γὰρ ὄνοι οὔτε ἡμίονοι
\end{quote}
I shall speak of a great wonder which was a boon to the Persians but an obstacle to the Scythians when they attacked Darius' camp—namely the sound of the donkeys and sight of the mules. For the Scythian land produces neither donkey nor mule, as I have previously shown, nor is there in all the land of Scythia either donkey or mule because of the cold. So the donkeys would alarm the Scythian cavalry by their braying, and oftentimes upon attacking the Persians the Scythians' horses would hear the braying, and since they had never heard nor seen such an animal before, their ears would perk up and they would turn tail frightened and dumbfounded. This brought the Persians a small advantage in the war.

Herodotus is saying that a cultural phenomenon that he described in detail in an earlier digression had direct bearing on the events and outcome of Persian military history; this in turn ultimately helped shape events and set the stage for the Persian advance into Greece. The events described above are more credible to Herodotus' audience because he has taken the time to describe the Scythian people, land, and customs, and now he is demonstrating how this background is woven in a practical way into the web of his history. The line between digression and historic narration is crossed at this point and Herodotus' history becomes more unified.

When one considers the distribution of animals in the Histories it is likely that the Egyptian animals of Book 2 come immediately to mind: more text is devoted to animals here than in any other book, and as we see from the statistics nearly one-fourth of the total occurrences (189 of 804) is found here. Many of
these animals are mentioned only once. How many animal terms in Table 1 appear only once in the Histories, and are the majority of these located in Book 2? The following list answers the first part of this question:

<table>
<thead>
<tr>
<th>Animal terms occurring</th>
<th>52</th>
</tr>
</thead>
<tbody>
<tr>
<td>twice:</td>
<td>13</td>
</tr>
<tr>
<td>3-5x:</td>
<td>20</td>
</tr>
<tr>
<td>6-10x:</td>
<td>10</td>
</tr>
<tr>
<td>11-20x:</td>
<td>4</td>
</tr>
<tr>
<td>21-30x:</td>
<td>7</td>
</tr>
<tr>
<td>31+:</td>
<td>5</td>
</tr>
</tbody>
</table>

Total no. of different terms: 111

Close to half of the 111 different terms are only found once in the text, and well over half occur only one or two times. Of the 52 that are mentioned only once, the majority are found in two places: 20 fall in Book 2, and 15 occur in the digression on the history and demography of Libya (4.145-199). In fact, only 7 of the 52 occur in the main narrative sections (sections not marked by *): βουκόλιον, γαλαθήνα, κυνηγέσιον, νεβρός, αλγυπίος, στρούθος, and θύννος. Apart from θύννος, none of these terms is particularly uncommon. This is not surprising since we would expect the majority of lesser-known animal terms to be found in sections that enumerate and describe foreign fauna. The longest such listing of foreign animals occurs at 4.191-192 where no less than 25 different animals are named, 15 of which appear nowhere else in the Histories.14

Herodotus’ zoological interests thus led him to include sections devoted specifically to animals and their descriptions, yet the statistics also reveal that these inclusions are not entirely segregated from the main thread of his history.
How these references to animals are literarily woven into his narrative will be examined in detail in Chapters III and IV.

To put Herodotus’ abundance of zoological references in perspective, let us briefly compare his *Histories* with Thucydides’ *History of the Peloponnesian War*. All the animal terms that appear in Thucydides’ *History* are enumerated in the following list:

<table>
<thead>
<tr>
<th>Term</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>nightingale</td>
<td>1</td>
</tr>
<tr>
<td>horse, mare</td>
<td>30</td>
</tr>
<tr>
<td>dog</td>
<td>1</td>
</tr>
<tr>
<td>bird</td>
<td>2</td>
</tr>
<tr>
<td>bird</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>42</td>
</tr>
</tbody>
</table>

Though it is obvious that Herodotus was more interested in animals than Thucydides, it is nevertheless surprising that only seven different animals are mentioned in Thucydides. These historians’ works are approximately equal in length, yet Herodotus includes over 19 times as many references to animals (804 compared to Thucydides’ 42). Part of this vast difference can be accounted for by each author’s terminology for "cavalry." Herodotus prefers the term "ἵππος," whereas Thucydides uses "ἵππευς" (or the plural "ἵππευς"); "ἵππευς" occurs 74 times in Thucydides compared to 30 times in Herodotus, but "ἵππος" occurs only 30 times in Thucydides compared to Herodotus’ total of 203. Even if we count only those uses of "ἵππος" in Herodotus that mean "cavalry" the totals are still 30 for Thucydides and 62 for Herodotus.
The more numerous occurrences of ἵππος in Herodotus demonstrates two things: first, horses play a much greater role in Herodotus’ history than in Thucydides’. Since the cavalry was an important part of the Persian army, Herodotus often contrasted Persian land power with Athenian sea power (Chapter IV will investigate this further). Second, Thucydides’ preference for ἵππευς over ἵππος is perhaps an indication of his anthropocentric view of history. To Thucydides, people’s motivations and actions control the flow of history, so whether it be animals or the gods themselves, all else was of secondary importance in his view of historical causation.

Classification

Herodotus divides animals into three main groups according to their geographical habitat. These categories are land, air, and water animals. Although a few animals such as the crocodile blur the dividing lines between these categories, there is nevertheless a discernible consistency in his attempt to associate particular animals with one of these three groups. Herodotus was by no means original in his views, for we can trace elements of this division as far back as Homer. Aristotle in the century following Herodotus also maintained a tripartite division of living things (De Generatione Animalium 761a20-b16); he associates earth, air, and water with three general categories of living things, but Aristotle’s divisions contrast with Herodotus’ in that Aristotle based his divisions on what animals breathe. Land animals (πεζό) for Aristotle were all those that breathe air. This included birds as well as beasts since both birds and beasts move through the air, whether they walk or fly. Animals associated with water
were those which breathe water—namely fish. And living things that draw their life from the earth were for Aristotle all the plant life, for plants draw their sustenance from the earth.

Herodotus was not nearly so consistent. He approached the animal kingdom as an explorer and ethnologist, and thus never attempted a systematic taxonomy. Yet the *Histories* is not without a general, albeit limited, taxonomy as is evidenced by Herodotus' terminology for the different types of animals he discusses. Terms that define broad categories include ὅρνις, πετειώ, θηρίον, ἔρπετά, τετράποδα, and ἰχθύς. Certain subcategories are recognizable under these, such as the inclusion of snakes and lizards among the ἔρπετά. The following passage illustrates this (4.183.4):

οἱ γὰρ τρωγλοδύται Αἰθίοπες πόδας τάχιστοι ἄνθρώπων πάντων εἰσὶ τῶν ἡμεῖς πέρι λόγους ἀποφερομένους ἀκούομεν. σιτέονται δὲ οἱ τρωγλοδύται ὄψις καὶ σάφρος καὶ τὰ τουαῦτα τῶν ἔρπετῶν.

The Ethiopian troglodytes are the swiftest of all the men in the stories that we hear reported. They eat snakes, lizards, and other such reptiles.

Categorical groupings such as this come offhandedly from Herodotus and reveal the assumptions he had about zoological distinctions. As stated above, the three main categories that Herodotus maintained were distinguished by geographical location: land, air, and water. For Herodotus, land animals are those that walk upon the land; air animals are distinguished by their ability to fly; and water animals were those that primarily swam or lived in water. These divisions are evident at points where Herodotus contrasts animals living in one
location with animals living in another. For example, in his discussion of remote countries in Book 3, Herodotus says the following concerning India (3.106.2):

> τούτο μὲν γὰρ πρὸς τὴν ἡ ἑσχάτη τῶν οἰκειομένων ἡ Ἰνδικὴ ἐστίν, ὥσπερ ὁλίγω πρῶτον εἷρηκα: ἐν ταύτῃ τούτῳ μὲν τὰ ἐμφύσχα, τετράποδα τε καὶ τὰ πετεινά, πολλῷ μέζῳ ἢ ἐν τοῖς ἄλλοις χωρίοις ἐστὶ, πάρεξ τῶν ἰππῶν...

As I mentioned a little earlier, India is the most easterly inhabited country. Living things there, both four-footed and winged, are much larger than in other countries, excepting the horse...

From what Herodotus says we may conclude that he considers there to be one class of animals with the ability to fly (hence winged; πετεινά), and another class that is inherently different from flying creatures by the presence of four feet (τετράποδα) and the absence of wings. These two different groups are demarcated by their mode of travel as is emphasized by the words πετεινά and τετράποδα. He considers the horse, then, to be one example among others that belong to the larger group of τετράποδα.

In the following passage (1.140.3), Herodotus contrasts πετεινά with ἐρπετά, a category of land animals mentioned above:

> οἱ δὲ δὴ μάγοι αὐτοχειρὶ πάντα πλήν κυνὸς καὶ ἀνθρώπου κτείνουσιν, καὶ ἀγόνισμα μέγα τούτο ποιεῦται, κτείνουτες ὁμοίως μῦρμηκας τε καὶ ὄφις καὶ τάλλα ἐρπετὰ καὶ πετεινά.

The Magi kill all things except dogs and men with their own hands, and they take great pains to do so, indiscriminately killing ants, snakes, and other crawling creatures, and birds.

The passage at 4.183.4 (quoted on p. 40) included snakes and lizards among the ἐρπετά. In the passage above we see that the word ἐρπετά can also refer to crawling insects such as the ant; the joining of μῦρμηκας with ὄφις via τε
καὶ, and following this with καὶ τὸλλα ἐρπετά, suggest that Herodotus was
beginning a list of animals with ants and snakes that he abbreviated by referring
to others in the same category by the word τὸλλα; this is not unlike his phrase
"ὄφις καὶ σαύρας καὶ τὰ τοιαῦτα τῶν ἐρπετῶν" in the passage on page 40.
Hence I have translated ἐρπετά more broadly than in the previous passage. With
the one word ἐρπετά, then, Herodotus incorporates all the crawling animal
kingdom and contrasts it with πετεινά.

A more common term for πετεινά is ὀρνιθες (or its cognates ὀρνιθῶν
and ὀρνεον). In many passages, ὀρνιθες are contrasted with various non-flying
beasts (including man as will be shown momentarily). For example, Herodotus
states that two groups of animals avoid the crocodile, ὀρνεα and θηρία (2.68.4):


tὰ μὲν δὴ άλλα ὀρνεα καὶ θηρία φεύγει μιν, ὁ δὲ τροχίλος ἐφηναίον
οἱ ἑστί, ἀτε ὑφελεομένω πρὸς αὐτοῦ...

All other birds and beasts avoid the crocodile except the Egyptian
plover which is at peace with it since this bird brings the crocodile the
following benefit...

The differentiation between birds ("animals of the air") and other animals
is maintained throughout Herodotus. In the following passage, Herodotus
distinguishes all three main categories of animals--land, air, and water (2.123.2):

πρῶτοι δὲ καὶ τόνδε τὸν λόγον Αἰγύπτωι εἰσὶ οἱ εἰπόντες, ὡς
ἀνθρωποῦ ψυχὴ ἀθάνατος ἐστί, τοῦ σώματος δὲ καταβήνοντος ἐς ἄλλο
ζῷον οἷον γινόμενον ἑσδύεται· ἐπειδὴ δὲ πάντα περιέλθη τὰ χερσισία
καὶ τὰ θαλάσσια καὶ τὰ πετεινά, αὐτὶς ἐς ἀνθρώπου σώμα γινόμενον
ἑσδύειν, τὴν περιήλπυν δὲ αὐτὴ γίνεσθαι ἐν τρισχλίωσι έτεςι.

The Egyptians were the first to maintain that the human soul is
immortal, and that after the body has died the soul enters another living
being as it is being born: when it has gone around to all the land, sea, and air animals, it enters back into a human body at the point of birth; its transmigration period lasts three thousand years.

One might argue that the three categories mentioned in this passage are derived from Egyptian doctrine and that Herodotus is simply echoing Egyptian sentiment. This argument, however, does not hold up under examination because Herodotus in numerous other passages distinguishes these three spheres of animal habitat, as has partly been shown above. What this passage does prove is that this tripartite division of the animal kingdom is not a Greek notion only. The distinction between animals of the air, animals of the land, and animals of the water was a natural conception common to Greeks and barbarians alike (at least according to Herodotus' accounts) as can be readily seen in Herodotus' stories and ethnologies. A good example of this appears in Book 4 where a Persian interprets gifts (a bird, mouse, frog, and five arrows) given by the Scythians to the Persian king (4.132.3):

> Ἦν μὴ ὄρνιθες γενόμενοι ἀναπτήσθε ἐς τὸν οὐρανὸν, ὦ Πέρσαι, ἢ μύες γενόμενοι κατὰ τῆς γῆς καταδύστε, ἢ βάτραχοι γενόμενοι ἐς τὰς λίμνας ἐσπηρήστε, οὐκ ἀπονοστήσετε ὅπλα ὑπὸ τῶν τοξευμάτων βαλλόμενοι.

Persian men! Unless you become birds and fly up into the sky, or mice and burrow into the ground, or frogs and jump into the marsh, you will be shot by these arrows and will not return back home.

The three habitats are represented in this interpretation by the three different animals and their propensity to retire to their natural abodes when danger threatens. Birds return to the air when they are endangered, mice return to their homes in the ground, and frogs jump into the safety of water. All three
categories are meant to contrast with humans since the Persians were obviously unable to escape from the Scythians in any of these ways.

Humans are contrasted with animals throughout the Histories and only rarely does Herodotus include people within the animal kingdom, though some argument may be made that people are closer to land animals in Herodotus’ thinking than to air or water animals; Herodotus distinguishes ἄνθρωπος from θηρίον and ὄρνις in the following passage (3.108.3):

τούτο μέν, ὅτι ὁ λαγός ὑπὸ παινότος θηρεύεται θηρίον καὶ ὄρνιθος καὶ ἄνθρωπος, οὕτω δὴ τί πολύγονός ἐστι...

The hare, for example, is hunted by everything—beast, bird, and man—as it is so prolific...

The distinction between ἄνθρωποι and θαλάσσωα is vividly made by Sosicles’ dramatic appeal in Book 5 (5.92.α1):

η δὴ ὁ τε οὕρανος ἐνερήθη ἔσται τῆς γῆς καὶ ἡ γῆ μετέωρος ὑπὲρ τοῦ οὐρανοῦ, καὶ ἄνθρωποι νομὸν ἐν θαλάσσῃ ἔχουσι καὶ ἱλθῦς τοῦ πρότερον ἄνθρωποι, ὅτε γε ὑμεῖς, ὦ Λακεδαιμόνιοι, Ἀσκηρατίας καταλύοντες τυραννίδας ἐς τὰς πόλις κατάγειν παρασκευαζόσθε, τοῦ οὐτέ ἄδικωτερὸν ἔστι οὔδεν κατ’ ἄνθρωπος οὔτε μαμφοὺστερον.

Spartans! I swear, when you destroy democracy and prepare to bring tyrants back to the cities—acts which are more unjust and more bloody than anything else in the civilized world—it is like placing heaven below the earth and earth high above heaven, and like making men dwell in the sea and putting fish in men’s homes!

We can assume that these two sets of extremes were without question polar opposites to Sosicles’ and Herodotus’ intended audiences, otherwise the impact of Sosicles’ point would have been greatly diminished. Sosicles thus
demonstrates that fish and humans have as much in common as night and day, as we might phrase it.

This separation between men and animals, and the distinction between the three classes of animals, are maintained throughout the Histories. There are a number of instances, however, where the barriers between these groups are breached. A few of these deserve special attention. Recall that in Chapter I Herodotus initially doubted the tale about the flying snakes of Arabia. After our discussion above we can easily understand the reason for Herodotus’ incredulity: a flying snake is a fantastic hybrid of ἑρπετά and πετευά, and therefore highly suspect. A similar mixture occurs in a story about winged creatures that guard cassia plants (3.110):

\[\begin{align*}
\text{εὐ \phiῦται \ εὐ \ βαθή, περὶ \ δὲ \ αὐτὴν \ καὶ \ εῦ \ αὐτῆ \ αὐλιξεται καὶ \ θηρία \ πετευά, τῇσι \ νυκτερίσι \ προσείκε \ μάλιστα, \ καὶ \ τέτριγε \ δεινον, \ καὶ \ ἐς \ ἀλκὴν \ ἀλκίμα.}
\end{align*}\]

The cassia plant grows in a shallow marsh. Around and in this marsh congregate winged beasts, very similar to bats; they make a terrible screech and are exceedingly strong.

Herodotus hears many such unverifiable tales that include stories about fantastic creatures in far-off lands--even about people that are part animal. The dog-headed men of Libya are a well-known example (4.191.4):

\[\begin{align*}
\text{καὶ \ γὰρ \ οἱ \ ὀφιες \ οἱ \ ύπερμεγάθες \ καὶ \ οἱ \ λέωντες \ κατὰ \ τοῦτος \ εἰσὶ καὶ \ οἱ \ ἐλέφαντες \ τε \ καὶ \ ἄρκτοι \ καὶ \ ἀσπίδες \ τε \ καὶ \ ὅνιοι \ οἱ \ τὰ \ κέρα \ ἐχοντες καὶ \ οἱ \ κυνοκέφαλοι \ καὶ \ οἱ \ ἱμφαλλος \ οἱ \ ἐν \ τούτοι \ στήθει \ τοὺς \ ὀφθαλμοὺς \ ἐχοντες, \ ως \ ὅ \ λέγονται \ \gamma \ \υπὸ \ Λιβύων, \ καὶ \ οἱ \ ἄγριοι \ ἄνδρες \ καὶ \ γυναικεῖς \ ἄγριαι \ καὶ \ ἄλλα \ πλήθει \ πολλά \ θηρία \ ἀκατάφευστα.}
\end{align*}\]

Among them are huge snakes, lions, elephants, bears, asps, horned asses, dog-headed men, headless men with eyes in their chests (as the
Libyans assert), wild men and wild woman, and many other beasts not as fabulous.

This is one of the few instances where Herodotus associates θηρία with people. We can see that he is incredulous about this report because he adds the disclaimer "ὡς δὴ λέγονται γε ὑπὸ Λιβύων" and he concludes by saying there are many unmentioned "ἀκατάφευστα," implying that the latter part of his list includes θηρία κατάφευστα. A goat-footed race of men reported earlier in Book 4 is received with the same disbelief (4.25.1):

οἱ δὲ φαλακροὶ οὕτωι λέγουσι, ἐμοὶ μὲν οὐ πιστὰ λέγοντες, οἰκεῖοι τὰ ὄρεα ἁγίόποδας ἀνδρὰς, ὑπερβάλλοντες τοῦτος ἀνθρώπους ὄλλους οἳ τὴν ἐξάμηνον κατεύθυνοι: τούτο δὲ οὐκ ἐνδεκόμαι ἀρχήν.

These bald men say that goat-footed men dwell in the mountains, but I do not believe their tale. They say that if one should go beyond the goat-footed men one would come to other men who sleep for six months at a time; this I do not believe at all.

These stories are met with disbelief because they breach accepted zoological boundaries. Men do not belong to the world of θηρία any more than θηρία belong among men. Fish do not make their abodes among people, and people do not live in the sea. These impossibilities do not fit in the order of living things as Herodotus sees it. Horses that fly as birds or talk with human speech belong to the world of myth and epic, not to the history in which Herodotus lives. Thus when Herodotus encounters tales like these he reports them but is not bound to believe, as he repeatedly points out.

In the next chapter we will explore how people and animals share certain qualities that supersede their zoological differences.
Notes to Chapter II

1Insects and invertebrates are considered by Herodotus to belong to the animal kingdom. Vid. 3.16.4 where εὐλαί (worms) are considered to be θηρία.

2I have used J.E. Powell’s A Lexicon to Herodotus (Cambridge, 1938) to compile these statistics.

3Elephants are included in this list since they are only wild in Herodotus.

4I have included bats in this bird group because they are flying creatures. The phoenix bird is absent from this list because it is included in the group of mythological animals at the end.

5“Historical” and "digressive", for lack of better terms, are used throughout this chapter though it will be shown below that this distinction is often blurred.

6Powell’s Lexicon to Herodotus has neatly gathered every reference and may be consulted to find particular references on specific animals.

7How and Wells consider this snake to be the cerastes.

8A comparison with Thucydides is made below.

9The digressions which I have demarcated total 383 sections; the remainder total 1163 (383 + 1163 = 1546; 383/1546 = 1/4).

10Powell’s Lexicon to Herodotus, which groups all definitions by meaning and usage, is the basis for this division. The definition "hippopotamus" ( ἵππος ὁ ποτάμιος) is of course excluded since it is listed under "water animals" in Table 1.

11This comparison takes into account the different lengths of both categories. See again note 9.

12Corroboration by statistical proof is nevertheless helpful and preferable.

13Herodotus refers to his digression on Scythian ethnography at 4.28.4.

14This amount is even greater if we consider that several animals in this passage have no specific names, but are described using animal terms found elsewhere in the Histories (e.g., ὅλος ὅλος ὅπωρεμεγόθεες).
This list is derived from my own reading of Thucydides and from a thorough search for animal names in Thucydides' work in the Ibycus CD-ROM database.
CHAPTER III
ANIMALS AND THE GODS

The world that emerges from the pages of Herodotus can be divided into various categories depending on one's analysis of the work. Geographically, we find that Herodotus' world is divided into three land masses: Libya (modern Africa), Asia, and Europe; Herodotus is so adamant about the proper geographical division and proportion of these three continents that he devotes several pages to their descriptions and makes light of previous incorrect views (4.36.2ff). Zoologically, his world is divided most often into land, sea, and air domains, with creatures occupying their appropriate habitats (as was demonstrated in Chapter II). Turning now to a consideration of the place of animals in the religious realm of the Histories it is appropriate to ask ourselves first how the world is divided or viewed in matters pertaining to religion. Simply put, Herodotus posits a duality of human and divine elements, each acting upon the other. These two elements together comprise the "real" world (i.e. both humans and the gods exist) with various forms of supernatural events as the manifestation of the divine. Such divine manifestations, which include signs, oracles, and dreams, to Herodotus had a direct bearing upon human history and thus occupy a necessary position in the Histories.

This duality is perhaps obvious to Herodotus' readers, but recognizing its existence helps one to understand why Herodotus saw fit to include many of his
observations of foreign religious practices. These inclusions are largely explained by a proper understanding of Herodotus' view of causation. Historians generally attempt to explain events by first isolating the causes, and ultimate causes for Herodotus are found in the divine plane. Thucydides, on the other hand, takes ultimate causes only as far back as the human plane to provide rational, psychological reasons for someone's actions; for what has no humanly explicable causes, he says so (vid. 2.47ff on the plague). Given the same circumstances, Thucydides claims that people will respond in the same way, but to Herodotus people react in different ways according to their cultural and religious backgrounds. Herodotus considers the religion of different nations to be truly valid for them since he believes that the gods reveal themselves to different societies in different ways. People in different societies, therefore, have different religious customs, yet for the most part none of their practices is "invalid" to Herodotus, even though they may be vastly different from one another. Thus in order to understand fully the downfall of Cambyses, for example, one needs to understand fully the enormity of Cambyses' sins--sins that in the eyes of a Greek might not be considered excessive, but in reality are excessive because he should have respected Egyptian religion.1 The divine realm therefore can and does affect the human realm in Herodotus' mind, and, in turn, historical events are changed.

What place, then, do animals have in divine affairs in the Histories? Animals serve as links between the human and divine realms. They share both human and divine traits and are used by both men and the gods to convey messages from one realm to the other. This is evidenced throughout the work
not only in sacrifice and ornithomancy but in much broader contexts. In this chapter I will demonstrate how this manifests itself by first showing how animals share human and divine traits and participate in the affairs of both planes, then I will demonstrate how animals are used to bridge the gaps that separate the two realms.

Herodotus views animals as creatures under the control of providence and fate, even as humans are. Fate's control over people is clearly seen in the stories of Atys (1.34ff) and Polycrates (3.40ff) who tried to escape their destinies but could not. In the latter's case, Amasis gave Polycrates full warning that τὸ θείου was envious of human success (τὸ θείου ὡς ἐστι φθουρέρον; 3.40.2), a remark that recalls Solon's words to Croesus in Book 1 (τὸ θείου πᾶν ἐδο φθουρέρον τε καὶ ταραχῶδες; 1.32.1). τὸ θείου is also responsible for endowing animals with procreative abilities that lend a proper balance to nature (3.108.2):

καὶ κὼς τοῦ θείου ἡ προνοία, ὥσπερ καὶ οἰκός ἐστι, ἐσοῦσα σοφή, ὡσα μὲν [γάρ] γυνὴν τε θελά καὶ ἐδώδιμα, ταύτα μὲν πάντα πολύγονα πεποίηκε, ἦσα μὴ ἐπιλήπῃ κατεσθιόμενα, ὡσα δὲ σχέτλια καὶ ἀνιπρά, ὀλιγόγονα.

And in some way it seems that the wise forethought of Providence has caused whatever is naturally meek and edible to be proliferous, so that it becomes fewer in number by being eaten, and whatever is savage and vexatious is made to bear few offspring.

The words "τὸ θείου" (= τὸ θεός) refer exclusively to ‘Providence’ in the Histories and their three occurrences (in the passages mentioned above)² fall within contexts that deal with the divine administration of worldly affairs. Since τὸ θείου governs the animal world as it does human affairs, animals share with humans this subordination to divine control that defines their place in the world
alongside humans, and the mortality that animals and humans share strengthens this tie.

Socially, animals exhibit familial relationships and modes of life similar to humans, a topic that will be considered at length in Chapter IV. In short, Herodotus believes that certain animals' actions are governed by sentient motives that explain their peculiar behavior. Female camels, for example, run more swiftly when they are returning home to see their children (3.105.1-3), and snakes avenge their father's death by killing their mother (3.109.1-2). Herodotus' animal anthropomorphism arises from an assumption that humans and animals share attributes imparted to all living things by a higher intelligence.

Since animals are under the control of Providence they are adversely affected by divine curses as humans are, even if they are not to blame for the curses levelled at them. Curses are often aimed at livestock so as to indirectly bring further misfortune on the human wrongdoers. An example of this is related at the end of Book 6: the Pelasgians who settled Lemnos seized certain Attic women at the festival of Artemis at Brauron and sailed back to Lemnos with their captives; these Attic women and the children subsequently born to them became a threat to Pelasgian domination of Lemnos, so the Pelasgians put them all to death. Herodotus relates what happened as the result of these murders (6.139.1; mentioned in Chapter I):

> ἀποκτείνασι δὲ τοῖς Πελασγοῖς τοὺς σφετέρους παιδὰς τε καὶ γυναῖκας οὕτε γῆ καρπὸν ἐφερε οὕτε γυναῖκες τε καὶ ποίμναι ὅμοιως ἐτικτοῦ καὶ πρὸ τοῦ.

For the Pelasgians who had killed the women and boys the land no longer bore its produce, nor did their women or flocks produce offspring as before.
The curse in this passage is a result of the Pelasgians’ misdeed and it affects the Pelasgians’ women, flocks, and crops because these are in essence their livelihood. The divine retribution is thus aimed at the growth and prosperity of the Pelasgians—the very things which they cherished most highly since they had but recently settled in Lemnos.

Similar in tone is a curse which affected Elisian mules (4.30.1):

\[
\text{I am amazed...that in all the land of Elis mules cannot be bred, even though the place is not cold nor is there any other obvious reason. The Elisians themselves say that this is a result of some curse.}
\]

Since only mules seem to be affected by the curse it would be advantageous to know its cause in order to determine the role, if any, that mules had in its inception. Evidently, however, Herodotus could not learn the cause from the Elisians (the indefinite ‘τευ’ implies that no one knew it). When a curse affects livestock or other domestic animals, it is normally a result of human sacrilege and is intended to punish human wrongdoers. This explanation is not specifically stated, but it is hinted at when Herodotus next explains that the Elisians were forced to drive their mares to a neighboring region and submit them to donkeys where they were able to conceive (4.30.2):

\[
\text{This explanation is not specifically stated, but it is hinted at when Herodotus next explains that the Elisians were forced to drive their mares to a neighboring region and submit them to donkeys where they were able to conceive (4.30.2):}
\]
But when the time of year comes for the mares to conceive, they drive them to their neighbors' land and then put donkeys to them there until the mares are pregnant; then they drive them back.

Curses are not always meant to punish only people, however, for animals, too, can incur divine disfavor as the following passage illustrates (1.138.1-2):

Any [Persian] citizen who has leprosy or the "white" leprosy does not enter the city nor does he socialize with other Persians; they say that he has contracted these diseases as a result of sinning against the sun. Many Persians expel every foreigner who catches these diseases, and they expel white doves, too, on the same principle.

The white color of the doves was taken as a sign of leprosy, and since leprosy was considered the result of some "sin" against the sun these doves were thought to be similarly polluted. This means that animals, at least in the Persians' eyes, could be held responsible for their actions and be punished for sacrilegious acts. This notion is remarkable given the fact that curses are normally the result of human sacrilege. Herodotus does not reveal his own opinion in the matter, and whether he even accepted the possibility is unclear since the explanation for the doves' expulsion is presented as a Persian interpretation (τὴν αὐτὴν αἰτίην ἐπιφέρουτες). Yet given Herodotus' acceptance of Providence's role in the animal world and his belief that animals were capable of human volition it is not unlikely that he accepted the Persian explanation.
It is clear, then, that animals in the Histories share human traits and interact with the gods in ways that humans do. The association of animals with the divine realm is also clear: certain animals are associated with specific gods, the gods reveal themselves in animal form, and animals were often considered sacred and received special treatment accordingly. Book 2, Herodotus' Egyptian logos, shows many such connections between animals and the gods. Though Herodotus addressed many nations' religious practices in his ethnological excursions, his respect for Egyptian religion was so great that he ridiculed Greek religious views when comparing the two, and more than once he pointed out that no other nation gives so much attention to religious practice and ritual than the Egyptians. Herodotus considered Egyptian religion to be more ancient than the Greeks', and he firmly believed that Greek mythology was borrowed from the Egyptians with later adaptations (2.43.1-2, 2.50.1, 2.51.1, 2.58, et passim). What he has to say, then, about the sacred status of animals in Egypt and the overall Egyptian attitude toward τὰ ἱπά ("the sacred"; vid. footnote 7) is significant; the very length of the Egyptian logos testifies to the significance Herodotus placed on Egyptian matters in general within his work.

It is not without design that Herodotus follows his discussion of Egyptian religion (2.37-65) with a detailed account of Egyptian animals (2.65-76). Even though much of this digression on animals is taken up with purely zoological description and commentary, the religious status of Egyptian animals was foremost in Herodotus' mind, a fact of which Herodotus repeatedly reminds us, since the adjective ἵπος ("sacred") occurs 15 times in this section. He begins this section with the following comment (2.65.2; vid. also Chapter I):
Though Egypt shares its border with Libya it does not contain many wild animals; but all the animals that the Egyptians do have, both wild and tame, are considered by them to be sacred. If I should explain why they are consecrated, I would come in my discussion to matters of the divine, which I very much avoid treating. The things I have already touched upon were brought upon me by necessity.

Herodotus’ hesitation to disclose specifics about Egyptian religion is repeated several times in Book 2 (no less than eight times as enumerated by How and Wells, Vol. I, p. 158) and is one of the many instances where he is reluctant to reveal religious mysteries. But he clearly is fascinated by the sacrosanctity of the animals. He notes, for example, that sacred animals were protected by the most stringent laws, and the punishment was death for those who killed them (2.65.5):

If anyone kills one of these animals willingly the penalty is death, but if accidentally he pays whatever the priests determine; but whoever kills an ibis or a hawk, willingly or not, must be put to death.

When sacred animals died they were given special burials. Cats and crocodiles, for example, were embalmed and buried in sacred tombs (2.67.1, 2.69.2). According to How and Wells (Vol. I, pp. 208-209):

Embalmimg was connected with the Egyptian idea as to the soul, the Ka; the continued existence of this depended on the survival of the body; if the body perished, the soul perished.
And in reference to the embalming process How and Wells state (Vol. I, p. 209):

...The reference is to Osiris; the mummy was made like him, in order that the dead man might obtain access to the realm where he ruled...the dead man in fact became an Osiris.

Though Herodotos makes it clear elsewhere that not all animals were considered sacred in all areas of Egypt (Crocodiles at Elephantine, for example, were not considered sacred; Hdt. 2.69.3), this reverential treatment accorded cats and crocodiles shows that many Egyptians believed that animals possessed immortal souls and that some were even considered gods.

Other passages throughout Book 2 show connections between animals and the gods: the Egyptians represented Zeus with a ram’s head, a practice adopted by the Ammonians (2.42.4); statues of Isis were given cow’s horns, and cows were considered by all Egyptians to be sacred (2.41.2); the Mendesians (an Egyptian tribe) represented Pan with a goat’s face and legs in their paintings and sculptures (2.46.1-2); and bulls were universally believed to be sacred to the god Apis (Epaphus to the Greeks) who himself appeared in bull form (2.38, 3.27-28). The rare manifestation of Apis was held in such high regard that all Egypt celebrated its occurrence, an event which actually took place, according to Herodotos, during Cambyses’ occupation of Memphis (3.27ff). Cambyses’ ill-treatment of Apis was considered by the Egyptians to be the ultimate cause of his madness and subsequent downfall, and even Herodotos, though he suggests the madness could have resulted from a natural sickness (3.33), dramatically connects
Cambyses' sacrilege against Apis with the fatal wound Cambyses later received (3.64.3):

καὶ οἱ ἁναθρωποικοὶ ἐπὶ τὸν ὑπὸν τοῦ κιλεῦ τοῦ ἕφεος ὁ μύκης ἀποπίπτει, γυμνωθέν δὲ τὸ ἕφος παλεὶ τὸν μηρὸν· τρωματισθεὶς δὲ κατὰ τούτο τῇ αὐτὸς πρότερον τὸν τῶν Ἀιγυπτίων θεὸν Ἀπιν ἐπιλήσε...

As he was leaping on his horse the cap fell off the sheath of his sword and the exposed blade struck him in the thigh, wounding him in the same spot where he had earlier struck Apis the Egyptian god...

This comment is certainly meant to dramatize the incident and give significance and meaning to what would otherwise be an 'accidental' death. But the connection between Cambyses' death and the mistreatment of Apis is more than simple literary flourish by Herodotus; he recounts the event in the same factual manner in which he narrates events elsewhere, and he spends considerable time explaining that Cambyses' death in Syria had been predicted by an Egyptian oracle at Buto (3.64.3ff), indicating his acceptance of the validity and efficacy of Egyptian religion and beliefs.

The association between animals and the gods is most evident in Book 2, as is to be expected given the nature of Egyptian religion. It has been demonstrated that Herodotus accepted much of the Egyptian religious attitude toward animals, but in what ways does this attitude show up in the rest of his work? It is primarily evident where animals reveal the nature and will of the gods. This finds support not only in Book 2 but throughout the Histories. To demonstrate this I must now move on to discuss how animals bridge the gap between the divine and human planes. First I will show how animals are used in
oracles, prophecies, signs, and other ways to transmit divine will from one realm to the other, then I will demonstrate how people attempt to use animals as mediaries between their own realm and that of the gods.

To begin, strange events involving animals are consistently interpreted as being somehow of divine origin, both by the people that encounter them and by Herodotus himself (see note 14 for remarks on the differentiation between Herodotus and his characters). Consider the following incident in Book 1 (1.78.1-2; cf. also Chapter I):

As Croesus was pondering these things the outskirts of the city were completely overrun with snakes. At their appearance the horses stopped grazing in the meadows and wandered about eating them. When Croesus saw this it seemed to him to be a portent, as indeed it was. He immediately dispatched messengers to the Telmessian interpreters.

Two things are to be noted here. First, Croesus immediately recognized that this phenomenon was a divine message of such import that he wasted no time in summoning interpreters. The very fact that the event was extraordinary led him to conclude its supernatural origin, i.e. he did not investigate possible natural causes. Secondly, Croesus’ actions are approved of by Herodotus who thrusts himself into the narrative with the words ‘ὡσπερ καὶ ἤν.’ This is Herodotus speaking, and what he says is by no means ambiguous: he too believed that the event was supernatural in nature, though he doesn’t state what it was about the event that made this obviously so—the appearance of the snakes, or the
horses eating them (he seems rather to treat the event as a single extraordinary phenomenon). This belief in the validity of prophecies, portents, and the like is observable throughout his work, and his response to these events at Sardis support that fact.

Strange events involving animals include miraculous and bizarre births which are interpreted as prodigies. When recording two such prodigies in Book 7 (7.57.1-58.1) Herodotus again includes his own comments:

`\Omega\zeta \delta\varepsilon\delta\varepsilon\beta\varsigma\zeta\sigma\nu\pi\acute{a}\tau\acute{e} \tau\acute{e} \rho\acute{a} \tau\acute{a} \sigma\varphi \epsilon\varphi\acute{a} \mu\acute{e} \gamma\acute{a}. \tau\acute{o} \Xi\acute{e}ρ\acute{e}\varsigma\varsigma \epsilon\nu \sigma\acute{u}\delta\nu \lambda\acute{a}\gamma\omega \epsilon\varphi\acute{i}\acute{a}\varsigma\tau\acute{a} \kappa\acute{a} \iota\acute{e} \epsilon\acute{u}\sigma\acute{o}\uacute{m}\acute{u}\acute{b}\acute{l}\acute{i} \tau\acute{o} \acute{o} \epsilon\varphi\acute{i}\acute{o} \sigma\varsigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigma\sigma\varsigm
addition, the omen of the mule at Sardis is recorded in the same context and thus serves to heighten this dramatic moment. Its birth is extraordinary (and hence supernatural) in two respects: one, it had an exceptional deformity. The brief description of the deformity (\(\ldots \kappa \alpha \tau \upsilon \pi \rho \varepsilon \tau \varepsilon \varepsilon \delta \varepsilon \ \varepsilon \ \gamma \nu \ \tau \alpha \ \tau \delta \ \varepsilon \ \rho \sigma \varepsilon \varepsilon \nu \varepsilon \ldots\)) suggests a similarity to the matter-of-fact description of the camel's άλυα in Book 3,\(^{11}\) and admits Herodotus' acceptance of the event as fact. Two, its mother (a mule) should not have conceived at all since the sterility of mules was presumed in ancient times.\(^{12}\) Herodotus himself notes this in a prophetic context in Book 3: during Darius' siege of Babylon the Babylonians (who had been planning their revolt and had accordingly prepared themselves for a long siege) taunted the Persian army with insults from the walls. According to Herodotus (3.151.2) one of them made the following remark:

\[
\text{Tι κάτησθε, \(\ddot{o} \) Πέρσαι, \(\epsilon\nu\thetaα\upiota\), \(\alpha\lambda\lambda\) ' ούκ \(\alpha\pi\alpha\lambda\lambda\alpha\sigma\sigma\varepsilon\sigma\varepsilon\delta\varepsilon\); \(\tau\acute{o}\) \(\gamma\alpha\rho\ \alpha\lambda\lambda\rho\iota\sigma\varepsilon\tau\varepsilon\ \eta\mu\varepsilon\alpha\varsigma\), \(\epsilon\pi\varepsilon\omega\) \(\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

Why do you sit there, Persians, and not go away? Sure, you will capture us--when mules give birth!

After a year and seven months passed by with no progress in the siege, the following miracle occurred (3.153.1-154.1):

\[
\text{\(\epsilon\nu\thetaα\upiota\ \epsilon\iota\kappa\omega\sigma\tau\omicron\ \mu\nu\nu\ \Z\omega\pi\gamma\omicron\ \tau\omicron\ \M\gamma\alpha\beta\gamma\zeta\omicron\ \tau\omicron\ \\delta\varsigma\ \tau\epsilon\tau\eta\iota\ \\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\M\gamma\alpha\beta\gamma\zeta\omicron\ \\pi\alpha\upiota\ \\Z\omega\pi\gamma\omicron\ \\varepsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\delta\varsigma\ \tau\epsilon\tau\eta\iota\ \\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]

\[
\text{τ\(\omicron\) \(\tau\epsilon\iota\kappa\chi\alpha\varsigma\) \(\epsilon\) \(\pi\omicron\sigma\omicron\ \\varepsilon\pi\omicron\varepsilon\ \\varepsilon\\eta\omicron\nu\omicron\ \tau\omicron\ \\varepsilon\\iota\nu\omicron\nu\omicron\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\epsilon\gamma\epsilon\nu\varepsilon\tau\nu\ \tau\omicron\ \\\alpha\nu\delta\rho\omicron\ \\eta\mu\iota\omicron\nu\omicron\ \tau\varepsilon\kappa\omega\varsigma.\)
\]
Then, in the twentieth month the following prodigy occurred to Zopyrus the son of Megabyzos (the Megabyzos who had been one of the seven men who killed the Magus): One of Zopyrus' grain-bearing mules gave birth. When it was reported to him and from disbelief he came to see the offspring himself, he ordered those who saw it to tell no one and he pondered what had happened. In light of what the Babylonian had said at the start of the siege—that the wall would be taken whenever mules gave birth—it seemed to Zopyrus that Babylon could now be taken; for, he reasoned, what the Babylonian uttered and the fact that his mule had given birth had both taken place by the will of God.

Since it seemed to him that Babylon was now fated to be taken...

A divine cause is given to this extraordinary birth through Herodotus' choice of the word τέρας to introduce the story and through the phrase σῶν γὰρ θεῶν, which is the summary conclusion tying the unwitting utterance to its unanticipated fulfilment. The birth is viewed both by the character Zopyrus and the historian Herodotus as a result of the supernatural intervention of fate to bring about the divine-appointed (μορφημένον) fall of Babylon. Having laid this groundwork in Book 3 Herodotus does not need to explain at length the divine significance of the birth in Book 7 that in fact is far more portentious due to the deformity and its being coupled with the miraculous birth of the hare.

Various other inexplicable events involving animals are interpreted to be of divine origin and are therefore thought to carry a divine message. In Book 5, for example, a swarm of bees inhabits the severed head of a traitor and fills it with a honeycomb; the townspeople, who had hung the head on the gates of their city to avenge the traitor's betrayal, took the event as a sign, consulted an oracle, and were informed that they should honor this traitor as a hero with a yearly sacrifice. They accepted the pronouncement and thenceforward observed
it up to Herodotus’ day (5.114.1-115.1). Near the close of the Histories (9.120.1-
2) Herodotus records another strange event:

The people of the Chersonese say that as one of the guards was roasting fish the following portent occurred: The fish which were lying on the fire began to jump and thrash about as though newly caught. Those who gathered about were amazed, but when Artayctes saw the portent he summoned the guard who was roasting the fish and said, "Athenian friend, do not let this portent terrify you, for it has not appeared to you, but Protesilaus of Elaeus is showing me a sign that though he is as dead as a fish he has power from the gods to take vengeance on the one who has wronged him."

Note the recurring use of the word τέρας in this passage. All the attendants of this event--Artayctes, the soldier, and the bystanders--recognized it to be nothing less than god-inspired (as intimated by τέρας and πρὸς θεῶν) and that it was thus meant to disclose (πέφημε, σημαίνει) a message from the gods.

Such strange events involving animals and their corresponding connections with the divine are far from uncommon in Herodotus. That these extraordinary occurrences were connected to a divine source is not particularly surprising since any natural phenomenon out of the ordinary commonly was. Other unusual or inexplicable happenings such as earthquakes, floods, lightning, plagues, and eclipses were often attributed to the activity of the gods, and their mention in Homer shows their early, literary use. But the role of animals in
such occurrences is more frequent and prominent in the Histories than in other authors, for Herodotus’ interest in animals extends far beyond his zoological diversions and diffuses his work on all levels. The over 800 uses of animal terms enumerated and charted in Chapter II objectifies this frequency, and as one more closely peruses the various settings in which animals appear he can see how Herodotus’ affinity for animals received broad contextual application.

Herodotus also frequently reveals the gods’ character and will via animals in other less miraculous ways. In some instances this is accomplished through direct human-animal interaction, as when he reports how Egyptian priests were said to be led by wolves to the temple of Demeter and back (2.122.3). Hepatoscopy was of course universally accepted as a means of knowing the gods’ will, and the account in Book 7 of the Greek mantis who foresaw the Greek failure at Thermopylae in the sacrifices shows Herodotus’ familiarity and acceptance of it (7.219). The gods often communicated with people through the behavior of birds, too; ornithomancy was an established practice long before Herodotus (as evidenced by its occurrence in Homer) and came to be a powerful political tool later in Roman times. Its acceptance in other cultures is recognized by Herodotus in his account of the appearance of seven pairs of hawks chasing two pairs of vultures that was interpreted by the seven Persian conspirators as a sign to proceed with the overthrow of the two Magi (3.76).

More commonly, however, the gods make their will known through oracles and prophecies in which animals in the Histories take no small part. Animals are mentioned more frequently in such contexts in Herodotus than they are in other authors. J. Fontenrose’s The Delphic Oracle (Univ. of Calif. Press:
Berkeley, 1978) provides an exhaustive list for just such a comparison. Though this book is limited to Delphic oracles (in all classical authors), most of Herodotus' oracles are of Delphic origin (55 are Delphic, 13 other, and 2 unknown). The totals for these oracles for Herodotus and other authors are given below:

<table>
<thead>
<tr>
<th></th>
<th>Hdt.</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracles with animals</td>
<td>9</td>
<td>47</td>
</tr>
<tr>
<td>Oracles without animals</td>
<td>46</td>
<td>433</td>
</tr>
<tr>
<td>Approximate ratio</td>
<td>1:5</td>
<td>1:9</td>
</tr>
</tbody>
</table>

This comparison reveals that references to animals in Herodotus' Delphic oracles occur nearly twice as often as in other authors. Furthermore, if we look at the contexts of the oracles in Herodotus that make no mention of animals we find that circumstances surrounding animals in some cases prompted the consultation of the oracle in the first place. The passage that detailed the Pelasgian slaughter of Attic woman and boys (6.139) discussed earlier in this chapter is one example. The contexts of other (non-Delphic) oracles reveal this too: the Telmessians were consulted to interpret the omen of the snakes in 1.78, and Egyptians living on the Libyan border consulted the oracle at Ammon in regard to the Egyptian prohibition against eating cows (2.18).

Animals thus appear frequently in prophetic contexts, but simple numbers do not adequately reveal the important roles these animals play. Animals have a variety of functions, both major and minor, as quickly becomes apparent when one looks at the numerous prophecies, oracles, and dreams in the Histories. An animal reference, for example, may appear only briefly as a poetic
description, as when Libya is given the epithet "sheep-breeding" (μηλοτρόφου; 4.157.2), or an animal may occupy the central image of the prophecy, as when a mule was prophesied to become king of the Medes (1.55.2). The aim of this study is not to attempt an exhaustive categorization and discussion of the differences among these roles; we shall instead look for common features that point to underlying assumptions on the part of Herodotus. Since the will of the gods is revealed most commonly through oracles and prophecies (as stated above), the part animals have in this communication will be our chief concern.

Most of the prophecies ("prophecies" in the following discussion shall also refer to oracles and dreams) that prominently mention animals may be divided into two categories: (1) Those which metaphorically refer to people as animals (1.55, 1.62, 4.163, 5.56, 5.92, and 7.220); and (2) those which refer to literal animals (1.47, 8.20, and 9.93).21 Of the first group, the omen of the mule is perhaps the most familiar (1.55.1-56.1):

After Croesus had bestowed gifts on the Delphians he consulted the oracle a third time; since he had received a true answer from the oracle he made full use of it. He asked the oracle if his monarchy would last a long time, and the Pythia answered in oracular verse the following:
But when a mule becomes king of the Medes,
then, soft-footed Lydian, flee beyond pebbly Hermus
and do not tarry, nor be ashamed to be a coward.

Croesus was much more pleased with these words than anything he
had heard, for he did not expect that a mule would ever rule the Medes
instead of a man; he supposed that neither he himself nor any of his
descendants would ever by removed from power.

Croesus' jubilation was based on a misinterpretation of the omen. The
mule, as he learns later (1.91), referred to Cyrus who was half Mede and half
Persian. The omen was given as a warning with ambiguous imagery, and not until
it was fulfilled did Croesus discover its true intent. The ambiguity was, in effect,
a means of revealing future events so that Croesus felt he had control over his
fate, while at the same time reserving for the god the right to final, authoritative
interpretation. This is indeed a regularity in Herodotus and is a borrowing from
tragedy that often placed actors in situations where they unwittingly brought
about their own fate by attempting to avoid a prophetic warning which they either
misunderstood or misapplied to their circumstances (Oedipus being an obvious
example). To Croesus this happened not once but twice: the oracle that stated
that he would destroy a mighty empire if he attacked Persia (1.53) was also
misinterpreted, and Croesus' initial exultations after receiving each prophecy
(ὑπερήπθη, 1.54.1; ἥθη, 1.56.1) were indicative of his misguided understanding
of the nature of oracles. This understanding was based on a third, previous
oracle that proved to him that the Delphic oracle was the only genuine one in the
world (the oracle of Amphiaraus was also believed by Croesus to be truthful, but
for reasons unknown; Hdt. 1.49). In order to test the oracles Croesus had sent
messengers from Sardis to the various oracular sites to see which could correctly
divine what he was doing. Then, on a fixed day, he boiled lamb and tortoise

together in a bronze pot, an activity which evidently was "a very unlikely and
unconvincing activity for a great oriental king" (D.E.W. Wormell, "Croesus and

records the Delphic utterance (1.47.3):

οἶδα δ’ ἐγὼ ψάμμου τ’ ἀριθμὸν καὶ μέτρα θαλάσσης,
kai kωφοῦ συνύμι καὶ οὐ φωνεύντος ἁκόων.

οδυμή μ’ ἐς πρέαν ἔλθε κραταρίνου χελώνης
ἐφομένης ἐν χαλκῷ ὀμ’ ἀρνείσι οἰκεῖσθαι,

I know the number of grains of sand and the limit of the sea,
and I understand the mute and hear the voiceless.

A smell has come to me of a strong-shelled tortoise
boiling in a bronze pot with lamb’s flesh:
bronze is stretched under the tortoise, and bronze covers it.

The lamb and the tortoise in this prophecy are literal animals and do not
metaphorically refer to people or anything else. Hence Delphi’s response was
unmistakably clear and truthful, and Croesus correctly saw this. But Croesus was
not enquiring about the future as he did with his other two consultations of the
oracle; he was asking if the oracle had knowledge of a present fact, and this
distinguishes this first utterance from the latter two. Thus the interpretation of
the first oracle was immediately verifiable since the activity that the oracle
referred to was occurring as the response was being given. Croesus was not in
error when he saw that the lamb and tortoise in Delphi’s response referred to the
lamb and tortoise in his pot; but when he applied the same hermeneutic to the
prophecy of the mule, his interpretation—that the mule was a literal mule—was in
error. His error was due to his failure to grasp the notion that divine messages,
when referring to future events, are often if not usually couched in ambiguous terms. This is borne out a number of times in the Histories where someone learns the true meaning of a prophecy only too late and is unable to avoid fate. For example, when the oracle of Buto in Egypt warned Cambyses that he would die in Ecbatana (3.64), Cambyses assumed it referred to Ecbatana in Media; but when he found himself at Ecbatana in Syria (where he received his fatal thigh wound) he learned the oracle’s real meaning.

Another example, this one including an animal reference, occurs in Book 4 (4.163.1-3):

Arcesilaus during this time was on Samos gathering together all kinds of men with a view to redistributing the land. After gathering a large force he sent an expedition to Delphi to consult the oracle about his return. The Pythia answered him as follows: "Loxias grants you to rule Cyrene for four generations of Bati and four of Arcesilai, but he warns you not to try to rule longer than this. Moreover, when you have returned to your land be lenient. If you find the oven full of jars, do not bake them but send them downwind. But if you heat the oven, do not return to the land surrounded by water; if you do, both you and the fairest bull will die."

This oracle contains instructions concerning future events and is very metaphoric. The "jars," Arcesilaus learned only too late, referred to people whom he burned alive in a tower (the "oven"); when he tried to avoid the "land
surrounded by water" by not returning to Cyrene (to which he thought the oracle referred) he was eventually killed in Barca along with his father-in-law (the "bull" of the prophecy; 4.164.1-4). In a sentence which concludes Herodotus' narration of these events, it is revealed that Arcesilaus met his fate no matter how much he tried to avoid it (4.164.4):

"Ἀρκεσίλεως μὲν νυν εἴτε ἐκὼν εἴτε ἀέκων ἀμαρτών τοῦ χρησμοῦ ἔξεπλησε μοῖραν τὴν ἐωτοῦ."

Arcesilaus, willing or not, missed the meaning of the oracle and fulfilled his fate.

"Ἀμαρτών" clearly shows that Arcesilaus' error was in his interpretation of the prophecy. Without the proper interpretation it mattered not, as Herodotus reveals with "ἐκὼν...ἀέκων," whether Arcesilaus tried to avoid fate or disregarded the prophecy altogether.

The correct interpretation of an oracle is therefore needed in order for the prophetic message to be of any use to the recipient. But the difficulty lies in discerning what its metaphoric language signifies. Animals, as has been shown, lend themselves well to this metaphoric use because they can refer to people (though not always; see below) without designating particular individuals. In fact, when an animal plays a prominent role in a prophecy, the recipient of the prophecy is expected to consider to what or to whom the animal refers since it probably is not a literal animal--especially if a literal interpretation is in any way suspect (as it clearly was in the case of the oracle of the mule). The following prophecy (which warned the Corinthians of the birth of Cypselus to Eëtion) illustrates this (5.92.63-61):22
Though this oracle was given to Eetion, it was somehow reported to the Bacchiadae for whom a previous oracle concerning Corinth had been unclear. The oracle concerning Eetion referred to the same event as the other one which went as follows:

An eagle among the rocks conceives and will give birth to a strong, savage lion who will loose the knees of many.

Now think well about these things, Corinthians, you who dwell around fair Peirene and beetling Corinth.

This earlier prophecy had been obscure to the Bacchiadae, but when they learned about the one given to Eetion they immediately understood it since it and the one concerning Eetion were in harmony.

The Corinthians assumed that the prophecy contained metaphoric language; the adjectives ἄσμου and ἀτέκμαρτον are Herodotus’ indication that the Corinthians knew the prophecy had meaning, but that they did not know to what people or events the prophecy specifically referred. It was not until the prophecy was being fulfilled that a correct interpretation was possible. This illustrates a truism of ambiguous prophecies: the interpretation generally followed the fulfilment.

The only reference to literal animals in an oracle which warns of future events is the following in Book 8 (8.20.2):
When a man of foreign speech casts a papyrus yoke on the sea, take thought to keep the much-bleating goats from Euboea.

The Euboeans ignored this oracle because they thought it had little meaning (ὡς οὐδὲν λέγοντα; 8.20.1). There was no attempt on their part to discern the oracle’s intent, nor did they concern themselves with it; consequently the Athenians (their own allies) slaughtered their goats so that they could not be of any benefit to the invading Persians (8.19.2). It is interesting to note that the interpretation in this instance was far from difficult, and that even though the oracle reasonably permitted the Euboeans to foresee the danger and save their livestock, they took no measures to avail themselves of the opportunity—an oversight for which Herodotus clearly faults them. This may be why Herodotus paused in his historical narration to include the oracle and its impact: it shows that even an unambiguous prophecy can be mishandled, and that the god, in any case, is not to be blamed for the consequences of the recipient’s action or lack thereof.

Correct interpretations of prophecies before their fulfilment are possible, though, and in fact are not uncommon in Herodotus. The following prophecy given to Pisistratus the tyrant is one such example (1.62.4-63.1):

\[
\text{ἐνθαῦτα θεὶς πομπὴ χρεώμενος παρίσταται Πεισιστράτῳ
'Αμφίλυτος ὁ Ἁκαρνάν χρησμολόγος αὐτῆς, δὲς οἱ προσώπων χρῆ ἐν ἔξαμετρῳ τὸν τάδε λέγων:

ἐρροπτω δ' ὁ βόλος, τὸ δὲ δίκτυον ἐκπεπέτασται,
θύνοι δ' οὐμήσουσι σέληναίς διὰ νυκτὸς.}
\]
And there, by divine guidance, Amphilytus an Acarnanian soothsayer met Pisistratus and approached him, speaking in oracular verse the following prophecy:

The net is cast and has been spread out;
the tunnies will rush through the moonlit sea.

Amphilytus spoke this oracle under divine inspiration; Pisistratus comprehended the oracle and, asserting that he accepted what was prophesied, led forth the army.

Herodotus does not say how Pisistratus knew what was meant by the prophecy. Pisistratus responded to the prophecy just as enthusiastically as Croesus had responded to the oracles delivered to him, but in Pisistratus’ case the true meaning of the oracle was somehow clear to him. The tunnies referred to the Athenians who were taken off guard by Pisistratus’ subsequent attack (1.63.1-2). His actions therefore resulted in success and he became dictator of Athens for the third time (1.64.1).

Lastly, Cyrus’ dream at the end of Book 1 deserves special attention for it contains animal imagery that refers neither to a literal animal nor metaphorically to a person (1.209.1; 1.209.3-210.1):
When Cyrus had crossed the Araxes and it became night, he saw a vision while sleeping in the country of the Massagetae. In his sleep he thought he saw the eldest of Hystaspes' sons grow wings on his shoulders and overshadow Asia with one wing and Europe with the other...

When Cyrus awoke he thought the dream over. Since the vision seemed important he summoned Hystaspes, took him aside, and said, "Your son has been caught plotting against me and my rule, and I will show you how I know these things for sure. The gods care for me and reveal to me all that will come to pass. Last night while I slept I saw your eldest son grow wings on his shoulders and overshadow Asia with one wing and Europe with the other. There can be no conclusion to this dream except that he is plotting against me. You, then, are to go back to Persia as quickly as possible and await me there while I finish matters here; when I arrive, you shall bring your son to me for examination."

Cyrus spoke these things because he thought Darius was plotting against him; but the god had shown him that he would die there in that place, and that the throne would pass to Darius.

Cyrus' misinterpretation of the dream is understandable given that his grandfather Astyages had two similar dreams. In the first of these dreams (1.107.1) Astyages saw his daughter Mandane urinate so profusely that she flooded all of Asia. In the second (1.108.1) he dreamt that a vine grew from Mandane's genitals and spread over Asia. Both dreams were interpreted by the Magi to mean that Mandane's offspring (Cyrus) would become king (1.107, 108, 120), an event that Astyages tried to prevent but failed. When Cyrus dreamt that Darius grew wings, which overshadowed Asia and Europe, it was likely that he saw a pattern in the three dreams that caused him to focus immediately on the threat of Darius rather than the circumstances leading up to Darius' succession.
(namely, his own death as interpreted by Herodotus). As stated above, the wings that he saw refer neither to a literal animal nor metaphorically to a person; the image is rather of a person who has become part animal. It will be shown in Chapter IV that people in the Histories who are part human and part beast are invariably viewed as uncivilized and barbaric (e.g., the dog-headed men of Libya [4.191] and the goat-footed men of Scythia [4.25]). Thus the mixture of human and animal in the vision may have made it more foreboding. In any case, it is clear that the dream was sent by the gods: Cyrus and the Magi agree with this, and Herodotus himself believed so.

Prophecies thus include much animal imagery as a means of conveying the gods’ messages, which at times were ambiguous, at other times less so. Not only do the gods use animals in this way to make their will known but they also carry out their will using animals as their instruments. The variety of animals used and how they are employed is quite broad: in Book 9 oracles from Dodona and Delphi made it clear that the gods were responsible for setting wolves on the sacred sheep of Apollonia (9.93), an incident for which a certain Evenius (the sheep’s keeper) had been blamed. In Book 2 the Egyptian king Sethos is aided by mice in response to his prayer in which he asked for help against an invading army; the mice ate all the leather trappings of the enemy, and consequently a stone statue of Sethos holding a mouse was placed in the temple of Hephaestus (2.141). Book 4 closes with Pheretima being eaten alive by worms as punishment from the gods for her atrocities against the Barcaeans (4.205). And in Book 3 Polycrates’ ring was miraculously returned to him in the belly of a fish (3.42).
Animals lend themselves nicely to these uses (conveying messages, carrying out the gods’ will) because they share divine traits (as shown in the discussion of Book 2 earlier in this chapter), while at the same time occupying the world of men. They are therefore visible and observable “extensions” of the invisible gods, and proper intermediaries. People can look to animals to find out what the gods are like and what their wishes are, for animals are the mirrors by which men can see the invisible hand of divinity working in this world. Whether it be hepatoscopy, ornithomancy, the unusual behavior of a barking dog, or the panic of a flock, the people of antiquity looked to animals in their own world to try to discover and understand the world of the gods. Herodotus accepted this as much as any Greek of his day, though his travels and encounters with other cultures taught him to compare conflicting religious views and practices and to look more closely at his own (particularly his Greek) assumptions about the gods and their manifestation in animal behavior. No passage shows this better than the extraordinary conclusions of Book 2 (2.64.1-2): 28

These Egyptians were the first to make it a religious offense to have intercourse with women in temples, or to enter temples uncleaned from having relations with a woman. Nearly all peoples, apart from the Egyptians and the Greeks, have intercourse in temples and enter them uncleaned, supposing that humans are just like other animals. For they say they see all types of animals and birds copulating both in the temples
of the gods and their precincts, and assume that if the god was not pleased with this activity then the animals would not do it. Though they appeal to such evidence, what these people do is disagreeable to me. The Egyptians, on the other hand, carefully observe religious law in this matter as they do in their other religious customs.

There are two assumptions in this passage that are in tension. First, Herodotus in no way denies that animals reveal the will of the gods, for it has been shown he accepted the validity of hepatoscopy, prophecy, and the direct intervention of the gods in human affairs via animals, and that, as How and Wells state it (Vol. I, p. 198), "Animals were supposed to act on direct impulse from the gods, and to show their will." But in this instance these beliefs came into direct conflict with another view of Herodotus that will be taken up for discussion in Chapter IV--namely that people who exhibit animal characteristics by their actions lower themselves to the status of a beast and are viewed as barbaric and uncivilized. Herodotus disapproves, for example, of tribes that copulate in the open "like animals" (1.203, 3.101, 4.180). So it is not surprising that in the passage quoted above he rejected the conclusion which people came to, but did not question the notion that animals can reveal the gods’ will.

People in the Histories recognize the intermediary role that animals play between the human and divine realms and try to use animals to communicate with the gods and to initiate a response in return. Sacrifice is the most obvious example of this since it entails an attempt by the worshipper to appease or thank the god, while at the same time endeavoring to discover the god’s intent (as before a battle). Examples are numerous throughout Herodotus, but he is especially interested in how foreign peoples accomplish this. He doesn’t linger
over Greek sacrifices long enough to even tell what animal is being sacrificed, but even descriptions of the altars of a foreign people are of interest to him (vid. 1.183.2 where a golden altar at Babylon was reserved for sucklings only). Care was universally taken by all peoples to sacrifice the proper animal in the proper way to the proper god because the god's acceptance of the sacrifice was based almost entirely on the correct procedure. The Massagetae, for instance, sacrificed horses to the sun since both the sun and horses were thought to be swift (1.216.4). The Scythians stood behind their victim, pulled on its bonds till it fell, called upon the name of the appropriate god, then strangled the animal (4.61).

Egyptian sacrifices are given lengthy, detailed descriptions from 2.38 through 2.48 since they varied from locality to locality. The Thebans of Egypt, for example (2.42.3-6), abstained from the sacrifice of sheep and explained their actions by a myth: Zeus killed a ram and used its head and fleece to show himself to Heracles since Heracles wanted to see Zeus. To reenact the myth, the Thebans once a year sacrificed a single ram and clothed the statue of Zeus in it, then brought up a statue of Heracles to view it. This observance brought the worshippers closer to the divine plane through association with the story as it was reenacted. The myth provided an etiology for their custom, and the custom became a unifying social factor.

Proper sacrifice was therefore important to all peoples. Herodotus knew this well and hence included it as a necessary component in his history. He recognized that people's beliefs regarding sacrifice and other religious observances had concrete, historical repercussions, and the Histories is imbued with examples. Numerous times in Books 7, 8, and 9 the Greek and Persian
forces performed sacrifices in order to obtain divine favor or to discern the correct course of action, and the instructions indicated by the sacrificial omens were dutifully followed (7.43, 189, 191, 219; 8.54-55; 9.10, 19, 33, 36ff, 61-62, 92; in 9.42ff Mardonius disregards the sacrifices and subsequently loses the battle at Plataea). It is interesting that the Persians, to gain some advantage or simply out of fear, on at least three occasions sacrificed (or permitted a sacrifice) to Greek gods. The first time was at Troy just a few days before crossing the Hellespont; Xerxes sacrificed to Trojan Athena and the Magi poured libations to the heroes (7.43.2). At Cape Sepias in Thessaly the Magi sacrificed to Thetis and the Nereids in order to calm a storm (7.191). The third time occurred on the Acropolis (8.54):

The day after he sent the herald, Xerxes summoned together the Athenian exiles who had followed him and bid them to go up on the Acropolis and perform sacrifices in their usual way. It is not certain whether he commanded them to do this because he had seen some vision in a dream, or if he had some remorse over burning the temple. The Athenian exiles did what they were commanded.

Herodotus’ supposition that Xerxes had these sacrifices performed to alleviate a guilty conscious is a Greek attitude which can be summed up by the notion that the Greeks viewed Xerxes’ crossing of the Hellespont and invasion of Greece as flagrant transgressions against the Greek gods (whose territory he had entered). I have stated elsewhere (vid. above, p. 50) that Herodotus considered the religion of different nations to be truly valid since the gods reveal themselves
differently to different peoples. We have seen Croesus' confidence in Apollo and know many peoples came to Delphi. To what degree this belief was present in the Persians is debatable. The fact that the Persians employed a Greek diviner to perform their sacrifices\(^{32}\) is evidence that they believed the Greek gods had power and that they could be assuaged, though it is perhaps more probable that the true motivation behind these sacrifices was an attempt to conciliate estranged Greek supporters\(^{33}\) and that Herodotus' view only reflected a general Greek attitude. Nevertheless, it is clear that the Persians believed in the efficacy of sacrificial omens since inauspicious omens delayed Mardonius' attack at Plataea for nearly two weeks (9.36ff).

Although a general discussion of sacrifice in ancient religion is beyond the scope of this study, it should be noted that primitive peoples viewed the life of a sacrificed animal as a substitute for their own lives, so that the animal in effect was vicariously offered in the worshipper's stead to appeal to or propitiate a deity. This substitutionary nature of sacrifice was recognized in antiquity\(^{34}\) and is maintained by modern scholars.\(^{35}\) The sacrifice of the animal was thus the primary means to appease or have communion with the gods. Since the animal was mortal, it served as the intermediary between mortal man and immortal god by removing through its death the condemnation and punishment incurred by man. Herodotus recognized this when he related how the Egyptians diverted potential disasters by transferring them from the Egyptian people to the heads of sacrificed bulls (2.38ff). His description of Scythian animal and human sacrifice at the same altar also acknowledges this substitution (4.62-63).
There are several incidents that Herodotus records showing people using animals as intermediaries in ways other than sacrifice. One example is found in the story of Pactyes and Aristodicus in Book 1 (1.54-160). Pactyes attempted to lead an overthrow of the Persian governor in Sardis, but when the attempt failed he fled to Cumae where he was received as a suppliant. Aristodicus, a prominent Cumaean, consulted the oracle at Branchidae (Didyma) to see whether they were obligated to betray their suppliant to the Persians who would certainly put him to death. The oracle responded that Pactyes should be handed over. Herodotus relates Aristodicus' response (1.159.3-4):

Aristodicus thought these things over and did the following: going around the temple he removed the sparrows and all the other birds that had been hatched there. While he was doing this a voice is said to have come from the inner shrine and addressed itself to Aristodicus as follows: "Unholiest of men, why do you dare to do such things?" Aristodicus, by no means at a loss, responded, "Lord, do you yourself help suppliants, but order the Cumaeans to hand over theirs?" The voice responded, "Yes, I do, so that you Cumaeans might more quickly perish for your sacrilege and not ever come again to my oracle to ask about handing over suppliants."

In his anger Aristodicus looked for a means of showing Apollo his displeasure at the oracle's instructions, so to be able to get the attention of the god his anger
came to rest on the birds in Apollo’s temple. Apollo’s acceptance and protection of these birds demonstrates the special privileges that animals enjoyed in sacred places, and Aristodicus’ removal of them was therefore considered a sacrilege (as the words ἀνασωπωτε and ἀσεβήσαντες demonstrate). Any action against these birds was in effect an offense against the god; Aristodicus knew this and used this knowledge to purposefully provoke Apollo.

In one of his many curious ethnological notes, Herodotus in Book 4 describes a Scythian method of executing false soothsayers (ψευδομάντις; 4.68-69): after confirming the soothsayers’ errors (by bringing in other diviners), the king has them bound and set on a cart full of sticks drawn by oxen; the cart is then set afire and the oxen are frightened into running. The soothsayers are burnt alive, though the oxen occasionally escape with only a scorching should the cart’s polearm be burnt through, freeing them. Herodotus states that this method of execution is reserved exclusively for ψευδομάντις (4.69.2). He does not venture to say why this method is used, but the practice probably has some religious significance. This hypothesis finds support in the fact that Herodotus precedes this passage with a description of Scythian divination (6.67) and follows it with an explanation of how Scythians take oaths (an innately religious activity; 6.70). Furthermore, oath-taking and perjury figure prominently in Herodotus’ account of the trial of the false soothsayers, so it would only seem natural if their punishment was in some way connected to their religious duties. Though exact parallels are wanting, their punishment is similar to another account in Herodotus where people are bound and set on wood to be burnt alive. This is the account of the pyre built by Cyrus for fourteen Lydian captives, to whom
Croesus was added (1.86). Herodotus did not know why Cyrus made the pyre, but he gives three hypotheses: 1) the captives were an offering to some god; 2) Cyrus made some vow that he was fulfilling; or 3) Cyrus heard that Croesus was a pious man and wanted to see if a god would save him. If we apply these hypotheses to the Scythian mode of execution we can see that the practice had at least a semblance of sacrifice (and Scythian human sacrifice is, after all, treated just a few sections earlier; 4.62). Perhaps the punishment began as an attempt to appease the gods for the sins committed by the soothsayers. To attempt to ascertain why they were put on carts and carried away would result in even further speculation, but let me venture to say that the practice seems to be an attempt to distance the executioner from the punishment meted out, so that the lives of the condemned are given over, so to speak, to the care of the oxen who carry them away, or, by extension, to the care of the gods to whom the condemned are entrusted, even as Croesus was. The intent may have been to see if the soothsayers were in fact guilty by allowing the gods to save them by intervention in the form of some miraculous act or fortuitous event. The oxen, then, would be used as "scapegoats" to allow the sentence to be carried out without the totality of blame for the execution falling on the heads of the executioners.

Chance, coincidence, and fortuitous events, as noted by K.H. Waters, are often associated with divine control and guidance, so that what appears to be serendipity in actuality occurs "by divinely-ordered chance." On several occasions individuals use animals that, through their actions, help to resolve an issue via this "chance." The war between the Perinthians and Paeonians was to be decided
this way (5.1). Two men, two horses, and two dogs from each side were paired off in single combat, and the victors of these fights determined which side won the war. Since victory in only two out of the three single combats was needed to decide the issue, the performance of the dogs and horses were crucial since either side could still lose the war even if their human combatant was victorious.

The best example of this use of animals to decide an issue by "chance"—and the one given the most attention and detail by Herodotus—is the episode of the contest between the seven Persian conspirators in Book 3 (3.84-87). To determine who would be king the conspirators decided that the person whose horse neighed first at sunup would take the throne. The story admits of human manipulation since Darius' groom managed to contrive a way to make Darius' horse neigh first, but the fact that such a contest was held testifies to the great importance and trust given to this decision-making process and shows that the gods were expected to be intimately involved in the actions of the animals (for more on this passage, vid. Chapter IV). This latter point (the gods' involvement) is proven by the divine confirmation of Darius' victory in the thunder and lightning that came from a clear sky, demonstrating that the gods were somehow watching over the outcome of the event.

Lastly, representations of animals are used as dedicatory objects and are found on or in divine constructions. When Croesus tried to win the favor of Delphi, one of the gifts he gave was a golden lion (1.50.3). The material chosen for the gift is easily explained by the gold Croesus obtained from the Pactolus River; but why a lion? The lion figures prominently in Sardian myth and history: it appears on the heraldic shield of Sardis, on Lydian coins (How and Wells, Vol.
I, p. 74), and Herodotus relates a tale about a lion that was carried around the walls of Sardis to protect it (1.84.3). We are told later in Book 1 (1.92.1) that Croesus also dedicated golden cows at Ephesus, possibly (as How and Wells conjecture; Vol. I, p. 92) as symbols of the procreative power of Artemis as fertility goddess. The nature of these gifts, then, is understandable when the giver and the recipient are taken into consideration. But there is more to it than this. Greek archaeology attests to the many animal statues, reliefs, and other representations that appear in connection with temples and precincts in the form of lion head spouts, bulls and lions (and other animals) in pediments, and various depictions of mythical animals (griffins are common). Thus the connection between animals and the gods evident in this type of adornment goes beyond Herodotus, for it had established itself firmly in architectural and artistic convention. We can see in Herodotus that this was a common practice among the Greek as well as foreign nations: the Samians dedicated a bronze bowl ringed by griffins' heads at the temple of Hera (4.152), statues of man-sphinxes were built into a temple in Egypt (2.175.1), and a wooden cow meant to honor Osiris was built by Mycerinus to entomb his dead daughter (2.129-132). There seems to be an attempt on the part of the builder or artist to somehow elevate the work by associating it with a specific god or goddess through the animal depicted (such as oxen with Hera,42 or snakes with Athena43), or to aggrandize the work via mythical representation, much as, say, a poet might elevate a literary work with animal or nature similes, or by including mythical animals in the story. Literary embellishment of this type is not that far removed, then, from architectural embellishment, for they both attempt to dignify their works and elevate them
It was noted earlier in this chapter (vid. pp. 59ff) that unusual and bizarre events involving animals are consistently interpreted as being somehow of divine origin. Stories and folktales often include fantastic tales of animals for the same reason, and Herodotus on several occasions "sees through" attempts of tale-bearers to aggrandize their narratives by embellishing them with such inclusions. There are two notable instances of this. One of these occurs in Book 2 (2.54-57) where Herodotus gives two versions of the founding of the oracles at Dodona and Ammon. The first of these versions, told by Egyptian priests, related how two Egyptian priestesses were taken as slaves and sold abroad--one in Libya, the other in Greece, where they established the oracles of Ammon and Dodona, respectively. The second version was given to Herodotus by the priestesses of Dodona who claimed that two black doves flew from Thebes in Egypt and one landed in Libya, the other in Dodona; the dove that landed in Dodona spoke with a human voice and ordered the people there to establish an oracle to Zeus. Herodotus questions the Dodonian version, and conflating it with the first he rationalizes it in the following manner (2.57.1-2):

The women seem to me to have been called doves by the Dodonians because they were foreigners, and as foreigners the women sounded to them like birds. Accordingly, the dove spoke with a human voice because what the woman said after time was intelligible to them; but as long as she was a foreigner, she seemed to them to make sounds like a bird--for how
could a *dove* speak with a human voice? When they assert that the dove was black they signify that the woman was an Egyptian.

It is interesting that the version given by the Egyptian priests stresses the Egyptian source for both oracles by claiming that Egyptian religion spawned, as it were, the oracles at Ammon and Dodona through the introduction of the Egyptian priestesses there. The Dodonian version, however, deemphasizes this connection by stressing the miraculous events at Dodona. In the first version, then, Egyptian religion is "exported" to Libya and Greece; in the second version, the intervention of the gods establishes "new" seats of worship for Zeus. The birds are thus the vehicles for this supernatural intervention, and Herodotus, not finding the Dodonian version convincing, attempts to rationalize it.

Another story that Herodotus questioned was a tale that claimed Cyrus was raised by a dog (1.122.3). Drawing a connection between the word for dog (κύων) and the name of Cyrus' foster-mother (η Κυνώ), Herodotus explains how this story was conceived:

> τραφήναι δὲ ἔλεγε ὑπὸ τῆς τοῦ βουκόλου γυναικός, ἢιε τι ταύτην αλεύον διὰ παντὸς, ἦν τε ὁ ἐν τῷ λόγῳ τὰ πάντα ἢ Κυνώ. οἱ δὲ θοκεῖς παραλαβόντες τὸ σώμα τοῦτο, ἵνα θειστέρως δοκή τοῖς Πέρσοις περείναι σφὶ ὁ παῖς, κατέβαλον φάτιν ὡς ἐκκείμενον Κῦρον κύων ἐξέθρησε.

Cyrus told how he was raised by the wife of the cowherd, and kept praising her throughout his story--Kuno in fact was everything to him in his tale. His parents seized upon the name, and in order that the survival of their son might seem more divinely miraculous to the Persians they made up the story that Cyrus had been exposed to die and was raised by a dog.
According to Herodotus, Cyrus' parents authored this story in order to make their son's beginnings ἡειστέρως. Herodotus might have used ὰμασωτέρου (a word attested in 3.112) to describe the effect of the story, but his choice of ἡειστέρως signifies a divine element that the parents apparently hoped would elevate the story by making it supernatural.\textsuperscript{44} The translation of Κυνό into κύνω would therefore have made Cyrus seem especially favored by the gods.

To sum up, animals in the \textit{Histories} are clearly intermediaries between humans and gods. Their physical presence in this world, their ability to behave like humans, and their simple mortality and subjection to fate connect them closely with people on the one hand, whereas their ability to make known the nature and will of the gods through their actions or through people's use of them connects them closely with the gods on the other. Their use in sacrifice, hepatoscopy, ornithomancy, and their literary use in oracles show how varied these intermediary roles can be. Since Herodotus' interest in animals caused him to include them in all areas of his work--historical, ethnological, or zoological--this abundance of animal occurrences provides us with an opportunity to see how often animals appear in supernatural and religious contexts, and how important their presence is in the religious realm of the \textit{Histories}.
Notes to Chapter III

1 Cambyses’ mistreatment of Apis the bull was among many of his sacrilegious acts. See below for further discussion of Apis.

2 Schweighauser’s emendation of τοῦ θεοῦ to τοῦ θείου in 7.16.γ1 may constitute a fourth.

3 Providence’s control over animals and humans will be treated again in a discussion of animal anthropomorphisms in Chapter IV.

4 Not only are both subject to death but to similar diseases as well. Vid. 4.90.1 where a river is said to heal mange in men and horses.

5 Vid. 1.167 which describes how men, sheep, and beasts of burden became maimed and deformed when they passed by a place where people were stoned to death, and 7.171 where Cretan wrongdoing during the Trojan War was rewarded with famine and plague on both men and cattle; this recalls Apollo’s shafts which struck mules, dogs, and men at the opening of the Iliad (1.50-52).

6 E.g. 2.45.1-2:

The Greeks say many other things without proper examination. The following story that they tell about Heracles is simple-minded: Upon his arrival in Egypt the Egyptians wreathed him and led him in a procession to be sacrificed to Zeus; for a while Heracles held his peace, but when they began to prepare him for sacrifice at the altar he let loose his might and killed them all. Now when they say these things the Greeks seem to me to be totally ignorant of Egyptian nature and custom.

7 Herodotus opens and closes his lengthy discussion of Egyptian religion with the following remarks:
The Egyptians are exceedingly religious beyond all men, and they use the following customs...

...The Egyptians, on the other hand, carefully observe religious law in this matter as they do in their other religious customs.

8This deity was actually Min of Chemmis whom the Greeks confused with Pan since both were goat-headed (How and Wells, Vol. I, p. 189).

9Commenting on Herodotus' introduction to the Egyptian animals section, How and Wells (Vol. I, p. 198) rightly stated that "animals were supposed to act on direct impulse from the gods, and to show their will."

10The most explicit acknowledgment of this is his statement about the truth of an oracle of Bacis (8.77.1,2):

I am not able to deny that prophecies are true, and I do not wish to attempt to discredit them when they speak clearly, for I have examined the following matters...

In light of such things--especially since Bacis spoke so clearly--I dare not discredit prophecies, nor will I accept others who do so.

11Book 3, section 103:

I shall not describe the appearance of the camel since the Greeks are already familiar with it, but I shall relate aspects of its appearance that are unfamiliar. The camel has four knees and four thighs on its hind legs and its reproductive organ is turned toward its tail through its back legs.
Vid. Aristotle, *De Generatione Animalium* 2.8, for a full discussion of this. Aristotle indicates that Democritus and Empedocles (whom he quotes) considered mules to be universally sterile, though he disagrees with their explanations for this sterility.

"Portent," "prodigy," "sign." The inherent connection with the gods in this word is self-evident.

It appears that I have been treating Herodotus as a spectator of the characters and events in his work as though what he records is objective history on the one hand, and his response to that history is separate commentary on the other. This approach, if unquestioned, would of course be erroneous, for an historian and his work are in many ways inseparable. The people and events of Herodotus' history are clearly molded by his own selection and condensation of the events--as is the case with every history--so to make distinctions between the "world" or "characters" of Herodotus and Herodotus "himself" is in one sense a moot point. But such a distinction is not entirely erroneous since it is clearly possible for an historian to place himself in antithesis with the characters whose actions and words he records (though again, this may say as much about the author as the events he relates). Nevertheless, what I am attempting to accomplish by this distinction is to acquire some sense of how the people of Herodotus' day (Greek, Persian, or otherwise) viewed extraordinary events involving animals, and to contrast that wherever possible with Herodotus' own conceptions of the same.

N. Marinatos, in her *Thucydides and Religion* (Beiträge zur klassischen Philologie: Heft 129 [1981]), accomplishes this quite well with Thucydides when she defends Thucydides against those who would make him seek "a naturalistic explanation in each and every case" (pp. 17-18) for the natural phenomena in his history which Thucydides supposedly includes only because they are "social factors" (p. 18). In her conclusion Marinatos remarks that "Thucydides' attitude is traditional towards natural phenomena also, although it may have differed from that of the average man on the street" (p. 56), showing that, in this case, author and characters can be profitably distinguished.

This is the first extant mention in Greek literature of bees inhabiting a carcass, an occurrence which became a *topos* among later writers (cf. *Georgics* 4.281-314). The Old Testament preserves an earlier account in Judges 14:5-9.

It is difficult to render in English the double meaning of τῷριχος ("pickled fish," "dead body").

The portent interpreted by Artayctes in Herodotus calls to mind the omen in Homer of the Sun's cattle bellowing on the spits (*Od.* 12.394-6).

The Pelasgians consulted Delphi to find a remedy for the barrenness of their women and flocks. See also 1.167 (paraphrased in note 5) which prompted the men of Agylla to consult Delphi.
19 For the purposes of this study we shall include dreams since they too provide direct, supernatural communication from the gods.

20 This passage (5.56), in which Hipparchus in a dream is addressed as "lion," will be discussed at length in Chapter IV.

21 A third category—consisting of only minor animal references—describes places with animal imagery and includes 4.155 ("Libya, nurse of flocks"), 4.157 ("sheep-breeding Libya"), and 6.77 ("three-coiled snake" [referring to Argos]).

22 For further discussion of this prophecy see Chapter IV.

23 Section 8.20 is clearly a break in the narrative; what comes before (8.19.2) leads directly into the following passage (8.21.1ff).

24 How and Wells argue that "Herodotus obviously looks on Pisistratus as favoured of heaven" (Vol. I, p. 84).

25 What was meant by "σελήναις διὰ νυκτός" is neither explained nor is its meaning apparent from Herodotus' account.

26 Another prophecy that is correctly interpreted is found at 7.220. This prophecy characterizes Leonidas as a lion and is reserved for a detailed discussion in Chapter IV.


28 This passage concludes Herodotus' discussion of Egyptian religion (2.37-65) and provides a smooth transition to his detailed account of Egyptian animals (2.65-76).

29 Herodotus says this explains why Zeus is pictured with the face of a ram (κρισπρόσωπον; 2.42.4).

30 "The Magi were little likely to pour libations to the dead heroes who fell before Troy. We must therefore suppose either that this sacrifice to Athena and the heroes was intended to conciliate the Asiatic Greeks...or that Herodotus has misunderstood some Iranian rites." (How and Wells, Vol. II, p. 147).

31 Themistocles speaks for all Greeks when he addresses them in Book 8 (8.109.3):

> τάδε γὰρ οὐκ ἦμείς κατεργασάμεθα, ἀλλὰ θεοὶ τε καὶ ἡρωες, οἱ ἐφθάνουσαν ἄνδρα ἐν τῇ τῆς Ἀσίς καὶ τῆς Εὐρώπης βασιλεύσαι, ἐδυνα ἄνθρωπον τε καὶ ἄνθρωπον· οὗ τὰ τὰ ἱερὰ καὶ τὰ ιδία ἐν ὄμοιω ἐποίητο, ἐμπιεσάς τε καὶ καταβάλλων τῶν θεῶν τὰ ἄγαλμα: ὅς καὶ τὴν θάλασσαν ἀπεμαστίγωσε πέδας τε κατῆκε.
You have not accomplished these things, but the gods and heroes have, who have begrudged one man from being king over both Asia and Europe—one who is both unholy and presumptuous. This man has treated the temples and their property the same, burning them and casting down the images of the gods. He even whipped the sea and cast fetters into it.

32Hegesistratus of Elis (9.37ff); Hegesistratus performed his duties partly out of hatred for the Spartans and partly for the pay he received (9.38.1).

33Themistocles' attempt to pull Ionian and Carian supporters away from the Persian forces (8.22-23) demonstrates the competition between the two powers over their vacillating allies.

34Sallustius, *De deis et mundo* 16 (4th c. A.D.):

Since, therefore, the first life is the life of the gods, but human life is also life of a kind, and human life wishes for communion with divine life, a mean term is needed. For things very far apart cannot have communion without a mean term, and the mean term must be like the things joined; therefore the mean term between life and life must be life. That is why men sacrifice animals; only the rich do so now, but in old days everybody did, and that not indiscriminately, but giving the suitable offerings to each god together with a great deal of other worship. [Transl. G. Murray, *Five Stages of Greek Religion* (1951) 219-220.]

Cf. Deuteronomy 17.11:

For the life of the flesh is in the blood, and I have given it to you on the altar to make atonement for your souls; for it is the blood by reason of the life that makes atonement. [NASV]


At the same time, the animal in Greek sacrifice seems to be associated in a particular way with man. Again and again, myth relates how an animal sacrifice takes the place of a human sacrifice or, conversely, how an animal sacrifice is transformed into a human sacrifice; one is mirrored in the other. A certain equivalence of animal and man is doubtless inherited from the hunter tradition and is also quite natural to the cattle breeder. To both belong eyes, face, eating, drinking, breathing, movement, and excitement in attack and flight. The slaughter then reveals the warm blood, flesh, skin and bones and also the *splanchna* which have always had the same names in both animal and man--heart, lungs, kidneys, liver, and gall-bladder, and finally the form and function of the genitals. That an animal is sacrificed in place of a man may be expressly stated. At that separation of gods and men in the sacrifice, the dying animal belongs to this extent on the side of men, mortals. To the
god it stands in a relation of polarity: through the death which it dies, it
confirms *e contrario* the superior power of the wholly other, deathless,
everlasting god.

Vid. also J.E. Harrison’s *Themis* (Cambridge, 1927 [2nd ed.]), p. 137, and

36Vid. 2.64 (discussed earlier in this chapter) where animals—including
birds—were allowed to copulate in temples because the god apparently allowed
the activity.

37*Herodotos the Historian* (London, 1985) 103:

The first wife of Anaxandridas, previously barren, ‘coincidentally’ fell
pregnant soon after the second wife, irregularly wedded for the purpose of
child-bearing (5.41). It was a coincidence, or lucky accident, that enabled
Kleomenes to dislodge the Peisistratids from the Athenian Akropolis
(5.65). But such fortuitous events are often described as ‘divine’,
‘supernatural’, or ‘emanating from [a] god’. The adjectival form of *theos*,
*theios*, is used to qualify *tyche* (chance) or is itself used as a noun, resulting
in a phrase meaning something like ‘divinely-ordered chance’.

38*Hdt.* 5.1.3:

υικώντων δὲ τὰ δύο τῶν Περινθίων, ὡς ἐπαιώνιζον κεχαρηκότες,...

When two of Perinthian combatants were winning, and they were
rejoicing and shouting victory,...

39Darius’ groom contrived to prompt Darius’ horse into neighing first by
leading it past the spot where it had mounted its favorite mare the night before.
Or, according to another version (3.87), the groom rubbed his hand on the mare’s
genitals and held it to the horse’s nose at the appropriate moment.

40*Hdt.* 3.86.2: ἡμιδὲ τῷ ὕππῳ τούτῳ ποίησαντι ἀστραπῆ ἐξ αἰθρίας καὶ
βροντῆ ἐγένετο. ("At the same moment the horse did this, lightning and
thunder occurred though the sky was clear.")

41This was after he had sacrificed 3000 animals and had bidden the
Lydians to offer sacrifices according to their means.

42The association of oxen with Hera in Herodotus is seen in the story of
Cleobis and Biton (1.32): since their oxen were still in the field, they yoked
themselves to the cart and drew their mother to the Argive Heraion to take part
in the festival there (*Hdt.* 1.32).

43Vid. *Hdt.* 8.41 for a tale about a snake that was thought to guard the
Athenian acropolis and live in the temple.
The form θειώτερως is hapax, but the alternate form θειώτερον occurs in 1.174.4 where Cnidian workers who were cutting through an isthmus received more injuries than could humanly be accounted for. The hindrance seemed to them "θειώτερον," so they applied to Delphi and learned that Zeus opposed the work.
CHAPTER IV
ANIMALS AND PEOPLE

In the last chapter we saw how animals share both divine and human characteristics; this chapter will explore the relationships between people and animals in the Histories. Animals and people in Herodotus' world interact on various levels: on one level there is the objective, physical contact between humans and animals. This includes casual, everyday contact such as raising livestock, using animals in war, keeping animals as pets, and hunting game. Herodotus' ethnological inquiries contain many descriptions of these activities that he included to be contrasted with Greek practices since his readers, as Greeks, are Hellenocentric. On another level there are stories, folktales, and local beliefs that contain many animals and animal metaphors. This is true of the Greeks as well as foreign nations, and since Herodotus seems to have an affinity for animals and for tales about animals, his comparisons between Greek and barbarian customs often highlight the similarities and differences in the way animals are treated in various cultures. For the most part Herodotus remains unbiased in these presentations. Yet as a Greek he, too, reveals Hellenocentric attitudes: Herodotus recognizes that each nation considers its own customs and beliefs to be best (3.38), and he implies that if circumstances were different—if individuals were brought up in different social surroundings—people would then naturally acquire the customs and beliefs of that different society. In my
discussion of animals and people, then, I will apply this view of Herodotus to his own observations to see whether we can detect explicit or implicit approval or disapproval on Herodotus' part toward the ways foreign people interact with the animal world, in spite of his attempt at impartiality. In this chapter I will therefore be concerned primarily—though not exclusively—with the extent to which the *Histories* embodies Herodotus' own views toward peoples, Greek and barbarian, and toward their modes of behavior.

To begin, it is important to observe that apart from obvious biological differences Herodotus draws few dividing lines between the animal kingdom and the world of people, and as a result each world encroaches upon what we might consider territory intrinsically belonging to the other. For example, animals at times exhibit extraordinary anthropomorphism (an animal/human substitution), and people (or individuals) under certain circumstances act with demonstrable animal-like behavior (a human/animal substitution). Herodotus uses this "encroachment" to characterize individuals or groups of people and their actions. By examining Herodotus' use of animal imagery in such contexts and by establishing from the clearer and more poignant passages what Herodotus' views toward animalistic behavior are, it is possible to set precedents that may be applied to similar literary contexts in which animal imagery is ripe but which are devoid of direct commentary on Herodotus' part.

Let us first consider animals that exhibit human characteristics. There are many shades of grey in the *Histories* between pure animal behavior and behavior that we would consider solely human. An animal that acts in accordance with what we consider to be natural instinct may at one moment be passed over in
silence in Herodotus' narrative, while in another place identical or near identical behavior seems to be the result of human sentience that the animal possesses. Added to this difficulty in sorting out one action from another is the fine line that divides the mythic from the historic. In other words it is not unusual for Herodotus to report a story or folktale that includes animals behaving in extraordinary ways (human behavior, supernatural, or other). In addition, when Herodotus describes unusual animals in foreign lands is he speaking from hearsay or personal observation? If a particular story has its source in hearsay, do we consider his testimony to be part of the element of folktale which characterizes much of his ethnography, or do we more "objectively" evaluate Herodotus' zoological veracity by such descriptions? I ask these questions at this point not to propose that there is a "right" or "wrong" way of looking at Herodotus' ethnography, but to suggest that we recognize our own presuppositions when we approach Herodotus' work. These questions become all the more difficult when we realize that there is a blurring of dividing lines between human and animal, historic and mythic, natural and supernatural in the Histories, but this blurring nevertheless has much to say about how Herodotus and perhaps his audience viewed their world. So even though categorization is difficult and a systematic breakdown and examination of anthropomorphinic occurrences are impeded, general—if not specific—conclusions are nevertheless possible.

Four passages in Books 2 and 3 will form the basis of discussion on animal anthropomorphism and "encroachment." The first, concerning cats, falls near the beginning of the section devoted to Egyptian animals (2.66.1-3):
And there would be far more domestic animals if the following did not happen to the cats: whenever the females give birth they no longer consort with the males, and though the males follow them about they are not able to copulate with the females. So the males contrive to forcefully snatch or secretly steal away the kittens from the females and kill them—though they do not eat them. The females, being bereft of their kittens, yearn for more and so return to the males, for this animal is fond of children.

Whenever there is a fire a remarkable thing happens regarding the cats: the Egyptians do not bother to put out the fire, but stand at intervals to guard the cats which either slip through or jump over the men and cast themselves into the fire.

Herodotus’ audience was already quite familiar with the appearance of cats since they were common in Greece (as they are today). This is demonstrated by literary references and depictions on vases. We, therefore, find no physical description of cats here or elsewhere in the Histories, while other non-indigenous animals in this section on Egyptian animals (2.65.2-2.76) are described (i.e., the alligator, the hippopotamus, the phoenix, the ibis, the horned snake, and the flying snake). What draws Herodotus’ attention and interest, then, is the cats’ behavior, and what he describes is undoubtedly unfamiliar to his readers. Since this behavior is peculiar enough to receive Herodotus’ attention, what is the
source for Herodotus' story? Is this based on Herodotus' own observations or is he reporting this second-hand from an Egyptian source? There is no clear evidence in this passage or in the surrounding context for a definite conclusion to this question. Herodotus does, however, seem to express a degree of certitude about the factuality of this behavior as is seen in the comparison between this passage and others which exhibit obvious incredulity through phrases such as ὥς λέγουσι. Herodotus' description of the phoenix, a few sections later (2.73), is a good example that includes several such disclaimers: he has never seen the phoenix (2.73.1), the story about the phoenix comes from the Heliopolites (2.73.1), and he himself does not believe it (2.73.3). This of course does not prove that he saw one cat carrying off another cat to its death, but it does provide strong evidence that Herodotus accepted the reality of the occurrence. It is possible that he was told about this cat "infanticide" and never observed it himself, or that he noticed the relative scarcity of domestic animals and attributed it to something he saw, but in any case it may be safe to assume that he did not seriously question its veracity.

The use of the word σοφίζωντα in this passage denotes rational problem-solving, a characteristic usually reserved only for people. In the three other passages this word finds mention in the Histories it is used of people who devise and implement solutions to problems (1.80.4, 3.111.3, and 8.27.3)--processes that involve cognitive reasoning. Yet cats, as the grammatical subjects of this deponent verb,² are also endowed with this characteristic. The fact that cats can reason as humans do does not seem to impress Herodotus as much as the fact that these cats use their rational capabilities to achieve a goal that involves the
destruction of their own offspring. Animals often kill one another for protection or food, a possible and logical assumption on the part of Herodotus' listeners, but this notion is quickly forestalled by Herodotus' stipulation that the kittens are not eaten. The disparity between the desire and care for the kittens on the part of the mother and the cruelty committed by the father is great and is alleviated to some degree by Herodotus' observation that the male's desire to be with the female drives it to these extraordinary measures rather than an overt hatred toward its own offspring—or a desire to eat them. Herodotus even shows that the Egyptians valued their cats more than their own homes when they try to prevent the cats from hurling themselves into the flames, and in the subsequent paragraph (2.67) he shows how greatly distressed the Egyptians were at their deaths: the dead cat was mourned and a special burial would follow, practices treated by Herodotus in the immediate context to contrast them with a cat's own behavior toward its young. Herodotus is underlining the disparity between human behavior and that exhibited by cats. If this were the usual behavior for cats or for animals in general, Herodotus would not need to describe it. The fact that he does shows that he considers the preservation of offspring which the females exhibit to be a normal and desirable mode of life for the animal world, and that the behavior of the male cats falls wide of the mark. Through his narrative Herodotus manages to have the reader ascribe in his mind human traits to the cats and to feel sorry for the females and their kittens.

Another passage which exhibits animal anthropomorphism concerns camels and their children (3.102.2-3, 105.1-3):
The sand which [the ants] dig up is full of gold. It is for this sand that the Indians make expeditions into the desert, each one yoking together three camels with male camels to lead on each side and a female in the middle, taking care that they use females that have just been separated from their newborn...

When they arrive at the place, the Indians fill small bags with the sand and ride back as fast as they can, for the ants quickly learn of their presence by their smell (as the Persians say) and give chase. Nothing else is like these ants as regards speed, so that none of the Indians would escape if they did not take to the road while the ants were still gathering. The male camels, since they cannot run as far as the females, begin to drag and are left behind one at a time, but the females do not easily give in since they are mindful of the children they left behind.

Camels appear in several places in the Histories, usually as beasts of burden in the Persian army (Hist. 1.80.2, 4, 5; 3.9.1; 7.83.2; 7.86.2; 7.87; 7.125; 9.81.2). Although none of these places provide additional information or insight that might expand upon or clarify the animal's behavior in the passage above, this passage does not require much interpretation: the female camels (as the female cats) are thoughtful of their newborns and desire to be with them (clearly because of the motherly instinct to protect and nurture their young); this desire is not inherent in the males; the females therefore run with more endurance than the males. There is no indication from Herodotus whether he believed that
camels would or could act in this way, but it is probably safe to assume that
Herodotus did not question the possibility of such behavior (though the veracity
of the gold and the dog-sized ants may still be suspect in his eyes). Indeed, he
seems only interested in the camels' appearance and swiftness (vid. 102.3-103),
and of course in the ants' appearance and behavior. A comparison between this
passage on camels and the previous one involving cats reveals a striking similarity
in the roles of males and females and their respective behavior toward offspring:
the females are protective of the young and the males less so.

The following account, found at 2.93.1-3, exhibits similar behavior among
fish:

Herodotus does not question the veracity of this account, a fact that
follows closely our observations of his accounts of the cat and camel. The male
fish in this passage lack the obvious premeditation that characterized the male
cats in their destruction of the young, but the end result is relatively the same—the males destroy their own offspring. In this case, however, simple instinct appears to be the motivating force. We find no suggestion as to the males’ (or females’) motivation from Herodotus’ description, but by a comparison in theme between this passage and the others on cats and camels, and by Herodotus’ word choice in his presentation of this spawning process, there is sufficient indication of his disapproval of the activities of the males. First, the eggs that the female fish scatter are destroyed by being eaten (καταπινοῦση, καταπινομένων) by the males. Recall that male cats that destroy their young do not go so far as to eat them (κτείνοντες μέντοι οὐ πατέονται; 2.66). This is underscored by Herodotus’ commentary which immediately follows the actions of the female and male fish respectively. The result of the females’ conduct is "κυῖσκοντας," but Herodotus follows the males’ conduct with the comment "ἐλοὶ δὲ οἱ κέγχροι οὗτοι ἱχθυές," i.e., he leaves no doubt that the male fish are swallowing fish, not just inanimate "eggs." Though instinct rather than premeditation seems to be the guiding force behind the actions of the male and female, to Herodotus the end justifies—or condemns—the means: the result of the females’ actions is life, that of the males’ is death. Secondly, Herodotus ends his description with an emphasis on the survival and ultimate welfare of the offspring with the three participles περιγινομένων, (μὴ) καταπινομένων, and τρεφόμενων, as if to emphasize that the vast majority of fish that reach maturity are those that had survived the initial danger imposed by the males. The rivalry between the male and female and their respective involvement in the survival of the young are common elements in all three passages thus far examined. Although these fish do not exhibit the clear
anthropomorphism which we saw in the cats and camels, the familial relationships between male, female, and offspring are strikingly similar.

The rivalry present in these three species is also exhibited by snakes at Hist. 3.109.1-2—the fourth and final passage to be examined for anthropomorphic elements:

Likewise, if both vipers and the flying snakes in Arabia were as numerous as their nature allows, life for men would be unbearable. Now whenever these snakes couple and the male is at the point of releasing his sperm, the female fastens onto his neck by biting into it; she does not release him until she has bitten through it, and the male dies in this way. The female, on the other hand, pays for what she has done to the male: the children, while in their mother’s belly, eat through their mother to avenge their father, and having eaten through her womb they make their exit.

The offspring in this account are clearly endowed with a human desire for revenge. The participial phrase τὸ γονέϊ τιμωρέοντα is Herodotus’ way of supplying the young with a reason and motivation for their actions—namely, their father’s death. But how could they know of their father’s demise? Herodotus does not attempt to bridge the illogical gap in time between the father’s death and the offspring’s ability to reason or act. The reasoning and motivation come nevertheless from the hand of Herodotus for he draws the connection between the mother’s actions and those of her young with the inclusion of this participial
phrase; hence there is no question whether or not the anthropomorphism evident in this tale is embraced by Herodotus. It obviously is. But the enmity between father, mother, and offspring in this anecdote is different in one respect from the rivalry we have seen among cats, camels, or fish. The mother this time is the aggressor, and the children are made by Herodotus to side with their father. This account is not entirely the reverse of the other three because the mother does not disregard or endanger her offspring as the father did. Herodotus instead ascribes the motivation for τίσις performed by the young to the mother’s actions against the father, not against the offspring. This example of τίσις, a major thematic force in the Histories, is significant. Here is a clear indication where Herodotus transfers something he sees as efficacious in the human realm to the animal realm.

What then can we say is common, if anything, to these four accounts? For one, human reasoning and volition in these animals are prominent. These qualities are especially present in the male cats when they kill their kittens to win back the females’ attentions, and in the unborn snakes which avenge their father. An even more prominent common element is the fact that these anthropomorphic traits are all exhibited within familial contexts. Herodotus’ animal world seems to reflect general assumptions which humans hold for themselves—the care of the mother for her young and the desire to avenge a family member.⁵ His account in Book 3 of a dog that breaks its tether and comes to the aid of its brother (ἀδελφόν ἀντοῦ) supports this conclusion (Hist. 3.32.1).⁶ Even though animals are separate and different from humans biologically (vid.
Chapter II for Herodotus’ zoological categories), Herodotus supposes they still have innate familial relationships and modes of life similar to humans.

Although Herodotus gives human attributes to animals, he does not view relationships among animals as originating in human behavior. In Herodotus’ view these attributes are common to all beings and are part of the order and plan of the animate world, and these innate characteristics have been endowed by a higher intelligence; hence his anthropomorphism goes beyond mere literary artistry and reveals an underlying assumption. An example of this attitude is given below:

καὶ κατὰ τοῦ θείου ἡ προνοία, ὡσπερ καὶ οἰκός ἔστι, ἐστὶς σοφὴ, δοσα μὲν [γάρ] ψυχὴν τε δειλὰ καὶ ἐδώδιμα, ταύτα μὲν πάντα πολύγονα πεποίηκε, ὡς μὴ ἐπιλίπη κατεσθιόμενα, ὡσα δὲ σχέτλια καὶ ἀνιηρά, ὕλιγγονα.

(Hist. 3.108.2)

And in some way it seems that the wise foresight of Providence has caused whatever is naturally meek and edible to be prolific, so that it becomes fewer in number by being eaten, and whatever is savage and vexatious is made to bear few offspring.

This statement introduces Herodotus’ section on snake procreation discussed above (Hist. 3.109.1-2). Herodotus implies that τὸ θεῖον stands outside both the animal world and the world of people, independent from any noble qualities which are intrinsic to humans. When animals behave like people in Herodotus’ history they are viewed as sharing with humans certain qualities rather than emulating those qualities through their behavior, whether good or ill. This is, at least, what we may surmise since there is a complete lack of incredulity on Herodotus’ part toward the anthropomorphism he presents.
As pointed out in Chapter I, there is a tendency in classical scholarship to treat the study of ancient history and the study of ancient poetry in very different ways. We are comfortable with placing each in its own well-defined category to be analyzed according to accepted, time-honored approaches and methods. Hence we view history primarily as a recounting of facts and events (with veracity as the highest ideal), whereas poetry is studied for its aesthetic use of language. For example, a comparison between the published articles on lions in Homer and those on lions in Herodotus reveals that the focus on lions in Homer is on the artistic use of the *similes*, but in Herodotus the chief concern is whether or not lions were actually alive and well and living in Greece in the 5th century. More and more, however, modern scholarship is ignoring the barriers genres seem to impose, and Herodotean scholarship, while admitting the heavy influence of Homer, now admits of ever more subtle literary imagery. My point in regard to Herodotus is that animals and animal imagery are used in literary ways in the *Histories* to characterize people and their actions, and they reveal Herodotus' tacit opinions about certain behavior and modes of life.

There is abundant evidence that this characterization of people is conscious and deliberate. When animal names are used as proper nouns, or when a person's name is equivalent to or cognate with the name of an animal, such word play and its corresponding semantic implications do not elude Herodotus. On the contrary, Herodotus is quick to exploit these for literary or dramatic effect. Recall that Chapter III demonstrated how Herodotus proposed that the similarity between Ἡ Κυνώ (the name of the peasant woman who nursed Cyrus) and Ἡ κύων was the opportunity to create the story that a female *dog*
nursed Cyrus (vid. *Hist.* 1.122.3)—a story described as "θειοτέρως" and hence more advantageous to its promoters. Other connections between proper nouns and animal names are consciously drawn, such as the following comment in Book 4 (4.149.1):

ὅ δὲ παῖς οὖ γὰρ ἔφη οἱ συμπλεύσασθαι, τοιγαρῶν ἔφη αὐτῶν καταλείπειν διὸ ἐν λύκουι· ἐπὶ τοῦ ἔπεος τοῦτον οὐνόμα τῷ νεψίσκῳ [τοῦτῳ] Ὀλύμποκος ἐγένετο, καὶ καὶ τὸ οἴνομα τοῦτο ἐπεκράτησε.

Since [Theras'] son said he would not be sailing with them, Theras said that he would be leaving him behind like a sheep among wolves. Because of this statement the name Oiolycus was applied to this young man, and somehow the name caught on.

Էեթіон's name (ʼΉετίων) is similarly punned with αλετός in Book 5 (5.92β). By comparing a Delphic prophecy delivered to Εεθίοιον with an earlier prophecy about the future of Corinth, Herodotus (via a speech given by Sosicles) relates that a connection was made between the birth of Ηεθίοιον's son and the following lines of prophetic hexameters:

αλετός ἐν πέτρησι κύει, τέξει δὲ λέοντα
καρτερὸν ωμιστήριον πολλών δ' ὑπὸ γούνατα λύσει.

An eagle among the rocks conceives and will give birth to a strong, savage lion who will loose the knees of many.

Considering that Ηεθίοιον in Doric would have been Ἀετίων (as pointed out by How and Wells; loc. cit.), the similarity between it and αλετός is easily recognized through the metathesis, though of course the etymological reasoning behind this similarity is flawed. Etymological license such as this is not
uncommon in Herodotus, and demonstrates the latitude allowed in the suspension of disbelief for folk etymologies.

Book 6 contains two conscious uses of animal names as proper nouns. When Cleomenes attempted to arrest certain Aeginetan men, he was opposed by a man whose name was Κρίως (6.50.3):

Κλεομένης δὲ ἀπελαύνομενος ἐκ τῆς Αἰγίνης ἐφετε τὸν Κρίων ὁ τι ὁ εἴτε οὖνομα· ὁ δὲ ὁ τὸ ἐὰν ἔφρασε. ὁ δὲ Κλεομένης πρὸς αὐτὸν ἔφη "Ηδὴ ὑδ οὐ καταχαλκοῦ, ὦ κριε, τὰ κέρα, ὡς συνοισόμενος μεγάλῳ κακῷ.

Cleomenes, being repelled from Aegina, asked Krion his name, and Krion told him what it was. Cleomenes responded to him, "Cover your horns in metal, Mr. Ram, since you are about to confront a great misfortune."

It should be noted that in none of the above instances does Herodotus feel the need to explain in any detail the semantic connections which underlie these plays on words. He writes for a Greek audience and of course assumes such wordplay to be understood. This will be important to remember when we look at instances of wordplay which are less obvious.

The other example in Book 6 is the nickname Κυνίσκος given to Zeuxidemos, son of Leotychides the Spartan leader (6.71.1):

Λεοτυχίδης δὲ ὁ Μενάρεος Δημαρίτου καταπαυσθέντος διεδέξατο τὴν βασιλείαν, καὶ οἱ γίνεται παῖς Ζευξίδημος, τὸν δὴ Κυνίσκον μετεξέτεροι Σπαρτιττέων ἑκάλεον.

After Demaratus was deposed, Leotychides the son of Manares became leader. He had a son named Zeuxidemos whom some Spartans called "Puppy."
Herodotus does not explain why Zeuxidemos was nicknamed "Puppy."
Perhaps the story was already familiar to his readers and he felt no need to
comment on it. Leotychides' name is not cognate with λέων ("lion") as might
appear from the usual transliteration of this Greek name (Leotychides), so
"Puppy" is not a reference to his being the son of a man named after an animal
(even if some Greeks thought dogs and lions belonged to the same zoological
family). Whatever the reason, the term is likely derogatory (vid. p. 119 and
note 28 for the ethos of dogs). Animal names were often applied to people for
ridicule. One of the more famous examples of this in classical literature is found
in Book 5 of the Histories: Kleisthenes of Sicyon renamed all the tribes except his
own after animals. The account is worthy of quotation (5.68.1):

...φυλᾶς δὲ τὰς Δωριέων, ἵνα δὴ μὴ αὐτὰ ἔωσι τοῖς Σικυωνίσιοι
καὶ τοῖς Ἀργείοις, μετὲβαλε ἐς ἄλλα σύνομα. ἔνθα καὶ πλείστου
κατεγέλασε τῶν Σικυωνίων· ἐπὶ γὰρ ύός τε καὶ ὄνομ <καὶ χοῖρον> τὰς
ἐπωνυμίας μετατιθέεις αὐτὰ τὰ τελευταῖα ἐπέθηκε, πλὴν τὸ ἐσωτοῦ
φυλῆς· ταύτῃ δὲ τὸ σύνομα ἀπὸ τὸ ἐσωτοῦ ἀρχῆς ἤθετο. οὕτως μὲν δὴ
Ἀρχέλαοι ἐκαλέοντο, ἄτεροι δὲ Ἰάται, ὀλλοὶ δὲ Ὀνεάται, ἄτεροι δὲ Ἰοφαέται.

...[Kleisthenes] changed the names of the Dorian tribes so that the
Argive tribes and the Sicyonian tribes would not be equal. In doing this he
made a mockery of the Sicyonians, for by giving them names derived from
"pig," "donkey," and "swine" he belittled all but his own tribe to which he
applied the term "Rulers"—derived from his own rule. The others were
either named Pigmen, Donkeymen, or Swinemen.

There is no ambiguity in Kleisthenes' intent; Herodotus sums it up with
the phrase "πλεῖστον κατεγέλασε." Although name-calling has not changed
throughout history, the importance placed upon the meaning of one's name has.
In classical literature—and especially in Biblical literature—the meaning of a
name was often closely tied with one's exploits, fate, or with the circumstances surrounding one's birth. This is why there is such great emphasis placed on names in Herodotus and in other ancient writers. The examples above demonstrate that Herodotus was not only aware of these uses, but he consciously included them in his work to explain more fully the circumstances surrounding people's actions, or simply to provide etymological insight for his readers.

The evidence from this conscious use of animal names provides a basis for suspecting Herodotus' intentional use elsewhere. This is particularly true in the case of Leonidas. This Spartan general dominates the stage in much of Book 7: he drew his lineage directly from Heracles; as a warrior he represented the Greek hero and the bravery of the Greek resistance against Persia; and Herodotus describes him as "the most esteemed [θωμαζόμενος μάλιστα] commander of the entire army" (7.204). Though Leonidas' name is cognate with the Greek word for lion (λέων) and is derived from his father's name Leon (Λέων), Herodotus never openly compares Leonidas with a lion. Based upon our observations above, however, it is not likely that this connection went unnoticed. This supposition is supported by what appears to be a correlation between Leonidas and lions mentioned in a Delphic oracle which predicted the Spartan defeat at Thermopylae. This prophecy and Herodotus' accompanying comments are given below (Hist. 7.220.2-4):

μένουτι δὲ αὐτοῦ κλέος μέγα ἐλείπετο, καὶ Ἡ Σπάρτῆς εὐδαμονίη οὐκ ἔξηλείπετο. ἐκέχρηστο γὰρ ὑπὸ τῆς Πυθίης τοῖς Σπαρτητήσι κρεμένοιοι περὶ τοῦ πολέμου τούτου αὐτικα κατ' ἀρχὰς ἐγειρομένου, ἡ Λακεδαίμονα ἀνάστατον γενέσθαι ὑπὸ τῶν βαρβάρων ἢ τοῦ βασιλέα σφέων ἀπολέσθαι. ταῦτα δὲ σφι ἐν ἐπεσι ἐξαιμέτρουσι χρῆ ἔχοντα ὥδε·

ὑμῖν δ', Ὡ Σπάρτῆς οἰκίτορες εὐρυχόροι.
By remaining there\textsuperscript{14} [Leonidas] acquired great fame, and the prosperity of Sparta was not blotted out; for when the Spartans had consulted the Delphic oracle it was prophesied to them that as soon as the fighting in this war began either the foreigners would lay Sparta to waste or the Spartan king would die. The hexameters the priestess gave them in oracular utterance were as follows:

O dwellers of broad-wayed Sparta: either your great and glorious city will be laid waste under Persian men, or if not, then Lacedaimon from one end to the other will grieve a dead king from the race of Heracles. For neither the strength of bulls nor of lions will hold him in the struggle, for he has the strength of Zeus; he will not be checked, I say, until he has thoroughly devastated one of these.

As I said, I am of the opinion that\textsuperscript{15} Leonidas sent the allies away because he was thinking about these utterances and because he wanted to establish a fame that would be for the Spartans alone...

At first appearance, "τὸν" in the fifth line of the oracle seems to refer back to "βασιλῆς," but the sense of the last sentence excludes this possibility: "τὸν" must refer to the Persian enemy since it is the one to be "checked" (σχήσει, ἔχει, σχήσεσθαι) by one of the two options detailed in lines 2-4. Herodotus might have had Xerxes himself in mind with this reference, for, as How and Wells point out (loc. cit.), the reference to Zeus recalls a statement made earlier in the book (7.56.2) about Xerxes being the incarnation of Zeus. If Herodotus viewed "τὸν" as a specific reference to Xerxes, this appears to set the leaders of the hostile forces opposite one another (see note 13) in the struggle (ἀντιβήν) since "βασιλῆς" can only refer to Leonidas. The "μένος" in line 5 would then belong to
Leonidas, and the reference to lions in this line would be a play on Leonidas' name. The strength "of bulls" is more enigmatic: this might be a reference to Leonidas' men--his "herd," so to speak--or a reference to his lineage. Parallel evidence for the latter comes from a Delphic prophecy in Book 4 (4.163.1) that refers to Arcesilaus' father as τάορος ὁ κολλίστευων. The pairing of lions and bulls in archaic architecture suggests a natural association between these two powerful land animals; hence "bull" may also refer poetically to Leonidas by its common association with lions. There may also be here an allusion to Hercules who overcame the Nemaean Lion and the Cretan Bull in two of his twelve labors.

But the most obvious indication that Herodotus recognized the "λέων" in Leonidas' name and used it for literary effect is his mention of the lion monument near the end of the book. In his description of the final moments of Greek resistance Herodotus states that the defenders took up a position on a hill that was located at the entrance to the pass. He locates this hill with the following statement (7.225.2):

ο Ὑ ἄ ὑ ν τὸν κολποτὸς ἐστὶ ἐν τῇ ἐσοδῷ, ὅκου νῦν ὁ λίθινος λέων ἐστικέ ἐπὶ Λεωνίδῳ.

The hill is at the entrance where the stone lion now stands as a memorial for Leonidas.

"ἐπὶ Λεωνίδῳ" has the meaning "for Leonidas" in the sense of "in honor of"; it does not mean physically on or over Leonidas as though the monument had been built over his body. We are told that Xerxes mutilated Leonidas' body after the battle despite its earlier removal from the battlefield (Hist. 7.225.1; see
note 13) -- though this is not to say that the Greeks at some point did not locate the body and include it with the other dead in a mass burial.\textsuperscript{18} What "ἐπὶ Λεωνίδην" does imply is that the stone lion was built specifically to honor Leonidas, and this is where Herodotus gives particular indication that his readers were to associate the λέων in Leonidas' name with the λίθων λέων built to honor him. It is not too surprising that Herodotus never detailed this connection; he is, after all, writing for a Greek audience who was not only familiar with the events at Thermopylae but easily heard the connection. Since Herodotus explains the geography of the battle in relation to where the lion stood, his readers must have at least known of the lion's existence and (by implication) why it was built.

Leonidas' father is not the only individual in the Histories with the name Leon -- another Leon appears earlier in Book 7. This individual we are told was among those who were captured in the first encounter between the Greek and Persian navies. Because of his handsomeness this Leon was singled out by the Persians for death (7.180):

καί ἐπειτα τῶν ἐπιβατέων αὐτῆς τοῦ καλλιστεύοντα ἀγαθόντες ἐπὶ τὴν πρώρην τῆς νεός ἐσφαξαν, διαδέξον ποιεύμενοι τὸν εἴπον τῶν Ἐλλήνων πρῶτον καὶ καλλιστόν. τῷ δὲ σφαγίασθέντι τούτῳ οὖνομα ἦν Λέων· τάχα δ' ἂν τι καὶ τοῦ οὖνοματος ἑπαύροιτο.

And then the Persians led the fairest of the ship's sailers to the prow of the boat and cut his throat, for they considered the first and fairest Greek whom they had captured to be a sure omen. The name of the man who was slain was Leon; perhaps his fate came in some way from his name.

Herodotus hardly needs to explain what he meant by "τοῦ οὖνοματος ἑπαύροιτο." If Herodotus had not included this passing comment we could easily
infer from other contexts—such as those already discussed—that he was drawing a connection between Λέων the man and λέων the lion. His short comment on Leon’s name proves that he saw a semantic connection which had a concrete impact on historical events. It also provides further evidence to support the hypothesis that he saw a similar tie between Leonidas’ name and his fate.

What were these ties? Perhaps the idea of sacrifice in Leon’s case is to be understood: οὐφαίειω and οὐφαίειοικοι are usually used in contexts of animal sacrifice in the Histories, and the word δωδεξιοῦ would fit such contexts nicely. Bravery in death is a motif that can be applied to both men’s circumstances and that might have been on Herodotus’ mind. This is not unlikely since wherever actual lions appear in his work they are marked by strength and ferocity. For example, lions were said to attack Xerxes’ camels (7.125)—beasts which we are told more than once terrified horses (1.80.4-5, 7.87)—and a lion cub which was made to fight a dog for amusement would have killed its opponent had not another dog joined in (3.32.1). Leonidas and Leon were both said to be handsome, both fought bravely, and both died a hero’s death. It is not surprising, therefore, that Herodotus highlighted in these men qualities that lions possess, given that their names are cognate with these beasts (lion imagery is examined more fully in a discussion of Pericles and Hipparchus below).

There is a multitude of other proper nouns in the Histories that are either cognate with or identical to names of animals. A quick look at the list of these names in Appendix B shows that a study could be done on this aspect of animal imagery alone. Most of these, however, are void of any commentary connecting
them to literal animals. When examining these words in their contexts we should remember that Greek names were normally composed of other Greek words ("Herodotus," a name possibly meaning "gift of Hera," is an example of this) and animal names were commonly used as building blocks. The abundance of these names, then, does not imply that Herodotus purposefully included these individuals in his history because their names were cognate with names of animals, nor does it mean that he "made up" fictional characters with animal names. On the contrary, these names were without doubt given to him by his sources. But what Herodotus does with these names is significant. By noting these cognates Herodotus moves beyond the bounds of simple ἴστορια to embellish the Histories with his own literary comments. This was evidenced by his attempt to find meaning in Leon's fate—a man who was chosen for an untimely death from among so many of his peers.

If we extrapolate from the more obvious connections with animals discussed above and look at other names in Appendix B, we can speculate how Herodotus might have viewed them. A brief look at two of these names—Mys and Skylax—will demonstrate this:

Mys (ὁ Μῦς) was a Carian chosen by Mardonius to make the round of oracles in Greece (8.133-135). Mardonius' purpose in doing this was unknown, but Herodotus assumes that it had something to do with his present situation (δοκεῖ δ' ἐγώ γείρει τῶν παρεόντων προηγμάτων καὶ οὐκ ἐλλων πέρι πέμψαι; 8.133). It is stated that Mys went to Lebadeia, Abae, Thebes, and the sanctuary of Ptoan Apollo. At the latter he received an oracle in the Carian language and then hurried back to Thessaly to report it to Mardonius. The content of the
oracle was not known, but whatever it was it prompted Mardonius to send a messenger to Athens to try to persuade them to join the Persian cause.

Mys' name seems to be identical to the Greek word for mouse (ὁ μῶς). Mice are mentioned three times by Herodotus. In Book 2 they were the instruments of a god in destroying an army's leather trappings (2.141.6); in Book 4 the Scythians sent a bird, a mouse, a frog, and five arrows to the Persians as enigmatic gifts (4.131); and later in Book 4 (4.192) Herodotus lists 3 species of mice which inhabit eastern Libya. In none of these instances does Herodotus anthropomorphize this animal, though there is some indication from the actions of mice in Book 2 and from the interpretation of the Scythians' gifts in Book 4 that mice preferred to "stay hidden" and were considered to act stealthily. If Herodotus saw in Mys' name any connection with mice in this respect it may have been Mys' furtive attempt to return to Thessaly with something Mardonius could use to his advantage. This seems to correspond with Mys' reactions to the oracle for he returned immediately to report it to Mardonius who in turn wasted no time in sending the herald to Athens.

Skylax (ὁ Σκύλαξ) was a ship's captain who was punished by Megabates for not setting a watch on his vessel (5.33.2-3). Megabates put him in irons with his head sticking out a porthole. Skylax's disgraceful treatment (ἀμφαίνωτο is the term Herodotus uses) caused a falling out between Megabates and Aristagoras who had been jointly leading an expedition against Naxos. Herodotus, rather than referring to Skylax anonymously as ἄρχων as he did when he began this story (τὸν ἄρχοντα ταύτης τῆς ουρά; 5.33.2), tells us his name (τῷ οὔνομα ἦν Σκύλαξ), though there is no explicit statement in the text that
connects Skylax with the Greek word σκύλαξ ("dog/puppy"). If Herodotus saw some connection between Skylax's name and his ignominious punishment (being treated like a dog?), he nevertheless left it unsaid. To compare this event with the single occurrence of σκύλαξ touched upon earlier (vid. page 106), we see that both "σκύλακες" in the respective stories were forcibly mistreated. On the other hand, there is no consistent treatment of dogs (κύνες) in Herodotus' work that might provide a firm basis for understanding how Herodotus viewed a σκύλαξ in particular. Yet it would not have been out of place for Herodotus to have written here, as he did at 7.180, "τάχα δ' ἔν τι καὶ τοῦ οὐνόματος ἐπαύρωτο," since in these passages (5.33 and 7.180) Leon and Skylax each meets up with unusually harsh treatment. To look at this from another viewpoint, our only evidence that Herodotus made any significant connection between Leon and a lion is the passing remark quoted above (7.180); that such a statement is missing from the story about Skylax neither proves nor disproves what linguistic connection--if any--he was going to make between Σκύλαξ and σκύλαξ. That Herodotus made some such connection is likely in light of what has been observed in his treatments of Kuno, Oeolycus, Eietion, Krios, and Leon.

Animal imagery in the Histories is abundant and is found in many contexts other than nomenclature. Herodotus includes a variety of metaphors, stories, and folktales in his work which equate people's characters or actions with those of animals. Sometimes people are represented symbolically as animals in a story, such as the tale of the two black crows (rationalized by Herodotus to signify two Egyptian female emigrants) that flew from Egypt to found the sanctuaries of Zeus Ammon in Libya and Dodona in Epirus (2.55). In other passages people
are metaphorically referred to as animals, as frequently happens in omens, dreams, and prophecies. Oftentimes people display animal characteristics by their actions—or very lifestyles—and receive Herodotus’ approbation or censure for their "animal-like" conduct.

Since these categories contain numerous examples, I have limited the following investigation to those examples that best typify Herodotus’ usages and that provide some insight into how varied these uses can be. I shall first examine passages that metaphorically refer to people as animals, then turn to those that demonstrate how people reveal animal characteristics by their actions.

In Book 7 Xerxes and his army are compared to a mare and a hare through an omen that occurred just after he crossed the Hellespont (7.57.1):

"Oc de diebhsan pants, ec odoe ommenei tera sphi efavn mega, to Zerxes en oudei loga epoigato kai per eusumbliton euhippos gaap etene lafou. eusumbliton avn tis [tous] egeneto, oti emelle men elan stratih eni tin 'Ellada Zerxes agavrotata kai megaloypesistata, opisow de peri euutoi trexou thein ec ton auton xuron.

When they had all crossed over and were setting out on the road, there appeared to them a great omen which Xerxes took no thought of, though its interpretation was easy to guess: a mare gave birth to a hare. It was easy to see that the omen signified that Xerxes would lead his army into Greece with great splendor and pride, but would return to the same place running for his life.

As pointed out in Chapter III, the fact that Herodotus confirms this extraordinary event as an omen reveals his agreement with current belief that animals serve somehow as intermediaries between gods and men. More can be deduced from further analysis of the passage. First, a horse aptly represents Xerxes and, in general, the Persian empire. Horses figure significantly in the
history of the Persian leaders, from Cyrus to Xerxes. Cyrus, according to Herodotus (1.189), spent an entire summer splitting the Gyndes River into 360 channels because one of his sacred white horses was drowned in it. These sacred white horses were the personal property of the Persian king and represented both military prowess and divine favor. The extremity of Cyrus’ action reflects both on Cyrus’ character and on the status he afforded these animals. Cambyses’ madness, on the other hand, ended with a mortal wound he received when jumping onto his horse (3.64): his own sword pierced his thigh in the exact spot where he had previously struck Apis the bull (3.27). That Cambyses’ horse was an indirect instrument of his death shows how differently his reign was conducted from the other Persian kings. Thus what should have strengthened Cambyses’ stability contributed to his downfall.

This view is further supported by contrasting Cambyses with Darius. The seven conspirators (among whom Darius was numbered) agreed that the throne would pass to the one whose horse neighed first after sunup (3.84.3ff). Darius’ groom contrived to prompt Darius’ horse into neighing first by leading it past the spot where it had mounted its favorite mare the night before. Darius’ first act as king was to honor his horse and his groom with a stone monument that included the names of both of them (vid. also Chapter III).

Xerxes’ confidence in his horses’ abilities was proudly displayed before all when he raced them against Thessalian mares. Although these Thessalian horses were reportedly the best Greece had to offer they were soundly beaten (7.196). Xerxes’ and his army’s representation as a horse in the omen of the mare and the hare is even better seen in the initial stages of the Persian army’s march to
Greece, for this grandiose display is what Herodotus emphasizes in his
interpretation of the omen:

A thousand horsemen picked from among all the Persians led the way,
then came a thousand similarly picked spear-bearers with their spears
turned down toward the ground. Next came ten sacred horses known as
Nesaean horses which were very beautifully adorned. They are called
Nesaean because the great Nesaean plain in Media rears this great breed.
Behind these ten horses was stationed the sacred chariot of Zeus drawn by
eight white horses; the charioteer followed behind on foot holding the
reins for no mortal mounts this chariot. Next came Xerxes himself on a
chariot drawn by Nesaean horses.

There are a number of other passages that connect Persian military
strength and capability to horses and cavalry, and that contrast Persian land
power with Greek sea power. These passages, however, are dealt with in a
discussion of Cyrus' parable of the fish (1.141.2; see p. 124 below); for now let
us turn our attention to the image of the hare in Herodotus' omen.

It stretches the imagination to wonder how the story of the mare giving
birth to a hare arose and became established. Surely it was part of the
transmitted "lore" about Xerxes that found its way to Herodotus, and Herodotus'
deemed it interesting enough to record. The mare aptly represents Xerxes and
the Persian army as we have seen, but what might Herodotus have seen in the
hare? Of all the land animals in the *Histories* the hare best represents the antithesis of the horse. Even the mouse is not as fully caricatured as a weak, inconsequential animal to the extent the hare is. In a passage quoted in part earlier in this chapter the hare is Herodotus’ solitary example of the prolific but timid animal preyed upon by others (3.108.2-3, 4):

\[
\begin{align*}
&\text{kai kws toû theîou ḥ̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣̣️
\end{align*}
\]

And in some way it seems that the wise foresight of Providence has caused whatever is naturally meek and edible to be proliferous, so that it becomes fewer in number by being eaten, and whatever is savage and vexatious is made to bear few offspring. The hare, for example, is hunted by everything—beast, bird, and man—as it is so prolific...

Such is the hare, but the lioness, being the strongest and fiercest beast, gives birth but once in its life.

The extremes in these two animals are obvious, and it is safe to assume that Herodotus chose them because they provided the best contrast between timidity (δευλός) and ferocity (σχέτλιος). In addition, the hare is characterized during the Scythian expedition of Book 4: Darius finally conceded defeat when he learned that the Scythians were engaged in hunting a hare instead of waging battle (4.134). He interpreted this as meaning that the Scythians despised the Persians (presumably since they took more thought of the hare) and that the hare symbolized what would happen to his army if he did not withdraw.35

The peculiarity of the omen of the hare and the mare is thus more understandable when what these animals signify to Xerxes and his army is taken...
into consideration. The horse is used as a symbol not only of Persian military power but of their land power in particular. The antithesis between Persian land power and Greek sea power was obvious to Herodotus and consequently we need not search far for further symbolism which emphasizes this opposition. One of the passages most often referred to among scholars dealing with this is Cyrus’ parable of the fish (1.141.1-3):

"Ἰωνες δὲ καὶ Αἰολές, ώς οἱ Λυδοὶ τάξιστα κατεστράφατο ὕπο Περσέων, ἑπεμπός ἄγγελους ἐς Σάρδης παρὰ Κύρου, ἐθέλοντες ἐπὶ τοῖς αὐτοῖς εἶναι τοῖς καὶ Κροίσῳ ἦσαν κατ᾽ ὕκοι. ὁ δὲ ἀκόνας αὐτῶν τὰ προσχονυτὸ ἐλέξει σφι λόγου, ἀνδρὰ φας ἀυληθῶν ἴδουτα ἱππὸς ἐν τῇ θαλάσσῃ ἀυλέειν, δοκεότα σφαῖρας ἐξελέυσεσθαι ἐς γῆν· ὥς δὲ θεοῦσθαι τῆς ἐπιδοκίας, ὅταν ἀμφιβλησθοῦν καὶ περιβαλεῖν τε πλῆθος πολλοῦ τῶν ἱππῶν καὶ ἐξειρύσαι, ἴδουτα δὲ παλλομένους εἶπείν ἀρά αὐτοῦ πρὸς τοὺς ἵππους: Παύεσθε μοι ὀρχεῖσθαι, ἵππον ἑμέω αὐλέουσας θῆλετε ἐκβαῖνειν ὀρχεῖσθαι. Κύρος μὲν τοῦτον τὸν λόγον τοίσι Ἰωσι καὶ τοῖσι Αἰολεῖσι τῶν ἐλευκὰ ἐλέξει, ὡς τῇ "Ἰωνες πρὸτερον αὐτοῖς Κύρου δεηθέντος δι᾽ ἄγγελων ἀπιστασθαί σφαῖρας ἀπὸ Κροίσου οὐκ ἐπείδοσθαι, τότε δὲ κατεργασόμενων τῶν πραγμάτων ἦσον ἔτοιμοι πείθεσθαι Κύρῳ.

Immediately after the Lydians were subdued by the Persians, the Ionians and Aiolians sent messengers to Cyrus’ court at Sardis since they wanted to be on the same terms with Cyrus as they had been with Croesus. After hearing what they proposed Cyrus told them a story about a piper who saw fish in the sea and played his pipe, supposing that the fish would come out onto the land. When his expectation was not fulfilled he took a net, cast it around a great number of them, and hauled them ashore. Seeing them jumping about he said to them, "Stop dancing for me; for you did not want to come out to dance when I played for you." Cyrus told this story to the Ionians and Aiolians because the Ionians previously had not been persuaded to revolt from Croesus when Cyrus had requested it through messengers, whereas they were now ready to obey him after the fact.

S.W. Hirsch ("Cyrus Parable of the Fish: Sea Power in the Early Relations of Greece and Persia," CI 81 [1986] 222-9) noted correctly that the fish in this parable represent the attitude of a land power toward people living on the coast
or on islands. Hirsch supports this view by comparing Herodotus' account with Assyrian records that contain similes comparing conquered sea peoples to fish. Hirsch looks for Greek origins for Cyrus' tale in parables—particularly in Aesop—and since he finds none he concludes that the tale in Herodotus is likely of eastern origin (ibid. p. 226):

Thus it appears that there is no known Greek version of the parable of the fish which clearly antedates Herodotus and which can be used to prove a Greek origin.

Yet the notion of "netting" people is found elsewhere in Herodotus (and earlier in Homer)—a fact that Hirsch seems to have overlooked. Herodotus describes the final reduction of Chios, Lesbos, and Tenedos in 493 B.C. in the following way (6.31):

Having spent the winter around Miletus the Persian fleet, in the year after it set sail, easily took the islands just off the mainland: Chios, Lesbos, and Tenedos. To take each island the Persians upon seizing them dragnetted them in the following way: the men held hands and stretched themselves from the north shore to the south and passed through the entire island hunting out the islanders. They also took the Ionian cities on the mainland at the same time, but did not dragnet the men because that was not possible.
The Persians had dragnetted Samos in the same manner (3.149; the verb σαγηνεύω occurs only in 6.31 and 3.149):

τὴν δὲ Σάμου σαγηνεύσαντες οἱ Πέρσαι παρέδοσαν Συλοσῶτι ἔρημον ἑδοσαν ἄνδρων.

The Persians dragnetted Samos and handed it over to Syloson destitute of men.

Two things can be deduced from these passages. One, dragnetting an island was clearly a repeated Persian practice. Herodotus' description of the procedure in the first passage does not apply strictly to the three islands mentioned as the presence of τις (indefinite) demonstrates. The Persian capture of Eretria (6.101)—an island city—is also described by later authors with the verb σαγηνεύω (Diog. Laert. 3.33; Strabo 10.1.10). Strabo even notes that Herodotus' use of σαγηνεύω was unique (πόλιν κατέσκασαν Πέρσαι, σαγηνεύσαντες, ὡς φησιν Ἦρωδοτος, τοὺς ἄνθρωπους...; 10.1.10), and it is noteworthy that σαγηνεύω does not occur before Herodotus, pointing perhaps to a Herodotean coinage. Secondly, since the only thing keeping the Persians from dragnetting the Ionian mainlanders was its impracticability, this implies that they too would have been treated as the islanders were if the geography had allowed.

Thus we need not search through external sources for netting imagery as Hirsch has done. Whether Cyrus' fable is of Greek or eastern origin cannot be conclusively proved of course, but there is ample evidence within the pages of Herodotus to allow for Greek—if not Herodotean— invention or influence.

As noted above, the antithesis between Persian land power and Greek sea power is also marked by Herodotus' emphasis on Persian equestrian strength via
references to horses; this thematic connection receives much more attention and
detail than the imagery evoked by netting fish and is first noted when Croesus
pondered how he could successfully oppose the Ionian islanders' naval power
when his own power rested in the cavalry (1.27); Croesus welcomed the idea of
opposing the islanders on horseback should they form a cavalry, and even
considered building a fleet to match their strength. After the Persians conquered
Sardis they found themselves in a similar predicament. The Persians planned
their confrontations with the Greeks in such a way as to maximize their superior
cavalry, whereas their attempts at naval superiority met with notable disasters.37
The sites of Marathon and Thermopylae were specifically chosen because the
former was the best place in Greece to maneuver the Persian cavalry (6.102)38
and the latter offered the Greeks the best defense against that cavalry (7.177).
The importance that the Persians placed upon their cavalry and its natural
antithesis with the naval strength of the Greeks is obvious throughout Herodotus
and need not be belabored. The Scythian success against the Persians, however,
was due primarily to the Scythians' superior horsemanship—a fact easily
overlooked. When we realize that only two nations successfully defended
themselves against Persian invasion—Greece and Scythia—it is profitable to ask
how, of all the nations that opposed Persia, the Greeks and Scythians managed to
overcome the Persian threat, especially since these two peoples were so radically
different.39 Their success, I believe, lay in a correct assessment of and response
to the Persian land strength: the Greeks relied heavily on their ships to offset
their weaker land (particularly, equestrian) strength, and the Scythians avoided
direct conflict by their reliance on their superior horsemanship and their nomadic
way of life. Thus each correctly assessed their aggressor's strengths, and rather
than attempt to alter their strategy they acted from their own strengths. In regard
to the Scythians, just as with the Persians, we can say that they are aptly
represented by the horse, but since they use their horses in a very different way
the image is not one of might or power but rather of mobility:

The Scythians have neither cities, walls, or buildings, but being
nomadic they fight as mounted bowmen and their houses are their
wagons--how could these people be conquered or even approached in
battle?

Herodotus in his analysis of Scythia emphasizes its suitability for
maneuvering horses (4.47.1) which contrasts with Attica, an area "notoriously bad
for it (Hdt. 9.13.3; Thuc. 7.27.5)." What should have been an advantage to
Darius' cavalry was, therefore, more successfully used by the Scythians.

The horse is thus central to historical events in the Histories, and as noted
above, since it represents Persian land power, it receives much more attention
and detail than the representation of sea peoples via fish imagery.

Before turning our attention to people who demonstrate animal
characteristics by their actions there is one more metaphor linking a person to an
animal which should be addressed, for this metaphor has stirred much debate.

This is the dream of Agariste in Book 6:
[Kleisthenes] and Hippocrates were born to Megacles, and Hippocrates fathered another Megacles and another Agariste (who took her name from Cleisthenes' daughter). This other Agariste married Xanthippus the son of Ariphron, and during her pregnancy she had a dream in which she seemed to give birth to a lion; after a few days she bore Pericles to Xanthippus.

The difficulty in dealing with this passage concerns whether or not the lion reference is meant to be complimentary of Pericles. This is the only time Pericles is mentioned by name in the Histories, hence much has been made of this passage. How and Wells, for example, see this as an "exaltation of Pericles" (Vol. II, p. 119), and see in the lion a reference to royal power, drawing a comparison between this passage and the following prophecy about the birth of Cypselus (5.92.3):

An eagle among the rocks conceives and will give birth to a strong, savage lion who will loose the knees of many. Now think well about these things, Corinthians, you who dwell around fair Peirene and beetling Corinth.

Compounding the difficulty in interpreting these passages is a third passage in which the tyrant Hipparchus is addressed as a lion in a dream (5.56.1-2):

εν τῇ πρωτῇ νυκτὶ τῶν Παναθηναίων ἐδόκεε δ’ Ἰππαρχος ἄνδρα οἵ ἐπιστάματα μέγαν καὶ εὐειδέα αἰώσκεσαν τάδε τὰ ἔπεα·

τλῆθι λέων ἀτλητα παθὼν τετλητότι θυμῷ·
On the night before the Panathenaea Hipparchus thought that a tall and handsome man stood over him and spoke these riddling verses:

Lion, suffer and endure the unendurable with enduring heart;
No unjust man will escape paying the penalty.

Hipparchus openly committed this to the dream interpreters as soon as day came; but later he disregarded the dream and attended the procession in which he died.

Hitherto in this chapter lion metaphors have been complimentary. Recall that both Leon (7.180) and Leonidas (7.220.2-4, 7.225.2), whose names are cognate with λέων, met with noble deaths. But the prophecy about Cypselus cannot be taken as complimentary by any stretch of the imagination. In the first place the prophecy is a warning to the Corinthians about Cypselus and the lion symbol in the immediate context refers to his savagery (ἀμετρήτης) not to "a symbol of royal power." All that Herodotus says about Cypselus in the immediate context reveals that he understood the symbolism to be negative too: Ætion’s child grew to be a source of trouble for Corinth (ἐδει δὲ ἐκ τοῦ Ἡετίωνος γόνου Κορίνθω κακὰ ἀναβλαστεῖν; 5.92.81) as the prophecy had predicted and as his treatment of the Corinthians proved (πολλοὺς μὲν Κορίνθιων ἐδίωξε, πολλοὺς δὲ χρημάτων ἀπεστέρησε, πολλῷ δὲ τί πλείστους τῆς ψυχῆς; 5.92.e2).

It would be erroneous, therefore, to treat all lion symbolism similarly since it is obvious that Herodotus does not do so. Agariste’s and Hipparchus’ dreams must then be interpreted in and by their own contexts. Hipparchus’ being
addressed as "λέων" and being told to "ταληθε...ατλητα παθών τετλητοι θυμών" seem to imply "courage and endurance," as G.W. Dyson concluded ("ΛΕΟΝΤΑ ΤΕΚΕΙΝ," CQ 13 [1929] 188), but this does not take into account the second line of the prophecy which certainly suggests that Hipparchus will pay the penalty as any other unjust man (οὐδεὶς ἀνθρώπων ὀδυκών τίσων οὐκ ἀποτίσει). Though it is "very difficult to read any disparaging sense into the appellation" (Dyson, ibid.) in the first line, how could λέων possibly be complimentary in the context of ὀδυκών--unless the second line was purposefully meant to be heard as a paraprosdokian? In light of Herodotus' hatred of tyrants and his disparaging remarks about Hipparchus elsewhere I find it difficult to believe that the address to him as "λέων" was meant to be complimentary, rather it is to be taken as sarcasm. If not disparaging, then the reference is at most ambiguous.

Agariste's dream is even more problematic since there is virtually no additional commentary in the passage or elsewhere. The brevity of the account does not, as Jacoby maintains, "wirkt eindrucksvoller" ("create a more moving effect"; RE, Suppl. 2, 238, 8), intended to extol the then-living Pericles; that is mere assumption. Besides, Herodotus has a habit of including unannotated references to the miraculous. The most we can say is that it suggests a reference to a force of will and perhaps "power" or "might," since these seem to be common elements among the lion references in the Histories. It is possible, too, that nothing in particular is meant by the reference, and, as Dyson concludes, "The account of the dream simply serves Herodotus to end a long and somewhat laboured genealogy" (op. cit., p. 190).
Let us turn now to passages that demonstrate how people display animal characteristics. There are two methods by which this characterization is achieved. The first of these methods focuses on an individual or a group of people who display animal characteristics by their appearance, actions, behavior, or mode of life. This can best be seen in Herodotus’ ethnographic digressions. The Scythians of Book 4, for example, derive their livelihood entirely from animals. They are said to have no agriculture and no fortified cities; they drink horse’s milk and are dependent upon their cattle for the majority of their food; their battles are fought from the backs of horses, and horse-drawn wagons take their belongings wherever they go (Hdt. 4.2, 4.46.2-3). Because of this nomadic existence they are called by Herodotus ἕπεοικοι, meaning literally "those who carry their own house." The term ἕπεοικος is hapax in Herodotus, but comparison with other authors shows that it is used exclusively of animals: in Hesiod ἕπεοικος means "snail" (Works and Days, 571), and Hesychius identifies the term as either a snail or a tortoise (Ὁ κοχλίως καὶ ἡ χελώνη; Etym. Mag. 790.35-36). This word, therefore, not only accurately describes the Scythians’ nomadic life, but more closely associates them with animals as does their own dependence on animals for their livelihood.

A tribe further to the east that also exhibits animal-like behavior is a people called the Argippaioi (4.22.3-4.23.5). These people are said to be bald from birth and to be συμοί, or "snub-nosed" (4.23.2). They speak a peculiar language and live chiefly on the fruit of the ponticum tree that they strain to create a dark-colored juice, which they lap up with their tongues. Animal imagery in this passage abounds: first, the term "snub-nosed" is usually used of
animals in Greek literature, and elsewhere in Herodotus it is used only to describe the hippopotamus in Book 2 (2.71) and the horse in Book 5 (5.9).

Second, to live primarily on the fruit of a tree may remind us of either birds or perhaps apes—an obvious "snub-nosed" animal—but the manner in which the fruit is consumed is most striking: normally only an animal laps up liquid with its tongue, not a human. Third, their very name, Argippaioi, contains the stem ἄροι-, meaning horse. These factors combine to underscore the animal imagery in Herodotus' description.

Other examples can be found in Herodotus' Libyan digression later in Book 4 (4.168-199). The Auses, for example, mingle with their women in common "like animals" (κττηνηδόν; 4.180.5); the Gyzantes make more honey, Herodotus says, than is supplied by bees (4.194); and the Trogloodytes are said to live on a diet of snakes, lizards, and other reptiles, and to communicate with one another by squeaking like bats (4.183.4-5). Many such examples abound, and there is no need to attempt a complete list of peoples and attributes to show that Herodotus' ethnographic digressions include much animal imagery. What is more noteworthy are the patterns which develop when these examples are geographically plotted. When this is done two things become evident: first, the more remote a people are from the Greek center of the world, the more their behavior manifests itself through animal imagery; and second, the more remote a tribe or nation is, the more "un-Greek" or "barbarian" they are in Herodotus' thinking, so that the remotest tribes have little or no culture and are depicted as being the most animalistic. In the description of the Babylonians in Book 1, for example, Herodotus begins with the city of Babylon where people eat wheat,
barley, dates, wine, and honey, and dress in linen tunics (1.193, 195). Then he moves in his descriptions to the more remote Araxes River where tribes eat roots and feed on whatever fruit they find suitable for food, implying that they have no established agriculture (1.202.1). Then Herodotus describes the yet more distant tribes at the mouth of the Araxes, where the people are said to dress in seal-skins and eat raw fish (1.202.3). His descriptions move finally to the most remote Caucasus Mountains north of the Araxes River where tribes live off wild fruits and copulate in the open "like animals" (κατά περ τοίσι προβόσκιοις; 1.203.1-2). This progression shows obvious movement from the nearer and more civilized peoples to those that are further and less civilized as evidenced by the animal imagery in the clothes they wear, the food they eat, and the customs they follow.

A similar progression is found in Herodotus' description of Libyan tribes in Book 4, sections 168 and following. Starting from Egypt he describes the tribes in geographical order from east to west. First come the Adyrmachidae, whose lifestyle is similar to the Egyptians' (οἱ νόμοισι μὲν τὰ πλέω Αιγυπτίοισι χρέωνται, 4.168.1). Further west the Nasamones are described who have cattle but also eat locusts, and who use their wives in common (4.172.1-4). Further on are found the Garamantes who live where wild beasts are found. They hunt the Troglohytes on four-horse chariots and avoid any dealings with humans (4.174, 4.183.4). West of the Triton River live the above-mentioned Auses whose women are common property and who mingle in common like animals (4.180). The most westerly Libyan peoples are included in a listing of wild animals in section 191 (4.191.3-4):
The land in Libya where the nomads live is flat and sandy east of the Triton River, but west of this point where the farmers live the land is very hilly, overgrown, and full of wild beasts. Among them are huge snakes, lions, elephants, bears, asps, horned asses, dog-headed men, headless men with eyes in their chests (as the Libyans assert), wild men and wild woman, and many other beasts not as fabulous.

The story of the five adventurous youths in Book 2 (2.32.3-7) who took it upon themselves to explore the Libyan desert corroborates these geographical and cultural assumptions: as the youths travelled westward they passed first through inhabited lands, then through a region of wild beasts, then a desert, and finally were captured by pygmies of unintelligible speech and were carried off to a village that lay beside a crocodile-infested river.

Similar progressions from civilized peoples to the more barbaric and animalistic can be found in Herodotus' listing of Scythian tribes. In sections 16 and following of Book 4 Herodotus begins with the nearer, southern tribes of the Callipadae and Alizones and works his way north and east, away from the Greek world. These first two tribes are described as Greco-Scythian, combining Scythian customs with a more civilized, agricultural economy (4.17.1). Next come agricultural Scythians who grow grain not for food but for export (4.17.2); beyond these are the Neuri (4.17.2) who later in the book are said to turn into wolves once a year (4.105.2); and north of the Neuri the country is uninhabited (4.17.2).
In the following section we see the same pattern: directly north of the Black Sea we first come to the agriculturally-based Borysthenites, a people known to the Greeks (4.18.1-2); further north lies a tract of uninhabited desert (4.18.2), beyond which live the Androphagi--the Maneaters (4.18.3). We are told later that this nation is comprised of the most savage men who have no customs or laws (4.106); they are nomads and are the only people in this part of the world to eat human flesh. North of these Maneaters there is utter desert without trace of human life (4.18.3).

This pattern repeats itself several times in Book 4, and one need only go to the map of European tribes in How and Wells' commentary (Vol. I, p. 305) and compare the most northerly and easterly tribes to Herodotus' descriptions of them to be convinced that this is indeed Herodotus' pattern of description.

Lastly, not only do far-off peoples exhibit animal characteristics but far-off lands do as well. When Herodotus reaches the farthest limits of geographical knowledge he often mentions that uninhabited desert lies beyond. Twice, however, this wasteland is itself described with animal imagery. In Book 4, section 31, the land to the far north of Scythia is said to be impassable due to falling feathers, and in Book 5, section 10, the country beyond the Danube to the north, according to the Thracian account, is infested by bees that make further progress impossible. Although Herodotus dismisses these two tales as fictitious they correspond nicely with his geographical preconceptions about people and show that both Herodotus and his sources held similar assumptions about their world.
The last method of characterization to be addressed focuses on those who treat others as animals and who thus lower them to the status of beasts. Substitution of this nature is expressive of a wrongful desire to subjugate or degrade. This may be accomplished through simple identification as when the Scythians compare the Persians in Book 4 to three meek and powerless animals—a bird, a mouse, and a frog—that were sent to them as gifts. In a similar way, Kleisthenes in Book 5 made fools of the Sicyonians by naming three of their tribes the "pig-men," "donkey-men," and "swine-men." Most occurrences, however, of this type of substitution involve physical harm and abuse. The Scythians illustrate this in their treatment of prisoners of war, for in addition to the sacrifice of certain animals the Scythians hold annual sacrifices of human captives in honor of Ares. Thus they place humans where normally only animals are found. In war, the Scythians drink their victims' blood and even wear their victims' scalps sown together as a cloak, as one would an animal skin. It is no wonder that Herodotus says the Scythians' ways are entirely opposite of Greek customs (4.76.1) and that in most respects he does not admire them (4.46.2).

In the mistreatment of subject-peoples there is no better example than the Persians. Not only do the Persians treat their opponents as animals by whipping, yoking, or bridling them, but oftentimes their own subject allies as well. In Book 7 the canal near Mt. Athos is cut by teams of workers from the Persian army who are compelled to dig ὑπὸ μαστίγων, "by whips," or "under the lash" (7.22.1). Later, at the crossing of the Hellespont, Xerxes watches his army cross over, "under the lash" (ὑπὸ μαστίγων) as though the people were beasts of burden to be driven on with whips (7.56.1). And in Book 8 the Ionians are said by
Themistocles to be "yoked" (κατέξευξικε) in their military service to Xerxes (8.22.2). This yoking image is often used in reference to conquered armies or even conquered lands and waters as is seen in Xerxes' yoking of the Hellespont. Numerous times in Book 7 Herodotus, through his own narrative or through the mouth of one of his characters, refers to Xerxes' bridging of the Hellespont as an attempt to subdue it via this image. After Xerxes announces his intention to yoke the Hellespont and lead an army into Greece (7.80.1) he concludes that Persia will ultimately rule all the world and that both the guilty and innocent will wear the "yoke of slavery" (δούλων ζυγόν; 7.81.1).53

Herodotus throughout his history shows the treatment of others as animals to be predominately Persian, and reveals this to be a Persian mind-set in Xerxes' discussion with Demaratus in Book 7 (7.103.3, 4); Xerxes asks:

κώς ἂν δυναίσθο χίλιοι ἢ καὶ μίριοι ἢ καὶ πεντακισμύριοι, ἐόντες γε ἑλευθεροί πάντες ὅμως καὶ μὴ ὑπ' ἑνὸς ἀρχόμενοι, στρατῷ τοσῷδε ἀντιστήναι; ... ὅποι μὲν γὰρ ἑνὸς ἀρχόμενοι κατὰ τρόπον τὸν ἑμέτερον γενολατ' ἄν δειμαίνοντες τούτων καὶ παρὰ τὴν ἐωτῶν φύσιν ἀμείνονες καὶ οὐ καὶ ἀναγκαζόμενοι μᾶστιγι ἐς πλένας ἐλάσσονες ἐόντες: ἀνείμενοι δὲ ἐς τὸ ἑλευθερον οὐκ ἂν ποιόσιν τούτων οὐδέτερα.

How could a thousand, ten thousand, or even fifty thousand men, since they are all free and not ruled by one leader, oppose such a great army? ... For if they were ruled by one man, as we are, they might through fear of him overcome their weak nature, or be compelled by the whip to go against larger numbers; but since they are immersed in their freedom they would not do either.54

The treatment of men as animals is particularly conspicuous in the actions of each of the other Persian kings as well:55 Cyrus' first achievement was to use a whip on a disobedient boy (1.114.3), and later in life he compared the Ionians
and Aeolians to fish who had been caught in a net and dragged ashore (1.141). Succeeding Cyrus, Cambyses forced the Egyptian ruler Psammenitus to watch his own son pass by with a horse's bridle on (3.14.4) and made Psammenitus drink bull's blood (3.16.1). Cambyses' march against Ethiopia resulted in his men eating the pack animals, then each other to stay alive (3.25). Cambyses also exhumed the body of Amasis which he then had whipped, goaded, and plucked of its hairs (3.16.1), and in his insanity he shot Prexaspes' son with an arrow (3.35.3)—one of several hunting images involving people. And finally, Cambyses' successor, Darius, threatened the physician Democedes with "whips and goads" (μάστιγας τε κολ κέντρα; 3.130.2).

The only Greek individual that I have found to exhibit this type of behavior is Cleomenes in an isolated occurrence in Book 6. After being refused admittance to Hera's temple Cleomenes has Hera's priest dragged from the temple and whipped (6.81). The Greek response to this, however, is one of outrage: the Argives assert that the gods responded by driving Cleomenes mad so that he committed suicide (6.84.1), and the more sympathetic Spartans have nothing more to say than that Cleomenes was simply insane (6.84.1).

Animal imagery is abundant in Herodotus' Histories, and the various literary uses of it that I have addressed in this chapter are by no means exhaustive. What I hope to have shown here is that animal imagery is used in literary ways to characterize people and their actions, and that animals in the Histories are found in richer and more varied contexts than the simple descriptions of foreign fauna. Even in passages devoted exclusively to these descriptions we are reminded that Herodotus writes with a view both toward the
people who interact with those animals and toward how the Greeks may have viewed this interaction; his introductory remark to his lengthy Egyptian animal descriptions is indicative of this: "The Egyptian custom regarding animals is as follows" (νόμος δὲ ἐστὶ περὶ τῶν θηρίων ὡδὲ ἐχων; 2.65.3). And finally, Herodotus as we have seen reveals an innate Hellenocentrism in the handling of his material, despite his efforts at impartiality. This is clearly revealed when Artabanus supposedly warned Mardonius that if he urged the king to march against Greece Mardonius would become prey to dogs and birds (7.100.3). This is a Greek notion put into Artabanus’ mouth; Herodotus had already stated that the Persians don’t bury their dead unless the corpse has been torn by a bird or dog (1.140). Herodotus’ Hellenocentrism thus reveals as much about himself and about his fellow Greeks’ attitudes as it does of the external world he attempted to describe.
Notes to Chapter IV

1 "There are many lekythoi and askoi decorated with felines and it is a thankless task to identify painters of these hasty products." (Ann Ashmead, "Greek Cats," Expedition 20,3 [1978] 47).

2 At first glance τάδε might be mistaken for the subject since σφίξοντας appears to be passive.

3 His only incredulity is expressed in ως δὴ λέγεταί υπὸ Περσήων, but this refers strictly to the olfactory capabilities of the ant, not to the camels' actions.

4 He need not have done this since in his description of a lion cub's birth immediately preceding the passage in question (vid. 3.108.4) he supplies no such motivation.

5 Albeit against another family member. The similarity between the tale about the snakes and events in Greek drama is hard to miss.

6 Another example is the phoenix whose parent is referred to as ὁ πατήρ (2.73). The phoenix prepares its father for burial by enclosing the body in myrrh (a spice commonly used for burials in classical times).

7 The arthrous use of θείου (τὸ θείου; = ὁ θεός) in the Histories consistently signifies a divine power that governs and oversees the activities of the animate world. Solon warned Croesus that τὸ θείου was envious of human prosperity (1.32.1), and Amasis advised Polycrates to beware of too much success for the same reason (3.40.2).

8 While this study owes much to this new trend, our tendency to approach history and poetry in separate and distinct ways is not innately fallacious, for the ancients themselves from the 4th century on recognized this distinction and consciously composed their works accordingly.

9 How and Wells (loc. cit.) point out that the phrase ἐν πέτρῃς was taken to refer to Εἴτην's home town of Petra.: "ἐὼν ἐκ Πέτρης" (5.92β.1).

10 See the reference to λέων in the discussion of Hipparchus and Pericles below.

11 This also makes it difficult to capture the intent of the original in an English translation. The Greeks were well aware of the etymology of names, and
this of course included those derived from words not related to animals as the following example from Herodotus illustrates (Hist. 9.91.1-2, 92.2):

As the Samian stranger was making a great appeal, Leotychides (whether wishing to inquire for the sake of an omen or doing so by divine happenstance) asked, "Samian stranger, what is your name?" The man replied, "Hegesistratus." Seizing upon that very word—in case Hegesistratus was eager to say something else—Leotychides said, "I receive ["Leader of the Host"] as an omen, Samian stranger...

Doing this the Samians sailed off, but Leotychides bid Hegesistratus to sail with his men since he considered his name to be an omen.

12 Herodotus provides a genealogy from Heracles' son Hyllus through Leonidas (7.204).

13 Herodotus pairs Xerxes and Leonidas against one another as though they were rival epic heroes. Although these two never fight in single combat, Herodotus' view of them is evident in several instances. The more notable of these are a description of Xerxes immediately before the battle of Thermopylae and the struggle over the body of Leonidas in the final moments of conflict. Concerning the former Herodotus says (7.187.2):

Among so many thousands of men there was no one more worthy to hold such power than Xerxes himself because of his handsomeness and stature.

This is clearly epic in tone. Herodotus' brief description of the battle over Leonidas' corpse is no less epic in tone (7.225.1):

At that time the two brothers of Xerxes fell in battle, and over the dead body of Leonidas there was a great struggle between the Persians
and Spartans until the Greeks in their prowess had routed the enemy four times and stole away the body.

In the aftermath of the battle Xerxes' particular hatred of Leonidas is seen in his cruel treatment of Leonidas' body (7.238.1-2). The parallels between these descriptions and scenes in epic—particularly the Iliad—are clearly suggested. By epicizing the opposing leaders in these ways Herodotus stresses the grandeur of the conflict and dramatizes the roles of its participants.

14I.e. at Thermopylae in order to meet Xerxes' troops.

15The indirect statement logically follows "ταύτη καὶ μᾶλλον τὴν γυνώμην πλείστος εἴμι" in 7.220.3.

16How and Wells also take this view: "λεόντων plays upon the name Leonidas" (loc. cit.).

17Hist. 7.238.1:

ταύτα εἶπεν Ἑρέρχης διεξήρε διὰ τῶν νεκρῶν καὶ Λεωνίδεω, ἀκηκώς ὧτι Βασιλεύς τε ἦν καὶ στρατηγὸς Λακεδαιμονίων, ἐκέλευσε ἀποταμόντος τὴν κεφαλήν ἀνασταρώσαι.

Having said these things, Xerxes went through the bodies of the dead, and since he had heard that Leonidas was the king and the general of the Spartans he ordered that Leonidas' head be cut off and stuck on a stake.

18Cf. Pausanias 9.40.10 for the stone lion that stood over the tomb of the fallen Thebans at Chaeronea.

19Hist. 2.39.1, 2.48.1, 5.8, 6.76.2, 7.113.2, 9.61.2, et al. How and Wells construe Leonidas' fate to be a Persian sacrifice (loc. cit.):

They may have gone on the maxim "Who spills the foremost foeman's life, that party triumphs in the strife" (Scott), cf. Tacitus, Germ. 10; but the act is more probably simply a sacrifice of the first-fruits of victory such asProcopius ascribes to the Scandinavian Thulitae (De Bell. Goth, ii.15)...

20This is, however, difficult to prove because διώδεξιον is hapax in the Histories and does not occur before Herodotus.

21The many lion similes in the Iliad and Odyssey demonstrate how early in the history of Greek literature the lion was associated with boldness and ferocity.

22Ἡροδότου Ἀλκιαρηνοσέος ἱστορίης ἀπόδεξις ἤδε... (Hist. proemium).

23As stated in the introduction to this chapter on page 107: 'By examining Herodotus' use of animal imagery in such contexts and by establishing
from the clearer and more poignant passages what Herodotus' views toward animalistic behavior are, it is possible to set precedents which may be applied to similar literary contexts in which animal imagery is ripe but which are void of direct commentary on Herodotus' part."

24 How and Wells make no comment about his name. Macan (loc. cit., Herodotus: The Seventh, Eighth, & Ninth Books [MacMillan and Co.: London 1908]) says "Mys (mouse, 2.141) as a proper name is curious, but genuine." Macan then provides two later examples of men with the same name.

25 The Scythians' gifts were interpreted to mean that the Persians could not escape unless they turned into birds and flew away, turned into mice and hid in the ground, or turned into frogs and jumped in the water.

26 Pausanias in his brief account of Mys (9.23.6) gives no indication that he made this connection.

27 There are two men in the Histories with this name. The first is mentioned as having led an expedition sent by Darius to discover the mouth of the Indus River (4.44.1-2).

28 Dogs appear in a variety of contexts: they are used for hunting (1.36.2, 4.22.2), they are scavengers (7.106, 9.112), they accompanied the Persian army in great numbers (7.187.2), the Egyptians considered them sacred (2.66.1), and incidents involving dogs are periodically mentioned (vid. e.g., 7.88.1, where a horse threw its rider when startled by a dog).

29 This will become evident when we examine Herodotus' ethnographic digressions.

30 The λαγός of Herodotus is undoubtedly a hare and not a rabbit, though in colloquial speech these two names are often used synonymously. Apart from minor physical differences, rabbits are born blind, furless, and helpless, whereas hares are fully-furred and their eyes are open. Herodotus states that the λαγός in its final stage of fetal growth is fully-furred (3.108.3), revealing it to be a hare.

31 They were "sacred to the sun-god Mithra" (How & Wells, 3.90.3). The Gyndes was split into 360 channels to correspond to 360 days of the solar year and the Cilicians' yearly tribute to Darius was 360 white horses (3.90.3).

32 His madness had carried him beyond all religious constraint. Cf. 3.38.1: 

\[
pαυτακτη \ μοι \ δηλα \ εστι \ ὃτι \ ἐμάν \ μεγάλως \ ὁ \ Καμβύσης; \ ού \ γάρ \\
\dν \ ροισί \ τε \ καὶ \ νομάιοι \ ἐπεχείρησε \ καταγελαν. \\
\]

In every way, then, it is clear to me that Cambyses was greatly out of his mind. For otherwise he would not have endeavored to mock both conventional and sacred customs.
It was easy to see that the omen signified that Xerxes would lead his army into Greece with great splendor and pride... (7.57.1).

This is clear from his acknowledgment that the Scythian gifts previously sent to him—a bird, a mouse, and a frog—symbolized the Persian army.

The slain suitors in the Odyssey (22.383-388) are compared to fish that have been caught in a net and dragged ashore:

Odysseus saw the many suitors all fallen in the blood and dust, like fish that fishermen have dragged out of the hoary sea onto the curving shore in a close-meshed net; they are all piled up on the sand, longing for the waves of the sea, and the burning sun draws out their life.

The storm off Mt. Athos and the overwhelming Greek success at Salamis are the two most prominent examples.

Though much has been argued to the contrary, it is my opinion that the Persian cavalry was present at least in part at Marathon. The passage referred to (6.102) clearly indicates that the Persians planned to use their cavalry there, and Herodotus a few sections earlier (6.95) mentions horse-transports that were part of the Persian contingent. In addition, the Persians at Marathon were surprised that the Greeks attacked without the aid of cavalry (6.112)—an indication that the Persians held the upperhand in that regard. For a thorough discussion of the battle with particular attention to the cavalry see J.A.S. Evans, "Herodotus and Marathon," Florilegium 6 (1984) 1-27.

Herodotus' Scythian excursion (4.1-82) makes this abundantly clear. The Scythians were especially opposed to Greek practices:

These Scythians also avoid using foreign customs at all costs, most of all the Greeks'...
(nomadic") is an epithet used of snails; see below (p. 132) for further discussion of this passage.

Evans, ibid. p. 3.


How and Wells, Vol. II, p. 52. How and Wells make all non-literal references to lions (e.g. 5.56.1, 6.131.2, and 7.225.2) symbols of royal power.

The appellation of Christ in the New Testament as the "lion of the tribe of Judah" (Revelations 5:5) and of Satan as a "roaring lion, seeking whom he may devour" (1 Peter 5:8) demonstrates the disparities possible depending on context.

Herodotus consistently refers to his murder as an attempt to liberate Athens (5.55, 6.123.2).

The ambiguity implied by αἰσθητογαί refers to the method of the prophecy's fulfillment--i.e. Hipparchus' death (τίσων...ἀποτίσει)--not to the characterization of Hipparchus.

Vid. e.g., the miraculous events in Aristeas' life (4.14-15) which Herodotus lists without any intimation of credulity or disbelief.

I choose this phrase since it does not necessarily denote a quality which is innately good as the word courage does.

E.g. of the dog (Xenophon Cyn. 4.1), hippopotamus (Arist. HA 502a11), bee (Theocritus 7.80), goat (Theocritus 8.50), and dolphin (Aelian NA 12.45 [quoting Arion]).

This list is representative. The following tribes have been excluded for brevity: the Giligamae, the Asbystae, the Auschisae, the Bacales, the Psylli, the Macae, the Gindanes, the Machlyes, the Maxyes, the Zaueces, and the Gyzantes.

Cheops' harsh treatment of the Egyptians during his reign can be mentioned as an additional example at this point (2.124ff). Though no whipping or yoking is expressly mentioned as they are in the Persian examples that follow, the track that took ten years of forced labor to build had carvings of animals upon it (2.124.4)--symbols which contrasted strongly with the fact that no animals are mentioned in its construction, only Egyptian slave labor.

"Yoking" a body of water is terminology clearly taken from reference to animals. Examples from Herodotus include the yoking of camels (3.102.3) and horses (5.9.2), and pack animals were commonly called ὑποκύγων (3.25, 7.25, et. al.).
Other references to yoking the Hellespont include the following: 7.10β.1, 710γ.1, 7.33, 7.34, 7.36.1, 7.158.1, 8.20.2, 9.120.4; Xerxes in a fit of anger also has the Hellespont whipped and branded, and has fetters thrown into it (7.35). Herodotus may be drawing his references to yoking from The Persians of Aeschylus; note the following words of the chorus, taken from the parodos, lines 65-72:

πεπέρακεν μὲν ὁ περσάπτωλος ἢν
βασίλειος στρατός εἰς ἀν-
τίπορον γείτονα κύρους,
λινόδέσμῳ σχεδία πορθ-
μόν ἀμείψασ
'Αθαμαντίδος Ἑλλάς,
πολύγομφον ὀδύσμα
ζυγόν ἀμφιβαλὼν αυχένι πόντου.

The king's city-destroying army has already crossed over to the neighboring land, opposite their own, having made the passage over Helle's stream, daughter of Athamas, on a floating, cord-bound bridge, by casting on the sea's neck a well-fastened roadway as a yoke.

This is a hollow assertion in light of the fact that the Persians plied whips on their own troops at Thermopylae (7.223.3). P.G. Maxwell-Stuart, in his examination of Xerxes' atrocities ("Pain, Mutilation, and Death in Herodotus VII," PP 31 [1976] 356-362), states, "The huge machine works only by force and what is more it consists not of individuals but of cyphers without identity as Herodotus proceeds to show by the remaining number of carefully placed atrocities, whose import is not so much narrative as symbolic" (p. 359).

Among the following examples can be included Intaphrene's humiliation of the palace guards by placing horses' bridles on them (3.118.2).

ἀποτίλλω ("pluck") and its root (τίλλω "pluck") are used only of animals elsewhere (rabbit, 1.123.4; bird, 3.76.3).

When Cambyses sent Prexaspes to kill his brother Smerdis, Prexaspes is said to have killed him on a hunt (ἐπὶ ἀγρην; 3.30.3). Recall also that when the Persians dragnetted the Ionian islands (6.31) Herodotus described them as "hunting out the men" (ἐκθρεύωντες τοὺς ἀνθρώπους). Other nations illustrate this: the Garamantes hunt the Troglodytes (4.183.2-4) and the Sagartians use lassos to pull people in and kill them in war (7.85).

Maxwell-Stuart (op. cit., p. 360-361) asserts that the inclusion of a reference to the crucifixion of Artayctes (7.33)—a "Greek atrocity"—among Persian atrocities in Book 7 (7.18-40) caused Herodotus' listeners to be "startled...when he suddenly reminded them that the Greeks were capable of being little better." On the contrary, my view is that Herodotus sanctified the act
by surrounding it with Persian atrocities and by detailing Artayctes’ impious acts in the same passage. Whichever interpretation one may take of this passage it nevertheless has little bearing on the issues addressed in this chapter since animals were never crucified.

59Remarking on Herodotus’ description of Indian tribes in Book 3, D. Konstan states, "One does not need to be an ethnologist to know that these descriptions tell us more about Herodotus’ picture of the world, or that of the Greeks generally, than they do about India" ("The Stories in Herodotus’ Histories: Book I," Helios 9, 1 [1983] 5).
CHAPTER V
HERODOTUS AND THE ZOOLOGICAL TRADITION

Abbreviations

EE: Aristotle. *Eudemian Ethics*
GA: Aristotle. *De Generatione Animalium*
HA: Aristotle. *Historia Animalium*
Hist.: Herodotus. *Histories*
Mete.: Aristotle. *Meteorologica*
Mir.: Aristotle. *On Marvelous Things Heard*
NA: Aelian. *De Natura Animalium*
NH: Pliny. *Naturalis Historia*
PA: Aristotle. *De Partibus Animalium*
Pol.: Aristotle. *Politica*

Hitherto I have looked primarily at the various literary aspects of animals as they appear in the *Histories* (having dealt with some of the scientific aspects in Chapters I and II). There remains one important inquiry—namely, the effect of Herodotus' writings on later zoologies. There are numerous references to the *Histories* in later works that deal with zoology, yet one notices that classical writers often quote, use, or abuse Herodotus' animal descriptions and stories without citing him, even though other authors are freely cited in the same work. These observations have prompted this chapter on Herodotus and his zoological legacy.

Most modern works that trace the history of zoology begin with a treatment of Aristotle and proceed to other later writers, such as Pliny and
Aelian, in their presentation of early, pre-Linnaean works. Although Aristotle was the first and only ancient author to offer a systematic treatment of animals, Herodotus (I will contend) was a catalyst for the rise of zoological curiosity and investigation. I use the term "catalyst" because the processes of empirical observation were already put to use before Herodotus by the pre-Socratics, and it is likely that animal descriptions similar to those found in Herodotus were contained in the lost works of Hecataeus. Other writers who predate Herodotus were keen in stereotyping and anthropomorphizing animals, such as Semonides in his poem on women (frg. 7) or Aesop in his animal fables. Poets and fable writers such as these show an early Greek interest in animal behavior, but Herodotus, as a traveler and investigator of foreign animals, was the first to study and record the behavior of animals that were largely unfamiliar to the average Greek and to present an abundance of exotic fauna to a wide Greek audience. And--most importantly--out of all the writers prior to Aristotle, Herodotus was the one from whom later zoological writers most often drew their material.

Four primary animal digressions in Herodotus' work provide the bulk of material which is copied or reworked by later writers on zoology. Each of these digressions corresponds to countries or major regions of the known world: the first is Egypt, in Book 2; the second is comprised of India and Arabia together, in Book 3; the third is Scythia, in Book 4; and Libya is fourth, also in Book 4. Herodotus as we have seen does not restrict his zoological observations to these five geographical areas. He often includes remarks on animals within discussions of lesser known peoples, pointing out what animals are domesticated, eaten, or hunted. Table 1 in Chapter II demonstrates how pervasive this treatment is in
the Histories. Two things nevertheless distinguish Herodotus' five major geographical regions: 1) each includes lengthier descriptions and/or longer lists of animals than found elsewhere in the work; and 2) these regions become major focal points for Greek zoological curiosity and speculation throughout classical times.

The first writer after Herodotus to treat zoology at length was Ctesias of Cnidos, a Greek who wrote a guidebook of sorts to India (the Indika) and a history of Persia (the Persika) in the late 5th century B.C., just a few decades after the Histories was completed. Ctesias exhibited an interest in Indian wildlife. Although his works are lost an epitome of them survives from the pen of Photius, a 9th century A.D. Byzantine scholar and compiler. Ctesias was a doctor from Cnidos, a city in southwest Asia Minor famed for its medicine. As a physician at the Persian court from 405 to c. 397 Ctesias claims to have had recourse to official Persian records that he used in his works. These records seem to have been "bien plus laudatifs que critiques dans leur version officielle des événements,"1 which make Ctesias' history unreliable as anyone can note from even a cursory comparison between Photius' epitome and Herodotus' history. Yet from Photius we learn that Ctesias accused Herodotus of being a liar and of fabricating stories.2 Herodotus' assertion that the Persians never burn their dead (3.16), for example, is contradicted by Ctesias who relates that a Persian man did indeed burn his dead father on a pyre (Photius 72.43b). Ctesias specifically names Herodotus in his Persian history to attempt to prove the superiority and veracity of his own work.3 Although Ctesias claims eyewitness for the majority of what he sees (φησι δὲ αὐτὸν τῶν πλειώνων ἀιτορεῖ αὐτόπτην
Photius 72.36a), Photius is right in saying that he did not remove himself from fictitious stories, even though he accuses Herodotus of them (Photius 72.45a), as is noticed by modern scholarship; How and Wells, for example, remark that Herodotus is "free from the ridiculous tales which later writers give, for example Ctesias" (Vol. I, 287). What is important to note is that Ctesias felt obliged to respond to Herodotus who had only finished his work just a few decades earlier. This shows that Herodotus' work was disseminated, received quickly, and became popular enough to merit Ctesias' repeated attention. Since Herodotus' work influenced Ctesias', which in turn shaped the history of zoology (many of Ctesias' tales and descriptions find their way into later zoologies), I shall therefore examine those elements in Ctesias I have found borrowed or adapted from Herodotus' work.

Herodotus is the first writer to remark on the comparatively great size of Indian animals (3.106.2), a notion that is often repeated by later zoologists:

τούτο μὲν γὰρ πρὸς τὴν ἡδονή τῶν οἰκειόμενων ἡ 'Ινδική ἐστι, ὡσπερ ὀλίγω πρότερον εἴρηκα: ἐν ταύτῃ τούτῳ μὲν τὰ ἐμψυχά, τετραπόδα τε καὶ τὰ πετεινά, πολλὶς μέζω ἢ ἐν τοῖσι ἄλλοιοι χωρίωσι ἐστὶ, πάρεξ τῶν ἱππών...

As I mentioned a little earlier, India is the most easterly inhabited country. Living things there, both four-footed and winged, are much larger than in other countries, except the horse...

This statement finds a few corroborative, though extraordinary specifics in Ctesias, who asserts that Indian apes have tails 12 feet long (72.45a), Indian dogs are so huge and fierce they battle lions (72.45b), the sheep and goats are larger than donkeys (72.46b), and a type of worm that grows to be over 20 feet long
seizes cows, camels, or anything else and drags them into the Indus River to be completely eaten—except for their bowels (72.49a). Thus Ctesias expands on Herodotus by relating specific examples he has gathered. Herodotus does not give specifics in his own version (excepting the tale of dog-sized ants that he described briefly in the previous passage). Instead, he moves immediately from a discussion of Indian peculiarities to Arabian (i.e., from 3.106 to 3.107). This transition seems to have escaped Ctesias’ attention for he transfers aspects of Herodotus’ descriptions of Arabia and other lands to India in the Indika.

Herodotus’ description of long-tailed Arabian sheep at 3.113, for example, is echoed by Ctesias’ statement that the sheep in India have such big tails that the females’ are cut off so the males can mount them (72.46b). Another adaptation comes from Herodotus’ statement at 3.116:

\[
\text{πρὸς δὲ ἀρκτοῦ τῆς Εὐρώπης πολλῷ τὶ πλείστος χρυσὸς φαίνεται ἕως. διὸς μὲν γνώμενος, οὐκ ἔχω σοῦτο τοῦτο ἀτρεκέως εἶπαι, λέγεται δὲ ὑπὲκ τῶν γρυπῶν ἀρπάζειν 'Ἀριμασπίας ἄνδρας μουσοφόλιμους.}
\]

It is evident that northern Europe contains by far the most gold; but I am not able to tell exactly how it is acquired. It is said that the one-eyed Arimaspians men steal it from griffins.

Ctesias places this gold in India (72.46b):

\[
\text{ἐστὶ δὲ καὶ χρυσὸς ἐν τῇ 'Ἰνδικῇ χώρᾳ, οὐκ ἐν τοῖς ποταμοῖς εὐρύσκομενος καὶ πλυνόμενος, ὡσπερ ἐν τῷ Πακτὼλῷ ποταμῷ, ἀλλ’ ὁρὴ πολλὰ καὶ μεγάλα, ἐν οἷς οἰκοῦσι γρύπες...}
\]

There is gold in India—though not to be found washed down in the rivers as occurs in the Pactolus—but in a vast mountain range where griffins dwell...

and expands Herodotus’ version by describing these griffins (ibid.):
...ὄρνια τετράποδα, μέγεθος ὡσον λύκος, σκέλη καὶ δύνας ὀλαπερ ἀέων. τὰ ἐν τῷ ἄλλῳ σώματι πτερὰ μέλανα, ἐρυθρὰ δὲ τὰ ἐν τῷ στήθει. δι' αὐτοὺς δὲ ὁ ἐν τοῖς ὀρεσὶ χρυσὸς πολὺς ὃν γίνεται δυσπόριστος.

These are four-footed birds as large as a wolf, having legs and claws like a lion, black feathers all over their body and red feathers on their chests. Though the gold is plentiful among these mountains it is hard to get on account of the griffins.

Other adaptations include Herodotus' observation that Libya has no pigs (4.186, 192), which is paralleled by the absence of pigs, wild or tame, in the Indika (72.46b); and the dog-headed tribe of Libya (Herodotus 4.191) is given elaborate expansion by Ctesias who places them in India (72.47b-48a). In addition, the "fish-bearing springs" of Zacynthus where pitch is procured (72.46a) finds its source in Herodotus who speaks of a pitch-bearing lake on Zacynthus (4.195)--both writers including this note immediately after ending a digression on animals. It is of course impossible to know precisely what sources Ctesias used since we only have an epitome of his work, but Ctesias' adaptation, expansion, and specific correction of Herodotus show that Herodotus' Histories had an immediate impact on the understanding of distant lands in his own day.

It seems, then, that both historians were interested enough in exotic wildlife to investigate and gather stories about various foreign animals. The major difference between them, though, is that Ctesias exaggerates and desires to outdo or "out-sensationalize" Herodotus' zoological curiosities, as Photius indicates (τῶν μέντοι γε μῦθων, ἐν οἷς ἐκείνωι [i.e. Herodotus] λοιθορεῖται, οὐδ' οὗτος [i.e. Ctesias] ἀφίσταται; Photius 72.45a). To what degree this is true
of Ctesias is difficult to determine since the loss of his works prevents further inquiry into this question. We nevertheless know that Ctesias' work added to Herodotus' observations many "firsts" which became part of the zoological "pool", as it were, from which later writers of zoology drew their material (see below for brief remarks on Aristotle's use of Ctesias). Perhaps the most memorable of these "firsts" is a supposed eye-witness description of a beast called the mantichore (μαντιχόρας in Ctesias), an animal as large as a lion, having the face of a man, three rows of teeth in its upper and lower jaws, and a tail staggered with poisonous darts that it shot at enemies from as far as 100 feet (72.45b).

Before turning to Aristotle who was the first "true zoologist" in the modern sense, I should first define what is meant by the word "zoology". In the classical world zoology was much broader in its scope than in modern times. A zoologist according to Aristotle was a φιλοκός or a φυσιολόγος, that is, a writer on nature. A φιλοκός/φυσιολόγος was simply one who studied φύσις, though of course there were "specialists" as there are today. These terms not only described those who addressed zoology but all areas of science, from philosophy to anatomy, for Aristotle applies these terms indiscriminately (vid. e.g., PA 641a7, 21, 647a11, GA 741b10, 38, 742a16, 763b31, 769a7). The broader term "naturalist" might be a more accurate rendering of the Greek terms as used by Aristotle. In Roman times Pliny refers to zoologists simply as auctores—authorities—of the subject they had written on. Furthermore, it is difficult to define zoology as a discipline simply by comparing the treatments of the subject by various authors because ancient zoologies are so disparate in their approaches; some included personal observations, some collected the notes of others, and some resorted primarily to
telling anecdotes. A zoology, then, in the classical sense was a writing about animals, and the only person to fulfil the role of what we might consider to be that of a modern zoologist was Aristotle. As one scholar puts it, "Aristotle was the first zoologist as we understand the term, in that he studied animals as animals and not just as something to be hunted or, perhaps, to be domesticated" (Willey Ley, Dawn of Zoology [Prentice-Hall, 1968] 31).

Most of us are acquainted with Aristotle’s technique of empirical study. His constant recourse to personal observation and verifiability is the essential ingredient to Aristotle’s success. This theory of science can best be summed up in his own words (GA 760b28-33):

```
ἐκ μεν οὖν τοῦ λόγου τὰ...τούτων ἐχεῖν φαίνεται τὸν τρόπον...οὐ μὴν εἴληπται ὅτι τὰ συμβαίνουσα λακᾶς, ὅλλ' ἐάν ποτε ληφθῇ, τότε τῇ αἰσθήσει μᾶλλον τῶν λόγων πιστευτέον.
```

In theory these things...seem to be this way...but their actual occurrence has not been sufficiently ascertained; if, however, they should ever be ascertained, then we must give credence to first-hand experience rather than to theories.

The key words in this passage are λόγος and ἀισθήσεις. λόγος is what is inferred and that can be verbally passed from one naturalist to another. ἀισθήσεις refers to first-hand perception via one’s own senses, leaving (in Aristotle’s mind) no room for error. Aristotle’s own ἀισθήσεις was the backbone of his zoological work, yet when we turn to his zoological writings we do not get the impression that he was merely breaking new ground, but correcting and amplifying (by personal observation) the knowledge of contemporary and previous naturalists and writers. He frequently includes remarks such as "as some
assert" (ὡσπερ τινὲς φασὶ), or "there are those who say" (εἰσὶ δὲ τινὲς οἱ φασὶ),\(^8\) and even quotes verbatim from the writings of others, especially the Hippocratics (when it involved anatomy).\(^9\) Modern commentaries are quick to point out that Aristotle was adverse to naming his sources, but we can be quite sure that he was responding to a myriad of writers and was not writing in a vacuum.

Even though Aristotle did not usually cite by name those φυσιολόγοι he used as evidence (or contradicted), his zoological writings are so voluminous that a listing of those who are mentioned--drawn from his *Historia Animalium*, *De Partibus Animalium*, and *De Generatione Animalium*--is nonetheless impressive.

In alphabetical order these names are:\(^10\)

Aeschylus
Aesop
Alcmeon of Crotona
Alcman
Anaxagoras
Ctesias
Democritus
Diogenes of Apollonia
Empedocles
Herodorus
Herodotus

Hesiod
Homer
Musaeus
Parmenides
Pherecydes
Polybus (son-in-law of Hippocrates)
Simonides
Stesichorus
Syennesis

This list includes a wide variety of names, some of whom are well-known, others less so. Though we may find it unusual that Plato's name does not appear in this list, there seem to be several references to the *Timaeus* in the *De Partibus Animalium*.\(^11\) More significantly we notice also that none of these individuals was a "zoologist," i.e., a specialist in the study of animals. In fact, as far as we know none of them even wrote a work solely on animals. This fact by itself shows the unique place that Aristotle holds in the history of zoography, and for our purposes it means Herodotus has no Greek source that dealt solely with animals.
Why are these people cited and where does Herodotus fit in? If we group these sources into categories we find that most are scientists/philosophers (the two cannot be separated at this early date), almost as many are poets, and two are historians:

<table>
<thead>
<tr>
<th>scientists/philosophers</th>
<th>poets</th>
<th>historians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcmaeon of Crotona</td>
<td>Aeschylus</td>
<td>Ctesias</td>
</tr>
<tr>
<td>Anaxagoras</td>
<td>Aesop</td>
<td>Herodotus</td>
</tr>
<tr>
<td>Democritus</td>
<td>Alcman</td>
<td></td>
</tr>
<tr>
<td>Diogenes of Apollonia</td>
<td>Hesiod</td>
<td></td>
</tr>
<tr>
<td>Empedocles</td>
<td>Homer</td>
<td></td>
</tr>
<tr>
<td>Herodorus (father of Bryson the sophist)</td>
<td>Pherecydes</td>
<td>Simonides</td>
</tr>
<tr>
<td>Parmenides</td>
<td>Musaeus</td>
<td></td>
</tr>
<tr>
<td>Polybus (anatomist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syennesis (doctor)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The fact that only two of these persons are historians is not in and of itself significant since "history" as a literary endeavor had only existed for about a century by the time of Aristotle and there is little zoology contained in historical works as a matter of course. The list of poets is fairly consistent since all wrote various "non-scientific," literary works in metre. The usual distinction between poet and non-poet by metre or lack thereof does not work well in this case since many presocratics wrote in metre (e.g. Empedocles, Parmenides). Admittedly, a few of these names seem to straddle the line between scientist/philosopher and poet, such as Parmenides and Hesiod. But if we view the first category as being comprised of persons who had a wide variety of pursuits, from philosophy to anatomy, and if we view these individuals as those who tried to objectively understand the world around them and how people (physical humanity) fit into that world, one can see that they all belong in this general grouping.
None of the poets is quoted by Aristotle to provide information additional to that which he has already recorded in his zoological writings. They are instead almost all quoted to provide substantiating examples for the information which he proffers. I do not believe Aristotle is trying to "prove" his case by such examples as much as he is trying to show how zoological specifics find their way into non-scientific writings. For example, at HA 542b22ff Aristotle mentions that the halcyon is wont to fly about boats for a while then suddenly disappear. He then adds that Stesichorus also made mention of this bird's habit. Homer, who is quoted more often than anyone else (11 times), is never contradicted and is even used to corroborate Aristotle's own misconceptions; at HA 519a18 Aristotle asserts that waters with certain qualities drunk by lambs color the lambs' wool as is evidenced by yellow lambs drinking from the Scamander, which in the Iliad (20.74) is called the "yellow river."

The one exception to this general rule is Aristotle's explicit contradiction of Hesiod at HA 601b1:

Generally put, birds of prey, as was said earlier, never drink at all (though Hesiod was ignorant of this in his story of the siege of Ninus when he wrote that the eagle who presided over the oracle drank).

If Aristotle did indeed write 'Hesiodos (see note 13) then his correction of Hesiod in this passage is the single exception to his use of poets merely to illustrate his observations and conclusions. As I mentioned above, in no
instance does Aristotle derive new information from these poets. They did not attempt to "explain" their world nor the animals in it by scientific means, and Aristotle for this reason does not go out of his way to draw examples from poetry to contradict. If he had chosen to make this his practice he would of course have had ample material to criticize.

When we turn to the list of scientists/philosophers, however, we find the reverse true: corrections abound and in only a couple of instances do we find the source providing corroborative or additional information. His corrections of Empedocles (Aristotle sees fit to contradict him at least 7 times) are quite direct and without reservation: when Empedocles asserts that animals grow to their mature form by a series of accidents, Aristotle says "Ἐμπεδοκλῆς οὖκ ὅρθως εὑρηκε," and makes light of Empedocles' notion that the twisting of the fetus causes the backbone to be broken into segments (PA 640a20ff). Of the 34 passages in which Aristotle brings these scientists/philosophers into his discussion, I find only 3 instances in which he agrees with them without correcting, amplifying, or outright contradicting their views. Yet in two of these instances he makes it clear that they only "happened upon" the truth or were carried there passively by the force of their own subject matter, and thus he detracts, in a way, from their veracity. These two instances occur in an introductory discussion on causation in nature in the De Partibus Animalium, 642a18ff:

ἐναχοῦ δὲ που αὐτῇ καὶ Ἐμπεδοκλῆς περιπλήττει, ἀγώμενος ὑπ' αὐτῆς τῆς ἀληθείας, καὶ τὴν οὐσίαν καὶ τὴν φύσιν ἀναγκαζέται φανεί τὸν λόγον εἶναι.
In some places even Empedocles happens upon the truth when he has been led to it by truth itself, and is compelled to assert that the *logos* is a thing's essence and nature.

ολλ' ήματο μεν Δημόκριτος πρώτος, ως ουκ άναγκαίοι δε τη φυσική θεωρία, όλλ' έκφερόμενος υπ' αυτω ψάργματος.

But Democritus was the first to touch upon it since he was carried to it by his subject matter, not by the necessity for the contemplation of nature.

The third occurrence, at *HA* 581a15, is a remark by Aristotle using an image supplied by Alcmaeon, and it seems to be the only unreserved agreement between Aristotle and a named scientist/philosopher, even though it is only a passing reference:

όμα δε κατ τριχωσις της ήγης άρχεται, καθαπερ κατ τα ψυται μελλοντα σπέρμα φέρειν ανθειν πρώτος Άλκμαιων ψησιν ο Κροτωνιάτης.

At this time the hair of puberty begins to grow, just as Alcmaeon the Crotonian says that leaves first blossom when they are about to produce seed.

To sum up, then, it is apparent that Aristotle tends to treat poets and scientists/philosophers differently. He draws corroborative examples from the poets, but in turn attempts to correct or revise the assertions of scientists/philosophers. Though it may oversimplify our categories, we might prefer to call these two groups "fiction" and "nonfiction" writers. Those who attempt to provide "factual" information, therefore, are more critically scrutinized by Aristotle since (it seems) there is more danger that they will spread erroneous conclusions, whereas poets are given greater license to misrepresent zoological details in creating their poetical worlds and backdrops. I have surveyed these
various sources at some length so that we might more clearly see Herodotus’ place among them and to see whether he is in some way an atypical source (Ctesias is included in this discussion below). Let us now turn to the two historians.

Herodotus is quoted by name three times in Aristotle’s zoological works. Taken together, these three instances reveal that no other quoted source receives harsher criticism than Herodotus. At GA 756b5ff Herodotus is singled out as the explicit example of those who promulgated a common misconception:

καὶ οἱ ἀληθείς περὶ τῆς κυήσεως τῶν ἱχθύων τοῦ εὐθεία λέγουσιν λόγον καὶ τεθρυλημένον, δύσερ καὶ Ἡρόδοτος ὁ μυθολόγος, ὡς κυηκομένων τῶν ἱχθύων ἐκ τοῦ ἀνακάπτειν τοῖς θορόν, οὐ συνορώντες ὅτι τοῦτ’ ἐστὶν ἀδύνατον.

Fisherman tell the silly, oft-repeated story about the conception of fish, which we find in Herodotus the fable-teller as well, how fish conceive by swallowing the milt; they do not perceive that this is impossible.

Aristotle is responding to the following statement in Herodotus (2.93.1):

ἡγενται δὲ οἱ ἔρσενες ἀπορραίνοντες τοῦ θορό, οἱ δὲ ἐπόμεναι ἀνακαίτουσι καὶ εἰς αὐτοῦ κυισκοῦνται.

The male fish lead, scattering their milt, and the females follow behind swallowing it and from it conceive.

Aristotle does not quote Herodotus verbatim (he usually paraphrases quotations), but he does employ Herodotus’ terminology with the words κυηκομένων, ἀνακάπτειν, and θορόν, showing that he was most likely familiar with Herodotus in text form and was not simply recording a popularized version of the story. There are several indications in the Aristotle passage which reveal
his attitude toward Herodotus' veracity, even beyond Herodotus' simple misconception about how fish spawn. The foremost of these is his use of the term μυθολόγος. We saw earlier in this chapter how Aristotle carefully contrasts λόγος with αἰσθησις (GA 760b28ff), stating that αἰσθησις (empirical evidence obtained directly from the senses) is always preferrable to λόγος (theory/assumption/supposition\(^{17}\)). Herodotus, therefore, as a μυθολόγος would be one whose λόγοι are in the realm of fiction (or myth\(^{18}\)) much as a poet's λόγοι would be. What Aristotle is saying is that Herodotus belongs among the poets. But of course Herodotus does not present his material--at least his material on the spawning of fish--as a folk story or fable; he believes it himself and asserts its truth, thus drawing a harsh criticism from Aristotle who we have seen would not normally attack a poet to such a degree. Herodotus is therefore considered by Aristotle to be more dangerous than any poet because he pretends to be writing facts, not mere "stories" (vid. below for a discussion of Aristotle's treatment of Herodotus in the Poetics). That this is a fair evaluation of Aristotle's intent in this passage is clear from 1) external evidence--evidence from other passages where the concept of μυθολόγος is expressed; and from 2) internal evidence--the immediate context. 

(1) The word μυθολόγος is hapax in Aristotle and as such is all the more poignant since Herodotus is marked out as the specific example of an idea which is elsewhere conveyed by this word's cognate: μυθολογέω. The verb μυθολογέω occurs 25 times in various forms (verb, participle, infinitive). In the active voice it is usually plural with an indefinite subject ("they").\(^{19}\) In three passages, however, the subject is more narrowly defined as οἱ ποιηταί (EE 1230a3), ὁ Αλσόπος
(Mete. 356b13), and ὁ Ὄμηρος (identified by the substantive participle ὁ μυθολογήσας; Pol. 1269b28). There seems to be, then, a tendency to associate this verb with poetic activity as the context of these three passages bear out: the ποιηταὶ in the first passage relate the tale of Chiron the centaur (ὦστερ καὶ τὸν Χείρωνα μυθολογούσιν οἱ ποιηταῖ...), Aesop in the second speaks of Charybdis (καὶ γὰρ ἐκείνος [ὁ Αλεωπος] ἐμυθολογήσεν ώς δὲς μὲν ἡ Χάρυβδις...), and Homer in the third joins Ares and Aphrodite in love (ἔσκε γὰρ ὁ μυθολογήσας πρῶτος οὐκ ἀλητῶς συζεύξαι τὸν Ἀρην πρὸς τὴν Ἀφροδίτην). The other 22 uses of μυθολογέω occur in mythological or semi-mythological contexts as well, and a surprisingly large percentage of these passages refer to Heracles’ exploits.20 Heracles, as a semi-mythical personage, touches historical reality just enough to make him part of legend (not just pure myth). In the same way Aristotle, by using μυθολόγος of Herodotus, may view much of Herodotus’ writings as touching on or having their basis in reality without containing actual verifiable fact. One occurrence of μυθολογέω in both a semi-mythological context and a zoological context exemplifies this notion of quasi-historicity (HA 578b23-25):

Περὶ δὲ τῆς ζωῆς [ἡ ἔλαφος] μυθολογεῖται μὲν ὡς δὲν μακρόθευον, οὐ φαίνεται δ’ οὔτε τῶν μυθολογομένων οὔδεν σαφές, ἢ τε κύριος καὶ ἡ αὐξήσις τῶν νεβρῶν συμβαίνει οὐχ ὡς μακρόθει τοῦ ζώου δύτος.

People fabricate stories about how the hind is long-lived, but none of these fabricated stories seem to be factual; the hind’s gestation period and its rapid growth are not in accord with its having a long life.

Even when dealing with mythology Aristotle does not always immediately disagree or jump at the chance to correct false beliefs. For example, the fact that Iphicles and Heracles are referred to in myth (μυθολογούσων) as twins though of
different parentage is accepted by Aristotle as true (vid. HA 585a14), and when disagreeing with the version of a myth Aristotle often only mildly suggests that the myth might be otherwise (as at Pol. 1312a1ff and 1341b1ff). But those who attempt to pass off μοθος as fact receive a more direct confrontation from Aristotle who strives to maintain a strong distinction between ἄλογος/μοθος on the one hand and λόγος/μοθος on the other. Thus Herodotus, who claims to have an οὐροφία of regions unknown, is placed by Aristotle among the poets through the use of the term μυθολόγος to undermine his veracity and make his readers wary of him.

It should be noted that Aristotle mentions Herodotus in the Poetics (9.1) in connection with a general discussion on the differences between poetry and history. Aristotle argues that poets are not concerned with how things are, but with how things might be, and because the poetic method involves speculation about general truths (instead of a simple reiteration of facts), poetry is more "scientific" (φιλοσοφωτερον) and more "serious" (σπουδαιότερον) than history. He states that if Herodotus had written in verse, his work would still be a history since historians are concerned with what happened (τὰ γενόμενα), not with what might happen (οἷα δὲ γένοιτο). Though Aristotle implies that Herodotus is concerned with things that have actually occurred, the point he is making in the Poetics concerns the fundamental aims of poets and historians—he does not elaborate on Herodotus’ success (or lack thereof) in dealing with τὰ γενόμενα, nor does he explain the need for ἄλογος in the historical method (as he does so clearly in his zoological works). Hence Aristotle need not be contradicting what he says about Herodotus in the De Generatione Animalium.
(2) Elements in the immediate context of Aristotle’s "Ἡροδότος ὁ μυθολόγος" (GA 756a32ff) corroborate the conclusions we have drawn from (1) above. According to Aristotle, those who hold to the view that fish conceive by swallowing milt are deceived:

The swiftness of these fishes’ copulation helps to deceive these people, so that fishermen too never see it happening; for no fisherman watches such a thing for the simple sake of knowledge.

By implication we may therefore assume that Aristotle considers Herodotus to be deceived and that his methods of investigation lack serious observation. This is further emphasized toward the end of this section when Aristotle says fisherman do not see fish copulate (οὐχ ὑρώντες; 756b4) and both they and Herodotus do not perceive (οὐχ συνορῶντες; 756b8) that their notion is impossible (ἀδύνατον).

As stated above, Herodotus’ name appears three times in Aristotle’s zoological works. The two we have yet to consider are similar to each other in subject matter and include similar rebuttals of both Herodotus and Ctesias. These passages are given below:

As stated above, Herodotus’ name appears three times in Aristotle’s zoological works. The two we have yet to consider are similar to each other in subject matter and include similar rebuttals of both Herodotus and Ctesias. These passages are given below:
Ctesias of Cnidos is clearly mistaken in what he said about the semen of elephants. For he says that when dried it becomes as hard as amber. This does not happen...

The semen of all animals is white. Herodotus does not speak the truth when he asserts that the semen of the Ethiopians is black, as though everything about a person with black skin must be black! And Herodotus says this even though he saw that their teeth were white.

All blooded animals discharge semen...and all have white semen; Herodotus was mistaken when he wrote that the Ethiopians discharge black semen... What Ctesias wrote about the semen of elephants is false.

It is interesting to note that both Herodotus' and Ctesias' names appear together in these two passages, especially considering that Herodotus' name only appears three times. Just as Ctesias saw fit to respond to Herodotus, Aristotle feels the need to particularly mark out these two historians, showing that not only does he mentally connect the two but each one's work had made enough impact on zoological understanding (or general superstition) to deserve comment. This is also apparent in that Aristotle feels no need to specifically state what it was that Ctesias said about the semen of elephants in the second passage. The reader could not have learned it from the immediate context nor from any other section in the Historia Animalium, so we may assume that Aristotle's audience was already familiar with Ctesias, at least on this point.

The first passage once again calls into question Herodotus' investigative techniques. Aristotle shows no sympathy toward Herodotus with his open sarcasm aimed at showing forth the naïveté of the historian: nowhere does
Herodotus speak of the color of the Ethiopians' teeth--Aristotle extrapolates from an assumption that Herodotus conversed with Ethiopians and that he even then could not see the obvious.24 The passage in Herodotus to which Aristotle refers is found in Book 3, section 101:

μείζες δὲ τούτων τῶν Ἰνδῶν κατέλεξα πάντων ἐμφανῆς ἐστὶ κατὰ περὶ τῶν προβάτων, καὶ τὸ χρώμα φορέουσι ὄμοιον πάντες καὶ παραπλήσιον Αἴθιοπος. ἡ γαίη δὲ αὐτῶν, τὴν ἀπείρτησις τὰς γυναῖκας, οὐ κατὰ περὶ τῶν ἄλλων ἀνθρώπων ἐστὶ λευκῆ, ἄλλα μέλαινα κατὰ περὶ τὸ χρώμα· τοιαύτην δὲ καὶ Ἀἴθιοπες ἀπείρτησι θερήν.

These Indians which I have spoken about all copulate in the open like cattle. Their skin is all the same and similar to that of the Ethiopians; the semen with which they impregnate women is not white like the rest of mankind but black like their skin, and the Ethiopians also emit semen of this type.

In addition to these passages in which Herodotus is named Aristotle also explicitly corrects Herodotus twice in the Historia Animalium without naming him. One of these instances employs the word μύθος to describe Herodotus’ version of a lioness giving birth (HA 579b2-5):

οὐ δὲ λεχθεῖς μύθος περὶ τοῦ ἐκβάλλειν τὰς υστέρας τίκτωντα ληρώδης ἐστὶ, συνετέθη δὲ ἐκ τοῦ σπανίου εἶναι τοὺς λέοντας, ἀποφύγει δὴν αὐτοὺς τὸν μύθον συνβένωσι.

The story which is told about a lioness losing its womb in the act of giving birth is nonsense; this story was concocted to explain the scarcity of lions by someone who was at a loss for the true reason.

This is a reference to Herodotus 3.108:
The lioness, being the strongest and fiercest beast, gives birth but once in its life, for in parturition it expels its womb along with the young. The reason for this is that while the whelp is still in its mother it begins to thrash about, and since a lion has the sharpest claws of all beasts it tears the mother. As it grows it cuts deeper into the womb until there is nearly nothing sound left in it when the whelp is ready to be born.

The passage from Aristotle above seems to attribute the origin of this story to Herodotus if that is indeed who is meant in the last clause. The use of μῦθος parallels the use of μυθολόγος in the De Generatione Animalium, and further substantiates the conclusions of our discussion on that term above. Since Aristotle clearly identifies Herodotus as a mythologizer in the De Generatione Animalium it is only natural to assume that Herodotus is the source of this μῦθος—especially since Herodotus’ version is explicit, detailed, and the only version prior to Aristotle that is extant.

Aristotle also corrects Herodotus on the anatomy of camels (HA 499a18–22):

The camel has four teats like a cow, and a tail similar to a donkey’s; its reproductive organ is turned backward.25 It has one knee on each leg but no more than one as some assert, though there appear to be more on account of the contraction of its belly.

Herodotus’ version follows (3.103):

τὸ μὲν δὲ εἰδὸς ὅκοιῶν τι ἔχει ἡ κάμηλος, ἐπισταμένοις τοῖσι ἔλλησι οὐ συγγράφω· τὸ δὲ μὴ ἐπιστεύεται αὕτης, τοῦτο φράσω.
κάμηλος ἐν τοῖς ὀπισθίοις σκέλεσι ἔχει τέσσερα μηροὺς καὶ
γρώνατα τέσσερα, τὰ τε αἴδοια διὰ τῶν ὀπισθίων σκελέων πρὸς τὴν
οὐρὴν τετραμμένα.

I shall not describe the appearance of the camel since the Greeks are
already familiar with it, but I shall relate aspects of its appearance that are
unfamiliar. The camel has four knees and four thighs on its hind legs and
its reproductive organ is turned toward its tail through its back legs.

Although Herodotus is the most obvious source for Aristotle’s remarks the
phrase ὡσπέρ λέγουσι τινὲς is an indication that by Aristotle’s time the multi-
kneed camel had become a popular notion. Even though it is certain that
Aristotle was familiar with Herodotus on this point (the similar descriptions in
the two passages above show this) he decided to focus on the current state of the
misconception rather than its source.

Yet, in the face of these direct criticisms, we are surprised by the far more
numerous passages in which Aristotle quotes from Herodotus to supply missing
information, or even to use misinformation from Herodotus to fill in gaps in his
own knowledge. Aristotle’s corrections of Herodotus in the passages above might
lead one to think that Aristotle eschewed using Herodotus’ work whenever
possible. This is not true. Many times he incorporates into his zoology what he
considers useful information from the Histories and tacitly agrees with
Herodotus’ observations. At other times Herodotus’ observation and his own
differ slightly so that it is difficult to determine if Aristotle is using another source
or is intentionally altering Herodotus.

Four passages which exemplify Aristotle’s direct use of Herodotus are
given below; the source text from Herodotus is provided after each citation for
comparison:
And a man’s skull which had no seams has even been observed.

When the flesh had decayed off the bodies of the dead and the Plataians were gathering the bones there was found the skull of a man which had no seam but was composed of one single bone.

A woman does not grow hair on her chin, except a little hair does occur for some women after menopause; in Caria this happens to priestesses and is interpreted as a portent of things to come.

Beyond Halicarnassus dwelt the Pedasians; whenever something bad was about to befall them and their neighbors the priestess of Athena would grow a great beard. Three times this happened.

Just as we have said—an elephant's trunk is its nose. It would have been impossible for the nose to be this way had it not been pliant and capable of bending (for otherwise the trunk by means of its great length would have prevented the animal from reaching its food, just as they say the horns of the backward-grazing bulls do; or they say that these animals walk backward as they graze).
The shortest route to the Lotus Eaters takes thirty days; the backward-grazing bulls are there too. These animals get their name from the fact that their forward-curving horns cause them to walk backward as they graze; for they are not able to move forward since their horns would stick into the ground.

All animals which have horns are four-legged, unless we include something which is referred to as having "horns," which the snakes around Thebes have according to the Egyptians, even though a mere protuberance is the reason for this misnomer.

Around Thebes there are sacred snakes which never harm people. These snakes are small and have two horns which grow from the top of their heads; when they die they are buried in the temple of Zeus.

In none of these passages does Aristotle quote directly or give any indication that he is using Herodotus. In the third pair of quotes, for example, Aristotle's "φασί" implies that there are multiple sources for his description. We cannot therefore say with certainty that Herodotus' history was the sole or even the primary source. It is possible that the description of these bulls had become popular or even commonplace, otherwise we might expect Aristotle to have
included a more detailed description of them or to have been more specific about his source; yet on the other hand Aristotle, as we have seen, tends not to name his sources. Likewise, in the last pair of quotes Aristotle quotes the Egyptians for the description of the "horned snake," but conceivably this description may have come from the writings of Herodotus, much as we might describe an animal without ever having seen it. Aristotle would then be relying on Herodotus for an accurate report from the Egyptians and relating this information secondhand.

Another possibility is that Aristotle obtained this material from Herodotus and after the process of organization and distillation, in his final work he either did not concern himself with the source or forgot the source altogether. I introduce these conjectures to acknowledge the general difficulty we have in determining source material, which in this case we would have liked to have, since this chapter deals specifically with the influence and adaptation of Herodotus' work. In the first quotation above I would argue that the seamless skull to which Aristotle refers is in fact from Herodotus' work on the bases that the incident is a single, highly unusual occurrence, and that Aristotle's version seems to be a condensed reference to the event and he includes no material not found in Herodotus.

Similarly, Aristotle's third passage betrays an Herodotean origin by its condensed description and by the repetition of Herodotus' adjective ὀπτωθονύμοι. One might argue that in both these instances the word φάσι in Aristotle shows that these tales had become popularized over the intervening years between Herodotus and Aristotle, but this is a moot point since whether Aristotle was influenced directly by Herodotus or indirectly from others who in turn first read about some event or description in Herodotus—the fact remains
that Herodotus in both cases contributed information which had a lasting effect on classical zoography. For the sake of simplicity I will nevertheless limit the following observations to those passages of Aristotle that are clearly borrowed from Herodotus.

Herodotus’ description of supposed flying snakes in Egypt finds a surprising affirmation from Aristotle. Both passages are given below:

There is a place in Arabia near the city of Buto where I went to inquire about the winged snakes. Upon my arrival I saw snakes’ bones and vertebra too numerable too recount; there were piles of large, medium, and small-sized vertebra, with the latter being the most abundant...

The form of this snake is similar to that of the watersnake. It does not have feathered wings, but wings resembling those of a bat.

Aristotle exhibits a certain amount of skepticism by his vague λέγονται and by shying away from any other fuller description than τοιούτου. But he does not entirely discount the possibility that this animal exists. In fact, it would have been easier for Aristotle to omit this reference from his immediate discussion.
entirely: in the context of this passage (HA 490a6-11) Aristotle discusses the various types of winged creatures and neatly places each in its own well defined category. His categories comprise the following three groups: Those with feathered wings (πτερωτά), those with dermal wings (δερμόπτερα), and those with membranous wings (πτερολωτά). Here is a listing of his summary observations:

<table>
<thead>
<tr>
<th>Feathered</th>
<th>Dermal</th>
<th>Membranous</th>
</tr>
</thead>
<tbody>
<tr>
<td>blooded</td>
<td>blooded</td>
<td>bloodless</td>
</tr>
<tr>
<td>two-footed or footless</td>
<td>two-footed or footless</td>
<td></td>
</tr>
</tbody>
</table>

If Aristotle had disregarded Herodotus’ flying snakes his schema would have been simpler, for his feathered and dermal categories would then be composed only of two-footed animals. By allowing for an exception to his general observation of "two-footedness" he sacrifices consistency for the sake of completeness—a decision which is preferable if one is presented with valid exceptions. But flying snakes are hearsay, not fact, and Aristotle certainly has never seen them. The reason for their inclusion will be discussed after we look at two more animals whose descriptions are borrowed from Herodotus. The first of these is the hippopotamus:

> ὁ δὲ ἴππος ὁ ποτάμιος ὃ ἐν Ἁιγύπτῳ χαίτην μὲν ἔχαι ὃσπερ ἴππος, διζολὸν δὲ ἐστὶν ὃσπερ βόος, τὴν δὲ ὁμοῦ σημών. ἔχει δὲ καὶ ἀστράγαλον ὅσπερ τὰ δικαλά, καὶ χαλύσσοντας ὑποφαινομένους, κέρκον δὲ ύός, φωνὴν δὲ ἴππου· μέγεθος δὲ ἐστὶν ἤλικον ὄνος. τοῦ δὲ δέρματος τὸ πάχος ὃστε δόρατα ποιεῖσθαι ἐξ αὐτοῦ. τὰ δὲ ἐντὸς ἔχει θρόσοι ἵππω καὶ δύσ. (HA 502a9-15)

The hippopotamus in Egypt has a mane like a horse, is cloven-hoofed like an ox, and its face is snub-nosed. It has an ankle bone like
cloven-hoofed animals, slightly protruding tusks, the tail of a pig, and the neigh of a horse; it is the size of an ass. The hippopotamus’ hide is so thick that spears are made from it. Its entrails are similar to the horse’s or donkey’s.

Herodotus wrote:

οἱ δὲ Ἄιπποι οἱ ποτάμιοι νομῷ μὲν τῷ Παμπρεμίῳ ἰροί εἶσιν, τοῖσι δὲ ἀλλοιοι Αἰγυπτίωσι οὐκ ἰροὶ. φύσιν δὲ παρέχουται ἰδέας τουσίνδε· τετράποιον ἐστὶν, δίχτυον, ὁπλαὶ βοῶς, σιμόν, λοφίνην ἔχουσιν ἰπποῦ, χαλύβδοισι φαῖνου, ύφρην ἰπποῦ καὶ φωνήν, μεγάθους ὅσοι τε βοῦς ὁ μέγιστος. τὸ δὲρμα δὲ αὐτοῦ ῥύτω δὲ τὶ παχὺ ἐστὶ ωστε αὐτὸ γενομένου ξυστὰ ποιέονται ἀκόντων ἐξ αὐτοῦ. (Hist. 2.72)

Hippopotami are sacred in the district of Pampremis, but other Egyptians do not consider them sacred. Their appearance is as follows: four-footed, cloven-hoofed like an ox, snub-nosed, a horse’s mane, protruding tusks, a horse’s tail and neigh, and in size as large as an ox. The hippopotamus’ hide is so thick that, when dried, spears are made from it.

There is little question that Herodotus’ passage served as the model for Aristotle’s. Not only do both writers include nearly identical descriptions but they do so in relatively the same order. Certain word choices differ between the two authors, but this is not surprising given that Aristotle rarely copies verbatim. Herodotus, for example, has φαῖνον where Aristotle uses the compound adjective ὑποφαίωμενος, and where Herodotus wrote λοφίνην Aristotle wrote χαίτην. Interestingly enough, two items of description are wholly changed. Instead of a horse’s tail as Herodotus describes it (ὑφρήν ἰπποῦ), Aristotle says the hippopotamus has the tail of a pig (κέρκου ύός), and the size of this animal is compared to an ox by the former and to a donkey by the latter. Though Aristotle’s version of the tail fits the hippopotamus more aptly than Herodotus’, he certainly was not using ἀγαθος when he reduced its size to that of a donkey,
because the hippo is "much bigger than an ox" (How and Wells, loc. cit.). He has also failed to correct Herodotus on a few points: the hippo’s supposed "neigh" is questionable, but no hippo has a mane nor is cloven-hoofed; Aristotle has simply repeated Herodotus’ error. As in the case of the winged snakes Aristotle passes this information from Herodotus to his readers without the ability to confirm it, and in this instance he was misinformed.

Aristotle’s additional comment on this animal’s entrails is puzzling. Nowhere does Herodotus make such a statement. Apparently this item was adopted by Aristotle from another source—perhaps the same source who is responsible for the altered tail and reduced size in Aristotle’s account. Aristotle’s description of the crocodile, the last animal we shall look at, is similar in many respects to that of the hippo since a comparison between it and the corresponding passage in Herodotus reveals many identical items along with some changed and added features. Here is Herodotus’ description in full (2.68.1-5):

τόν δὲ κροκοδίλιον φύσις ἐστὶ τούτη: τοὺς χειμεριστάτους μήνας τέσσαρας ἐσθείει οὐδέν, εἰν δὲ τετράπονοι χερσαῖοι καὶ λυμαινόν ἐστι· τίκτει μὲν γὰρ ὡς ἐν γῆ καὶ ἐκλέπτει καὶ τὸ πολλὸν τῆς ἡμέρης διατρίβει ἐν τῷ ἔποδι, τὴν δὲ νύκτα πάσαν ἐν τῷ ποταμῷ θερμότερον γὰρ ὅτι ἐστὶ τὸ ὕδωρ τῆς τε αἰθρίας καὶ τῆς ὑδάτας. πάντων δὲ τῶν ἡμείς ἴδομεν θυτῶν τούτο ἐς ἐλαχίστων μέγιστον γίνεται: τὰ μὲν γὰρ ὡς χερσαίων οὖ πολλῷ μέζων τίκτει, καὶ ὁ νεοσσὸς κατὰ λόγον τοῦ φοῦ γίνεται, αὐξανόμενος δὲ γίνεται καὶ ἐς ἐπτακαίδεκα πίθεας καὶ μέζων ἐτη. ἔχει δὲ ὀφθαλμοὺς ἐνοῦ ὅς, ὀδόντας δὲ μεγάλους καὶ χαλυμόδοτας κατὰ λόγον τοῦ σώματος. γλώσσαν δὲ μοῦνον θηρίων οὐκ ἔφυος. οὐδὲ ἐκεῖ ηὐ στὴν κάτω κυάθος, ἄλλα καὶ τοῦτο μοῦνον θηρίων τὴν ἄνω γυμνόν προσάγει τῇ κάτω. ἔχει δὲ καὶ ὄνοχας καρτεροὺς καὶ δέρμα λεπίστον ὀρρηκτὸν ἐπὶ τοῦ νωτοῦ. τυφύλον δὲ ἐν ύδατι, ἐν δὲ τῇ αἰθρίᾳ ὀξυμερύσσωσι. ἀπὸ δὴ ὅτι ἐν ύδατι διακεῖται ποιεύμενον, τὸ στόμα ἐνδοθεὶν φορεῖ πάν τοῦτον βεδέλλων. τὰ μὲν δὴ ἄλλα ὄρνεαι καὶ θηρία φεύγει μιν, ὅ δὲ τροχίλος εἶρηματον οἶ ἐστὶ, ᾧτε ὤφελομένων πρὸς αὐτοῦ ἐπεδώ γὰρ ἐς τὴν γῆν ἐκβῆ ἐκ τοῦ ύδατος.
Here is a description of the crocodile. During the four winter months it eats nothing. It is a four-footed, amphibious animal which lays and hatches its eggs on land where it spends most of the day, but spends the entire night in the river since the water is warmer at night than the open air and the dew. Of all the living things known to man this creature has the greatest proportionate size increase as it grows to adulthood. Although it lays eggs no larger than a goose’s and its young are comparatively small, when fully grown it attains a length of up to 25 feet and more. It has the eyes of a pig and compared to its body it has disproportionately large teeth and tusks. It alone of all animals has no tongue. It has strong claws and a scaly, impenetrable hide on its back. In the water it is blind but on land its sight is keen. Since it spends its life in the water the inside of its mouth gets covered with leeches. All other birds and beasts avoid the crocodile except the Egyptian plover which is at peace with it since this bird brings the crocodile the following benefit: whenever the crocodile comes out of the water and opens wide its mouth (which it almost always does while facing west) the plover enters its mouth and gobbles up the leeches. Being aided in this way the crocodile is pleased and brings no harm to the plover.

The following passages from Aristotle comprise a similar description:

κυνεί δὲ πάντα τὰ ζῷα τὴν κάτωθεν σιαγώνα, πλήν τοῦ ποταμίου κροκόδιλου· οὕτως δὲ τὴν ἄνω μονον. (HA 492b24)

All animals move the lower jaw except the river crocodile; this animal moves only its upper jaw.

πρὸς δὲ τούτων τὰ οἰσθητήρια καὶ γλώτταν πάντα, πλὴν ὁ ἐν Αλγύπτῳ κροκόδιλος. οὕτως δὲ παραπλησίως τῶν ἴχθυων τιςίν· ὀλὰς μὲν γὰρ οἱ ἰχθύες ἀκανθωδη καὶ σύκ ἀπολειμμένην ἔχουσι τὴν γλώτταν, ἐνιοὶ δὲ πάμπαν λείον καὶ ἀδιάρθρωτον τὸν τόπον μὴ ἐγκλίναντι σφόδρα τὸ χεῖλος. (HA 502b35-503a4)

In addition to these things all [oviparous quadrupeds] have sensory organs and a tongue, except the Egyptian crocodile. This animal is quite similar to certain kinds of fishes. For, in short, fishes have a tongue which is prickly and unseparated, though to someone who hasn’t opened wide their mouth some fishes exhibit a completely smooth and unarticulated surface.
River crocodiles have the eyes of a pig, large teeth and tusks, strong claws, and its hide is impenetrable. They see but poorly in the water, but out of the water their sight is most keen. During the day they spend most of their time on land, but they spend the night in the water since it is warmer than the open air.

The river crocodile lays many white eggs, up to about 60, which it sits on for 60 days (since it is a long-lived animal). Though its eggs are no larger than a goose’s and its young are correspondingly small, from these small eggs this animal nevertheless grows to be one of the largest by contrast, and reaches over 25 feet in length. Some say that it continues to grow its whole life.

When crocodiles yawn, Egyptian plovers fly in and clean their teeth; the plovers themselves get nourishment, and a crocodile never hurts them since it is cognizant of the help it receives. But when it wants a bird to depart it shakes its neck so as not to bite down on one.

Though Aristotle’s descriptions are scattered over five separate passages, he includes almost all the observations noted by Herodotus. Similarities between the two authors abound in treated particulars and word choices: the phrase
"ὅψθαλμος μὲν ὑός, ὄδόντας δὲ μεγάλους καὶ χαλιώδοντας" in Aristotle’s third passage is taken verbatim from Herodotus; in the fourth passage the clause ἐξ ἐλαχίστων δ’ ὄσον μέγιστον γίνεται τούτο is a rewording of Herodotus’ phrase τούτο ἐξ ἐλαχίστου μεγίστου γίνεται as is Aristotle’s next sentence in this passage (τὸ μὲν γὰρ ὄσον...πῆχεων) when compared to Herodotus.

As was the case with his description of the hippopotamus, Aristotle adds particulars about the crocodile not found in Herodotus. The crocodile’s "shaking of the neck" (κυετί τὸν αὐχένα) to alert the plover does not appear in Herodotus, for example. The most detailed additions are Aristotle’s observations that the crocodile lays 60 eggs and that they are white in color. In light of the inaccuracies that he copies from Herodotus (see below) it is doubtful that he learned these facts from personal observation. He states at the end of the fourth passage that he is using more than one source (λέγουσι δὲ τυνές) so evidently in the 4th century certain "facts" about the crocodile were to be had from more than one source, though none were well-informed enough to provide corrections for mistakes which Aristotle copies into his own work: these include Herodotus’ assertions that the crocodile is blind in the water and that its lower jaw is immobile while the upper jaw is hinged. Herodotus’ term "τυφλόν" is changed only slightly in Aristotle’s version to "βλεποῦσι...φαύλως" but as How and Wells point out, "The crocodile sees excellently in water" (loc. cit). It is remarkable that Aristotle follows Herodotus in maintaining the immobility of the crocodile’s lower jaw given that he takes great pains to explain the nature of the crocodile’s tongue both in this passage and at PA 660b26-34 where he describes in even
greater detail the positioning and movement of the crocodile's upper and lower jaws in relation to the tongue. In addition, at HA 508a4-8 Aristotle is able to describe the crocodile's stomach. If Aristotle's own observations had led him to the conclusions about the crocodile's tongue and stomach it is hard to imagine how he could have missed something so basic as the movement of the jaw. I conclude therefore that his information on the crocodile was obtained from second-hand sources, and that these sources augmented or contradicted Herodotus whom Aristotle used as his chief source.

So why does Aristotle rightly correct Herodotus at some points and at other points repeat his mistakes? The answer I believe lies in Aristotle's method of composition. Aristotle did not travel as extensively as Herodotus did to acquire his information, he was more interested in what was immediate, observable, and verifiable. W.A. Locy, in The Growth of Biology, suggests this when he states the following (p. 27):

Thompson has brought forward evidence, based on the geographical mention of places, to show that Aristotle did his work in natural history in middle life on the island of Lesbos, where he spent three years before he went to Macedonia to take part in the education of Alexander. In his natural history, references to places in Greece proper are very few, but there is frequent mention of places in and around Mitylene.

Willey Ley in his Dawn of Zoology says (pp. 32,34), "It is logical to assume that Aristotle's description was elaborate when it was based upon personal observation and short and casual when he relied on written sources or even oral reports." Herodotus on the other hand skipped over what was already known to the Greeks as he attempted to record as accurately as possible the exotic and
unknown. I conclude, therefore, that it was only natural for Aristotle to rely on Herodotus at points where his own experience failed, and in doing so he made many of the same mistakes. This should not discredit Aristotle, for he was attempting to be thorough and (at times) to allow for even highly unusual exceptions as we saw with the winged snakes. He may have had an unconcealed disliking for Herodotus the "mythologizer," but Aristotle too had to periodically rely on μῦθος as he himself says (Mir. 839a9-11):

...τούτο μὲν οὖν ἢμιν φαίνεται μυθωδέστερον· ὡμως μέντοι ἐδει μὴ παραληπεῖν ἀμυνόμεντον αὐτό, τῶν περὶ τῶν τόπων ἕκειν τὴν ἀναγραφὴν ποιούμενον.

...This seems to me rather like a story; one must nevertheless not pass over it without mentioning it when writing up an account of the things around that place.

Aristotle relies on Ctesias for this same reason when he repeats verbatim Ctesias' description of the mantichore, as well as when he includes a number of other incredible stories from various sources which I have not mentioned. Yet, as we shall see, Aristotle became the chief authority on matters zoological and had a profound influence on some of the descriptions of Herodotean animals as they are quoted by later authors.

Soon after Aristotle's death political changes resulted in the transfer of Greek science to Alexandria where natural science took a back seat to medicine and anatomy. The writers of zoology between the time of Aristotle and the time of Pliny are largely known to us by name only, preserved when they are quoted by various authors. Since the course of zoology is obscured by the loss of their works, and since we are only able to observe their effect on later writers, it is
difficult to trace the additions and changes to the zoological pool of information from which the Romans drew their own examples. To determine how Herodotus fared over these intervening centuries and on into the later Roman empire I will look at the two primary Roman zoologists, Pliny and Aelian.

Pliny's *Natural History*, written in the 1st century A.D., survives in its entirety. It was prepared and published by Pliny the Younger (Pliny's nephew). The zoological section of the *Natural History* (Books 7-11) was regarded as one of the important works on animals as late as the 16th century. Pliny, unlike Aristotle, quotes a myriad of writers by name. He also records a variety of interesting facts, as Herodotus did, but did not attempt to verify them nor does he show much incredulity even toward the most outrageous stories he relates; he eliminated many of the earlier fables, but retained just as many. Most of his sources are Roman. This is due to his general distrust of Greek authors, though he had a high regard for Aristotle. He nevertheless accepted the veracity of many fabulous animal stories which were rejected by Aristotle. Pliny traveled to Spain, Gaul, Germany, and Africa, but his zoology is not based upon eyewitness evidence as Aristotle's usually was. He was instead a collector of information and was very eclectic in the process. This is the major difference between Aristotle and Pliny; Aristotle includes information obtained by autopsy (whenever possible), Pliny almost never so. Thus Pliny is not as interested in the verification and preservation of truth in his writings as he is in organizing the various knowledge, stories, and anecdotes into an encyclopedia which would in many respects be entertaining to its readers. In this his debt to Herodotus is evident, as we shall see.
Pliny's five zoological books (Books 7-11) are organized by the animals they treat. Book 7 deals with man and includes a listing of extraordinary races, many of which are borrowed from Ctesias. Pliny's placement of man at the head of his zoology is indicative of the way he subsequently presents the animal world: he is most interested in anthropomorphisms exhibited by various animals. This accounts for his general lack of anatomical details and his preference for stories of unusual animal behavior. Book 8 begins with the largest land animals, specifically the elephant, and treats the other land animals in more or less descending size, though all domestic animals including the horse, mule, and donkey are reserved till last. Book 9 deals with fish, but Pliny only concerns himself with remarkable fish, i.e., the biggest and most unusual; this stems from his desire to entertain his readers, as mentioned above. In Book 10 Pliny treats all birds, beginning with the ostrich since it is the largest. And Book 11 is devoted to insects.

Pliny's debt to Herodotus is evident in each book. In Book 7 he speaks of the one-eyed Arimaspians who fight the gold-guarding griffins (NH 7.10; cf. Hist. 3.116, 4.13, 4.27); in Book 8 he refers to the backward-walking bulls of the Garamantes (NH 8.178; cf. Hist. 4.183.2-3) and describes the superfetation of the hare (NH 8.219; cf. Hist. 3.108.3); in Book 9 he relates the story of Arion the dolphin-rider (NH 9.28; cf. Hist. 1.23-24); in Book 10 the fight between the Egyptian ibis and the flying snakes is given credence (NH 10.75; cf. Hist. 2.75); and in Book 11 he records the story of the gold-digging ants of India (NH 11.111; cf. Hist. 3.102-105). Each of these examples is drawn primarily from the pages of Herodotus and either repeats the same information on each subject or gives a
condensed version. The first of these passages includes an easily overlooked comment on Herodotus (7.10):

...Arimaspi, quos diximus, uno oculo in fronte media insignes. quibus adsidue bellum esse circa metalla cum grypis, ferarum volucrī genere, quale vulgo traditur, eruente ex cuniculis aurum, mira cupiditate et feris custodientibus et Arimaspis rapientibus, multi sed maxime inlustres Herodotus et Aristeas Proconnesius scribunt.

...the Arimaspians, of whom I have spoken, distinguished by the single eye in the middle of their forehead. Many authors--the most renowned being Herodotus and Aristeas of Proconnesus--have written about the continual war they have around their mines with the griffins. The griffins are a winged type of wild beast, as they are commonly described, which dig up gold from the shafts; these creatures guard the gold and with equal greed the Arimaspians try to steal it.

Two things are to be noted in this passage. One, it is interesting that Aristeas is mentioned since he is the likely source for Herodotus' information; his story is told in one of Herodotus' passages on the Arimaspians (Hist. 4.13.1, 4.14.3):

...Aristeas of Proconnesus, the son of Ka?istrobius, when writing his poem said that he was inspired by Phoebus to travel to the Issedones, and that beyond the Issedones lived the one-eyed Aramaspians, and beyond them the gold-guarding griffins.

...after seven years Aristeas appeared in Proconnesus and wrote the poem which the Greeks now refer to as the Arimaspea; he then disappeared a second time.
Aristeas is not mentioned elsewhere in Herodotus nor in Pliny which leads me to suspect that Pliny adopted Aristeas' name from Herodotus' text. Pliny does not include any information that is not contained in Herodotus' passage, so it is likely that his penchant for referencing sources (as is demonstrated by his source lists in Book 1) prompted him to include the name alongside Herodotus'.

Secondly, for Greek writers, Herodotus and Aristeas receive unexpected recognition with Pliny's *inlustres* and by the fact that they are the first writers to be named in Pliny's zoology. If he truly had *multi* authors at his fingertips as he claims, why did Pliny choose these two individuals over a more "reliable" Roman source? In all probability Pliny's other sources were not more reliable than these. I point out this treatment of Herodotus to contrast it with Aristotle's treatment of him: unlike Aristotle, Pliny never disparages Herodotus. He freely borrows from Herodotus as Aristotle does, and when Herodotus' name is specifically mentioned Pliny respects the authority of his source. For example, in Book 8 Juba and Herodotus are the first foreign authors quoted, and in the context Pliny prefers Herodotus' terminology over Juba's (8.7; cf. *Hist.* 3.97):

praedam ipsi in se expetendam sciunt solam esse in armis suis quae Iuba cornua appellat, Herodotus tanto antiquior et consuetudo melius dentes.

[Elephants] themselves know that the only booty to be sought from them is in their weapons, which Juba calls "horns," but Herodotus (who came much earlier) calls "tusks"--a better term by common usage.

Herodotus, therefore, is not only quoted in the initial sections of Books 7 and 8, his authority is respected as well--and as we saw above Pliny draws material from him throughout his work.
But when we examine the borrowings from Herodotus which were corrected or amplified by Aristotle, another pattern emerges. In these cases Pliny follows Aristotle’s version. When writing about the events surrounding the birth of a lion, Pliny has to choose between at least two versions of the story: Aristotle’s or Herodotus’. As we saw earlier in this chapter, Aristotle debunks Herodotus’ version, which by Pliny’s day had become a popular misconception according to his own account (8.43, 45): 40

semel autem edi partum lacerato unguium acie utero in enixu volgum credidisse video. Aristoteles diversa tradit, vir quern in his magna secuturus ex parte praefandum reor...

is ergo tradit leaenam primo fetu parere quinque catulos, ac per annos singulos uno minus, ab uno sterilesescere.

But I see that most people thought that the lioness gave birth to a cub only once since her womb was lacerated by its sharp claws. Aristotle tells a different version, and since I think he ought to have first say in these matters I intend to follow him for the most part...

He then relates that a lioness produces five cubs in her first parturition, then one less for each successive year until she becomes barren after producing a single cub.

This common misconception that Pliny refers to has its source, as we saw, in Herodotus 3.108. Thus Herodotus is superseded by Aristotle in those points in which they overlap. Where Aristotle is silent, however, Pliny feels free to repeat even the most outlandish tales from Herodotus, such as the story of the dog-sized ants mentioned above. It is noteworthy that Pliny refers to the destruction of the lioness’ womb as a popular notion (volgum credidisse) because this shows that despite Aristotle’s efforts this anecdote of Herodotus was still alive and thriving in Pliny’s time.
Pliny’s description of the hippopotamus also repeats Herodotus’ observations, including the mistaken horse’s mane and ox-like cloven hooves, but instead of giving a horse’s tail to the hippo as Herodotus did Pliny follows Aristotle’s version in describing it as a pig’s tail (8.95):

maiour altitudine in eodem Nilo belua hippopotamus editur, ungulis binis quales bubus, dorso equi et iuba et hinnitu, rostro resimo, cauda et dentibus aprorum aduncis sed minus noxiis, tergoris ad scuta galeasque inpenetrabilis, praeterquam si umore madeant.

In the Nile there is also produced the hippopotamus—a beast which is taller [than the crocodile]. This beast has cloven hoofs like an ox, the back, mane, and neigh of a horse, and is snub-nosed; its tail and curved tusks are those of a boar, though less harmful, and its impenetrable hide is used for shields and helmets, unless they become wet with moisture.

Pliny has added dorso equi to the description, and (from another source?) has elaborated on the utility of the hippo’s skin by claiming that helmets and shields (spears in Herodotus and Aristotle) are made out of it. As was the case with Aristotle, we can only conjecture where Pliny received this additional information. What is important to note is that Pliny follows Aristotle’s version more closely. This is, under further investigation, a consistent method employed by Pliny as is clearly shown in his account of the crocodile in Book 8, sections 89-94, just prior to the passage above. Pliny repeats Aristotle’s and Herodotus’ versions in the following details: 1) the crocodile lacks a tongue; 2) its upper jaw is mobile while its lower jaw is not; 3) it grows to be 25 feet and longer; 4) it lays as many eggs as a goose; 5) it has an impenetrable hide; 6) it spends its days on land and its nights in the water; and 7) it allows the Egyptian plover to clean its mouth. All these observations are found in the first two sections dealing with
crocodiles in Pliny (i.e., 89-90), while the remaining four sections are taken up
with tales surrounding the crocodile's enemies (the material of which is taken
from other sources). At the end of section 94, however, Pliny returns to using
Aristotle's and Herodotus' works as is evidenced by his added particulars (8.94):

hebetes oculos hoc animal dicitur habere in aqua, extra acerrimi visus,
quattuorquer menses hiemis semper inedia transmittere in specu. quidam
hoc unum quamdui vivat crescere arbitrantur.

This animal [the crocodile] is said to have dull vision in the water, and
that out of it its sight is most keen; it is said to spend the four months of
winter in a cave without eating at all. Certain people think this is the only
animal which grows as long as it lives—but it lives a long time.

As I pointed out earlier, although Aristotle adds a few particulars to
Herodotus' observations, the only point in which they actually contradict is in the
degree to which the crocodile is able to see in the water: Herodotus used the
term "τυφλόν" while Aristotle employed the phrase "βλέπουσ...φαύλως." The
wording in Pliny's account follows Aristotle's version more closely, showing that
Aristotle's version was preferred at the point in which the two versions
contradicted: Pliny's hebetes oculos is an approximate translation of Aristotle,
not Herodotus, and his extra acerrimi visus is nearly word for word for Aristotle's
"[βλέπουσ...] ἔχω δ' ὁξυττοτον." Pliny's next two clauses are then taken from
Herodotus and Aristotle, respectively, since only Herodotus includes the note
about the crocodile's hibernation and only Aristotle mentions the crocodile's
continuous growth.42

In addition to Aristotle's influence, we can detect in Pliny other changes in
Herodotus which had occurred in the interim between the two writers. I notice
that several Herodotean animal descriptions have somewhere along the way been altered or expanded. The description of the Phoenix, for example, differs from Herodotus' version. Herodotus describes this bird as partly gold and partly red (2.73.1, 2):

There is another sacred bird called the Phoenix. I myself have never seen it except in a picture...
If it is similar to the picture, the Phoenix can be described as having golden and red plumage. In size it is just like an eagle.

Pliny expands the description (10.3)

The story goes that [the Phoenix] is the size of an eagle, has a gleam of gold round its neck and all the rest of it is red, but the tail is blue and marked with rose-colored feathers; the throat has tufts, and its head is adorned with a feathered crest.

What is the source for Pliny's version? He begins his section on the phoenix with two key words--ferunt ("they say"), and narratur ("the story goes that") and then proceeds after his description of the bird to relate the first and most detailed Roman account of it. Herodotus' version has therefore been augmented by additional information acquired by later writers. The same is true of his description of the Egyptian calf Apis. The earliest Greek records we have of Apis--and the Phoenix--are the accounts found in the Histories. Both of these
animals are treated at length by later writers. Herodotus' account locates a white, diamond-shaped mark on Apis' forehead (ἐπὶ μὲν τῷ μετώπῳ λευκὸν τετράγωνον; 3.28); in Pliny this mark is described as "a white spot on the right flank in the shape of a crescent moon" (in dextro latere candicans macula cornibus lunae crescere incipientis; 8.184). As I noted in my discussion of Aristotle, it is impossible to determine the source(s) for the majority of changes that have occurred to Herodotus in the interim. In the description of Apis and the Phoenix, Pliny obviously follows an unknown source, though we might expect this source to be Roman in the case of the Phoenix since he follows the description quoted above with Manilius' account of it (10.4). Let it suffice to say that Herodotus' stories were in the process of modification and amplification.

Turning now to Aelian, this process is taken one step further. Writing in the early 3rd century A.D., Aelian had at his disposal a yet greater storehouse of zoological curiosities than Pliny had, from which he could draw his anecdotes. His work, entitled "De Natura Animalium" and written in Greek, never mentions any Roman author, though Pliny's work is understood to be the model. Yet the book is no more than a collection of pure animal anecdotes; a few are true, more are false, and many are ridiculous. Furthermore, these are arranged in absolutely no discernible order, much unlike Pliny's work. Compared to Pliny, Aelian used any material of Greek origin which had a good story, usually deriving his story not from the original author, such as Aristotle (even though Aristotle's name appears more than anyone else's in the work), but from an intermediate source, such as Aristophanes of Byzantium--as one might today quote James Michener from Reader's Digest, or Shakespeare via Cliff Notes. This haphazard
arrangement explains why we fail to find any consistent use of Herodotus. At one point Aelian quotes Herodotus without a flaw, at another he is distorted beyond recognition. His affinity for Alexandrian scholarship caused him to be more concerned with how he used his sources than with the accurate handling (or lack thereof) of his source material. One cannot fully appreciate the differences in style and content between the De Natura Animalium and the Historia Animalium unless one has spent a few hours perusing one author and then has turned to the other.

Two passages from Aelian will suffice to demonstrate the disparity in his use of Herodotus. The first is his description of camels (10.3):

'Hrōdotos légei tás kámphlous én tois ópioshein skélesin [èchei]
téttéras µporous kai méνtoι kai γývata tosáta, tā dé ṭhθra diá tów
skelów tów katópis pròs thn õýran tétráfðai aútaí.

Herodotus says that camels have in their hind legs four thighs and the same number of knees, but their genitals are turned backwards through their hind legs towards the tail.

Here again is what Herodotus wrote (3.103):

kámphlos én tois ópiosiòsì skélesi èchei tésserases µporouς kai
γývata téssera, tā te aídoia diá tów ópiosiòsì skeléwis pròs tihn
òýhin tétramaìena.

The camel has four knees and four thighs on its hind legs and its reproductive organ is turned toward its tail through its back legs.

Aelian not only accurately records Herodotus' details but also tells his readers that his source is Herodotus. It is apparent that Aelian was not using Herodotus
via a secondary source, though he varies his word choice somewhat so as to paraphrase the original.46 Now compare this with the following passage (6.60):

Μασσαγεται μὲν, ὡς Ἡρόδοτος λέγει, τὸν φαρετρέωνα πρὸς γε ἑαυτῶν κρεμάσαντες, εἶτα μὲντοι ὄμλει τῇ θηλεί[?], ὃ δρήν ἐμφανῶς, εἶ καὶ ὁ ἄλλοιν αὐτοὺς ὁ πάντες, πεφροντικότες όλον ἐκείνου γε.

The Massagetai, as Herodotus says, hang up their quivers before themselves, then each male openly copulates with a female, even if everybody is watching them, for they take no account of it.

Here is the original version from Herodotus (1.216):

γυναῖκα μὲν γαμέει ἐκαστος, ταῦτα δὲ ἐπίκουνα κρέωνται. τὸ γὰρ Σκύθας φασὶ Ἑλληνες ποιεῖν, οὐ Σκύθαι εἰς οἱ ποιεόντες οἱ άλλοι Μασσαγεται: τὴς γὰρ ἐπιθυμησθε γυναῖκας Μασσαγέτης ἄνδρος, τὸν φαρετρέωνα ἀποκρεμάσας πρὸς τῆς ἀμάξης μίσγεται ἀδείως.

Each [Massagetan] man marries a woman, but they use the women in common. The Greeks say this is a Scythian custom, but the Scythians don’t practice it, the Massagetai do. For should a Massagetan man want a woman, he hangs up his quiver before her wagon and they copulate without fear.

It is difficult to believe that Aelian was reading a copy of the Histories when he wrote his mutilated version, but he claims that it is Herodotus nonetheless. In this case there is good probability that Aelian’s source was an epitome of the original.47

Aelian also records a few of Herodotus’ zoological assertions that had been soundly corrected by Aristotle. These include the notion that female fish are impregnated by swallowing the milt of the male (NA 9.63), and that the camel has two knees on each of its hind legs (quoted above). These examples prove that even at such a late date Herodotus was believed and used as a direct
source, even over Aristotle. In tracing Herodotus' influence on zoology it is noteworthy that a number of Herodotean observations and stories not repeated by Aristotle or Pliny find their way into Aelian as well. Included among these is the notion that a female snake bites off the head of a male snake after mating, and that the offspring from the union avenge their father by biting through the womb of their mother (NA 1.24, a reference to Hist. 3.109). Another curious observation that finds no mention in these two authors describes the solution that the Arabians have for sheep which have tails that drag on the ground (10.4):

τὰς οἷς τὰς Ἀραβιῶν ἔχειν οὐρὰς ἀλθεῖς ὡς πρὸς τὰς ὄλλας Ἡρόδοτος λέγει...

Herodotus says⁴⁸ that Arabian sheep have unusual tails in comparison with other sheep...

So if one were to allow the tails to drag behind the sheep, they would be completely sore from rubbing against the ground. He says that the shepherds are not deft at doing anything better than making little carts to put under the sheep's tails to keep them from getting sore.

A number of these entertaining animal stories in Herodotus were fully exploited in this way by Aelian since it was easy for him to find a place for them in his De Natura Animalium (given the lack of structure in this work). The inclusion of such material in Aelian's zoology demonstrates the broad definition of "zoology" in Classical times as was explained in the introduction to Aristotle earlier in this chapter. It also shows that the majority of Herodotus' major zoological observations had at one time or another entered into the zoological "pool" since they subsequently reappear in zoological contexts. And the
appearance of Herodotus' name in Aelian's work shows that Herodotus was often looked upon as being either the originator or the primary source for many animal anecdotes which had become commonplace. This is further demonstrated by Aelian's apology to Herodotus when he accepts an anonymous writer's version of a story over Herodotus' (NA 2.53):

"έγώ δὲ ἀκούω λέγοντος τινος ἐν συγγραφῇ καὶ μελίττας Σκυθιδας εἶναι, ἐπα[?]ειν τε τῷ κρύους οὐδὲ ἐν...
εἰ δὲ εὐαντία Ἦροδοτω λέγω, μή μοι ἀποθέω: ὅ γὰρ ταῦτα εἴπων ἱστορίαν ἀποδείκνυοσθαι ἄλλ' σου ἄκοην [?]δειν ἐφατο ημίν ἀφοσάνιστον.

I hear from someone who says in his writings that there are Scythian bees and that they don't feel the cold at all...
If I contradict Herodotus in what I say, let him not be angry with me, for the one who said this asserted that his own investigation bore this out and that he was not simply babbling something he had heard and which was for us unverifiable.

Why does Aelian feel the need to justify his comments? It is very unusual for Aelian to do so when he freely picks and chooses his material elsewhere. He even goes so far as to echo Herodotus' own historical methodology with his phrase "ἱστορίαν ἀποδείκνυοσθαί" (recalling ἱστορίας ἀποδείξεις of Hist. prooemium). He does not usually feel the need to support his information by explaining how he obtained it. Herodotus in his version (Hist. 5.10) simply related the Thracian account of the bees in Scythia, then said he doubted their existence because the colder climate in that region would prevent it. Apparently Herodotus' version had either become recognized as the "canonized" version, or Herodotus' name was commonly associated with this story so that it prompted Aelian to provide an explanation. Herodotus is likewise associated with stories
of dolphin-riders because of his story of Arion (NA 6.15),\textsuperscript{49} and he is quoted by Aelian in connection with the Egyptian Apis (NA 11.10) even though Aelian most likely drew his material on Apis from Apion.\textsuperscript{50} Herodotus' \textit{Histories}, therefore, is responsible for popularizing many animal observations and anecdotes which became popular in later antiquity. In fact, dozens of animals find their first mention in Herodotus.

To sum up then, we have seen the nature of zoology take on various shapes under the pen of different writers—from Herodotus who traveled about acquiring knowledge and stories, through Aristotle who concentrated on explicating indigenous animals, to Pliny who compiled and collated previous knowledge, and finally to Aelian who repeated and reshaped previous knowledge for amusement.\textsuperscript{51} What sets Herodotus apart from every other contributor to the pool of zoological information is that, as a traveler and investigator of foreign animals, he was the first to present foreign fauna to a wide Greek audience. His sources (as he relates them) are primarily eyewitness accounts and information obtained from various local inhabitants rather than from previous writers on the subject. His description of the phoenix, for example, comes from a picture he says he saw, and not from the text of an ornithologist. And finally, Herodotus may be viewed as a catalyst in the rise of zoological curiosity and investigation as is shown both by Ctesias' reaction to him and by the fact that nearly all his major animal descriptions find ample treatment at the hands of later zoologists.
Notes to Chapter V

1 R. Henry, Ctesias (Bruxelles, 1947) 6. Henry draws his information chiefly from Jacoby’s work as recorded in Pauly-Wissowa.

2 Photius 72.35b: [ὁ Κτησίας] διέξειε τὰ περὶ Κύρου καὶ Καμβύσου καὶ τοῦ μάγου, Δαρείου τε καὶ τοῦ Σέρβου, σχεδόν εἰς ἀπασιν ἀντικείμενα Ἡροδότου Ιστορῶν, ἀλλὰ καὶ φευγάντην αὐτῶν ἀπελέγχων ἐν πολλοῖς, καὶ λογοποιὸν ἀποκαλῶν. (Quotations from Photius are taken from F. Jacoby’s Die Fragmente der Griechischen Historiker [Leiden, 1958].)

3 This is evident from the quote in note 2 and by an occasional remark of Photius such as "ὍUsω περὶ τούτων φησὶ Κτησίας, καὶ οὕς ὡς Ἡρόδοτος" (Photius 72.39a).

4 I refer to Ctesias’ digression on the mantichore mentioned below and Herodotus’ Libyan animals digression.

5 The phrase περὶ ψωσιν όι at HA 513a9, though referring specifically to the anatomists, provides a paraphrase for these terms (“those who concern themselves with nature”).

6 The difference between generalists and specialists is discussed by Aristotle in his PA (639a).

7 Pliny throughout Book 1 of the NH (the book containing his summation of subjects and sources for all subsequent books) refers to quoted writers as auctores as he does specifically in his zoological sections; vid., e.g., NH 8.1.2, 8.2.1, 8.17.6, 8.31.9, 9.10.1, 10.44.4, 10.74.1, 10.185.2, 10.106.2, 11.52.4, 11.73.4, 11.149.7, 11.163.6, and 11.253.6.

8 E.g., GA 723a12, 742b18, 746a19, 755b7, 759a-b passim, HA 496b4, 500a5, 511b-513a passim, 532b20, 534b1, 538a4, 541a13, 553a-554a passim, 562b28, 565b20, 569a5, 22, 574b33, 578a2, 591a3, 596a12, 615b24, 624a19, PA 656a16, 664b9, 673a15; this list is not exhaustive. In addition, Aristotle often reacts to what appears to be common (though often mistaken) knowledge. For example, at HA 535a22 fishermen report the behavior of fish when sounds occur, and at HA 537b3 where "some people" (τυπεκ) had heard a dolphin snoring. It is not always easy to draw distinctions in Aristotle’s zoology between literary/learned sources and common fishermen, gamers, herdsmen, etc.

9 E.g., HA 511b20; Hippocrates—though not named—is used extensively at the beginning of Book 7 of HA as noted by D’Arcy Thompson (loc. cit., The Works of Aristotle, Vol. 4 [Oxford 1910]).
10I have here made use of T. Organ's *An Index to Aristotle* (Princeton
University Press, 1949). A single reference to Heraclitus is omitted (PA 645a17)
since he is only mentioned in an anecdotal story.

144, 256, and 304).

12Alcman and Pherecydes are introduced into the text in HA 557a as
examples of individuals who died of a certain disease; in this sense, then, they
themselves are the "substantiating examples" rather than something about which they wrote.

13Manuscript Da reads 'Ἡρόδοτος instead of 'ἩσIODος. In addition,
D'Arcy Thompson points out that Scotus' edition reads "'Ομηρος."

14The reference is unknown.

15The single quote from Aesop (662a35), however, entails a correction of
a notion of Momus, a character in a fable. Momus, according to Aristotle, was
misled when he thought bulls should have had their horns on their shoulders
instead of their heads. Aristotle is nevertheless careful to correct Momus himself
within the parameters of the fable, i.e., by not breaking the dramatic illusion;
instead of saying (as he did with Hesiod) that the author was wrong to include a
mistaken idea in his story, Aristotle allows his audience to believe that Aesop did
not necessarily agree with his character's assertion.

16Humans are included in Aristotle's analyses of animals.

17In other words, that which can be "told" or "said" about something but
which has not been verified.

18Though the ancient Greek would not normally consider myth proper to
be "fiction" in the modern sense.

19Sometimes the subject is further delimited by a word or phrase (ἐνωι,
HA 609b10; τωςες, Mete. 359a17; ολικει, Mete. 359a27).

20*Pol.* 1284a22, HA 585a14, HA 585b23, Mete. 359a28, and *Mir.* 838a28;
Heracles also appears in the immediate context of *Mir.* 838b31 where
μυθολογεω is used to recall the legendary husbandman Aristaeus.

21The following discussion and quotes are taken from GA 756a32-756b13.

22Though Herodotus is not specifically named, both historians are also
used as sources for Libyan and Indian fauna in the same sentence at HA 606a7-9.

23Nor from the *De Generatione Animalium* since it had not been written
yet according to HA 523a14:
What [semen] contributes to generation and how it does so will be treated elsewhere.

I find no hint in Aristotle that he believes Herodotus lied about his travels and encounters. He instead supposes Herodotus to be sincerely though unforgivably mistaken.

This anatomical feature is repeated at HA 500b15-16.

By "final" I mean the "extant version." Aristotle’s zoological works are more aptly identified as notes or lectures to his students than as finished (published) works.

Herodotus also mentions these snakes at 3.107. For the veracity of his account see Chapter I.

This assertion was made three sections earlier as (HA 499b 10):

...τὰ δὲ δισσχίθη καὶ ἄντι τῶν ὑπόχων χηλῶς ἔχει, ώσπερ πρόβατον καὶ αἶξ καὶ ἐλαφὸς καὶ ἱππός ὁ ποτάμιος.

...and there are animals which have cloven feet and hooves instead of nails, such as the sheep, goat, deer, and hippopotamus.

If one believes Porphyry then both Herodotus and Aristotle may have drawn their material from Hecataeus. But if this were the case we would not expect to find contradictions between the two extant accounts.

Aristotle repeats his assertion that the crocodile’s lower jaw is immobile at NH 516a24.

HA 501a24-b1. Aristotle includes another of Ctesias’ observations at PA 663a18-19:

ἔστι δὲ τὰ πλείωτα τῶν κερατοφόρων δίχαλα, λέγεται δὲ καὶ μόνυμχου, διὸ καλοῦσιν Ἰνδικὸν ὄνων.

Most horned animals are cloven-hoofed, but there is said to be a solid-hoofed animal which is called the Indian ass.

The source for this remark is Ctesias’ detailed description of the rhinoceros (Photius 48b19ff). Aristotle’s inclusion of this note is another example of his willingness to allow for a single exception to a general rule, even though this exception is unverifiable.

Vid. e.g., HA 552b17 (Salamander puts out fire when it walks through it); 595a2 (an otter will bite a person and not let go till it hears a bone crack); and
631a1ff (tale of a horse which committed suicide after copulating with its mother).

33Juba II, King of Mauretania (c. 50 B.C.-A.D. c. 23) and author of the lost De expeditione Arabica, is among those more often quoted.

34One passage that exemplifies this I found to be particularly humorous. In Book 8, sections 80-84, Pliny informs his readers about the myths surrounding the werewolf. He begins by relating a story from Evanthes (an unknown Greek writer), then finishes the tale with the following statement (8.82):

   mirum est quo procedat Graeca credulitas: nullum tam inpudens mendacium est ut teste careat. item Apollas qui Olympionicas scripsit narrat...

   It is incredible to what extent Greek gullibility will go: no lie is too shameless to lack a supporter. Likewise Apollas, the author of the Olympionicae, relates the tale of...

   In other words, Pliny contemns the Greeks for their interest in and adherence to fabulous animal stories, and in the next sentence under the guise of a censure he proceeds to tell another Greek "fable" so that he can entertain his own readers!

35These include dog-headed men, the Monocoli or "Sciapodae" (one-legged men who shade themselves with their large foot as they sleep), the Troglodytes (also mentioned by Herodotus), the Astomi (men who have no mouths but live by smelling their food), a race where the females are pregnant only once in their lifetimes, and a neckless race whose people have their eyes in their shoulders.

36Pliny's opening remarks in Book 7 make this abundantly clear (8.1):

   Principium iure tribuetur homini, cuius causa videtur cuncta alia genuisse natura magna.

   First place by right shall be given to Man, for whose sake great Nature seems to have given birth to all other creatures.

37He is therefore forced to jump around geographically. Compare this arrangement with the Histories which treats animals almost entirely geographically.

38Vid. note 34. Though he in general distrusts Greek sources in his zoology, in all fairness his initial attempt at impartiality is evidenced just three sentences earlier (7.8):

   nec tamen ego in plerisque eorum obstringam fidem meam, potiusque ad auctores relegabo qui dubiis reddentur omnibus, modo ne sit fastidio
Graecos sequi tanto maiore eorum diligentia vel cura vetustiori.

Nevertheless, I shall not be credulous in the majority of these cases, I shall instead refer to the authorities who will be consulted in all dubious matters. Only let there be no grudge in following the Greeks, because of their much greater diligence and older concern for knowledge.

39I point this out since Book 7 is the beginning of Pliny's zoology, and Book 8 is the beginning of Pliny's zoology as the term refers to non-*homo sapiens*.

40I have omitted 8.44 since it deals with Pliny's story about how Aristotle received his zoological information from gamesmen sent by Alexander.

41In my opinion Pliny mistakes Aristotel's statement "...καὶ γλωττάν πάντα, πλῆν ὧ ἐν Ἀγρίπτω κροκόδειλος" (NH 502b35) as meaning the crocodile has no tongue, which is what he *literally* implies. Without reading other passages in which Aristotle fully develops his view of the crocodile's deformed and useless tongue, one can viably conclude from this passage that Aristotle meant the crocodile was completely tongueless.

42Pliny's *quidam hoc unumquamdiu vivat crescere arbitrantur* is nearly another word for word translation of Aristotle's version: "λέγουσι δὲ τινες ὅτι καὶ αὐξάνεται ἐως ἄν ζη." [10]

43Aristotle never mentions the Phoenix.

44Pliny's section begins with this sentence (10.3):

Aethiopiae atque Indis discolorès maxime et inenarrabiles esse ferunt aves... (10.3).

45Aelian quoted a variety of sources: Homer, Aeschylus, Sophocles, Euripides, Herodotus, Artemon, Polemon, Empedocles, Theopompus, Callias, Aeschylides, Pammenes, Cleitarchus, Timaeus, Heraclides, Juba II, Apion, Pamphilus, Leonidas of Byzantium, Demostratus, Telephus of Pergamum, Plutarch, and even Oppian (his contemporary). This list is not exhaustive.

46Herodotus Aelian

<table>
<thead>
<tr>
<th>ὁμισθίωσι σκέλεσι</th>
<th>ὁμισθεῖν σκέλεσιν</th>
</tr>
</thead>
<tbody>
<tr>
<td>γούνατα τέσσερα</td>
<td>γούνατα τοσάθατα</td>
</tr>
<tr>
<td>τά τε αἰδοῖα</td>
<td>τά δὲ ἄρθρα</td>
</tr>
</tbody>
</table>

47Theopompus, for example, is known to have written an epitome of the *Histories*. 
After a two-page story about a dolphin-riding boy (NA 6.14), Aelian says:

So if Herodotus had known about these things, in my opinion he would have marveled at them no less than he did over the circumstances surrounding Arion of Methymna.

"Chapters on the ibis, on Apis, on the hawk, the bird sacred to Apollo...may with fair certainty be traced to Apion." A.F. Scholfield, transl., Aelian: On the Characteristics of Animals, Vol. I. (Loeb Classical Library: Harvard Univ. Press, 1971), xix-xx.

We can see in Aelian a prelude to the later bestiaries. He wrote his work at the same time that someone in Alexandria was composing the Physiologus, a work that became the primary source for medieval bestiaries.
SUMMARY

What has this examination of animals shown? For one, it is clear that animals play important roles in the *Histories*. I have called attention to the ubiquitous occurrence of animals throughout Herodotus' work, and demonstrated that Herodotus' zoological interests do not stop at the boundary between ethnological digression and historical narration. Herodotus' interest in animals infuse his work on many different levels (zoological, religious, literary). For the most part, Herodotus was well aware of his use of animal imagery (as his is recognition and use of animal cognates in proper nouns demonstrates). But occasionally we get a glimpse into the author's mind, beyond the mere words of the text. For example, Herodotus' suppositions and beliefs about the world are demonstrated to be largely Hellenocentric by the pattern in his descriptions of foreign peoples: the further a nation lies from the Greek center of the world, the more animalistic it becomes. Extreme animal-like behavior, such as open copulation, is clearly censured by Herodotus, hence from the clearer and more poignant criticisms he makes we are able to establish precedents for interpreting passages where animal imagery is ripe but personal comment on the part of Herodotus is lacking.

Herodotus' descriptions and depictions of the Persian invaders underscores this on both the individual level as well as the national level. The Persian army, composed of many disparate nations, relies heavily on horse and
camel, and the nations that compose this army are described variously as wearing horses' scalps and manes, fox skins, leopard skins, lion skins, and fawnskin boots, and have antelope-horn spears, craneskin shields, and helmets decorated with the ears and horns of oxen (6.61ff). On an individual level it has been shown that the Persian rulers exhibit animal-like behavior and in particular treat their own subjects as animals. Such behavior is censured by Herodotus who contrasts Persian behavior with the freedom of the Greeks who need not be whipped into battle.

Animals in Herodotus' world find such a significant place in religious matters that animal imagery and occurrences are as common in religious contexts in the Histories as animal reliefs and adornments were in the ancient temple. From the ability of Herodotus' animals to share certain qualities with both people and the gods, they were able to act as intermediaries between the two realms. Thus people looked to animals to reveal the will of the gods, whether the animal's behavior revealed this will to them, or whether the animal was sacrificed to this end. Yet we should not think that animals were mere tools to be manipulated at the hands of men, as was demonstrated in the story of Aristodicus (1.159.3-4). Established custom and religious law dictated the guidelines within which one should act, yet the religious mores of the different nations invariably carried within them the latitude to allow for supernatural guidance and intervention, whether it be oxen that pulled a fiery cart to decide the fate of a condemned soothsayer (4.68-69), or challenges that were decided by a contest of animals (3.84-87 and 5.1).
Finally, Herodotus' interest in animals occupies a strategic position in the history of zoology. Literarily, he wrote the first lengthy prose history intended for a wide general audience, and his success is summed up in Cicero's attribution of him as the father of history. It is true that he borrowed heavily from previous writers, but all the authors from whom he quotes, except Hecataeus, composed their works in verse, a fact that demonstrates Herodotus' pivotal position between poetry and prose. The simplicity of his work, its general appeal and "archaic smile," if you will, won for it in antiquity an audience surpassed only by Homer's. Zoologists, when reaching for authorities prior to Aristotle, found these two authors--Herodotus and Homer--above all others to be storehouses of animal knowledge, anecdotes, and stories from which they fashioned their own literary works. The scarcity of citations from authors between the time of Homer and Herodotus demonstrates the impact Herodotus had upon the history of zoology and his strategic place within it.
APPENDIX A

Complete Alphabetical Listing of Animals and Animal Terms

(° = 1st mentioned in Herodotus)

αιγυππιός, ὁ
vulture

βάτροχος, ὁ
frog

αὐλουρος, ὁ
cat

βδέλλη, ἡ
leech

αετός, ὁ
eagle

οὔρος, ὁ
(?)

οἶς, ὁ, ἡ
goose (he/she)

ὁμόπης, ἡ
fox

οὐράσφιγξ, ὁ
man-sphinx

οὐρακαῖος, ὁ
sea creature (?)

ὀρκτος, ἡ
bear

ὀρνός, τοῦ
lamb, sheep

ὠσπίς, ἡ
asp

.Observer, ὁ
locust

οὐσσάριον, τὸ
fox

👦 Βοῦνος (see ζεγεριές, οἶ)

βοῦς, ὁ, ἡ
bull, cow

gαλαθηνά, τά
sucklings

gαλη, ἡ
ferret

γέρανος, ἡ
crane

γρῆψι, ὁ
griffin

dελφίς, ὁ
dolphin
(ο = 1st mentioned in Herodotus)

οδίκτυς, ὁ
d Jackal

οδορκάς, ἡ
antelope

ἐγχελύς, ἡ
eel

ἐλαφός, ὁ
deer

ἐλέφας, ὁ
elephant

ἐνυδρίς, ἡ
otter

ἐρπετόν, τό
reptile

eὐλή, ἡ
worm

ἐχιδνα, ἡ
adder, viper

ἐχινέες, οἱ
mice

ἐγερείες, οἱ
mice

ζορκάς, ἡ (see δορκάς, ἡ)

ἡμίονος, ὁ
mule

θηριον, τό
beast

θύννος, ὁ
tunny-fish

θύως, ὁ
d Jackal

ἐβύς, ἡ
ibis

ἰκτίνος, ὁ
hawk

ὑππός, ὁ, ἡ
horse, mare

ὑπποφόρβιον, τό
herd of horses

ἱρης, ὁ
hawk

ἰχθύς, ὁ
fish

ἰχνευτής, ὁ
weasel

κάστωρ, ὁ
beaver

κάμηλος, ἡ
camel

κῆτος ἀνάκαυθον, τό (see ἀντακαῖος, ὁ)
crow

κρέξ, ἡ
rail, crake

κρίος, ὁ
ram

κροκόδειλος, ὁ
lizard, crocodile

κτῆνος, τό
sheep, cattle
<table>
<thead>
<tr>
<th>Greek Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>κυνηγέσιον, τό</td>
<td>dog-pack</td>
</tr>
<tr>
<td>δίς, ὁ</td>
<td>sheep</td>
</tr>
<tr>
<td>κύων, ὁ, ἦ</td>
<td>dog</td>
</tr>
<tr>
<td>ὄνος, ὁ</td>
<td>donkey</td>
</tr>
<tr>
<td>κώνωψ, ὁ</td>
<td>mosquito, gnat</td>
</tr>
<tr>
<td>ὄρνεον, τό</td>
<td>bird</td>
</tr>
<tr>
<td>λαγός, ὁ</td>
<td>hare</td>
</tr>
<tr>
<td>ὄρνιθιον, τό</td>
<td>small bird</td>
</tr>
<tr>
<td>λέαινα, ἦ</td>
<td>lioness</td>
</tr>
<tr>
<td>ὄρνις, ὁ, ἦ</td>
<td>bird</td>
</tr>
<tr>
<td>ἄπειδωτός, ὁ</td>
<td>a fish (?)</td>
</tr>
<tr>
<td>ὄρτυξ, ὁ</td>
<td>quail</td>
</tr>
<tr>
<td>λέων, ὁ</td>
<td>lion</td>
</tr>
<tr>
<td>ὄρυξ, ὁ (see ὄρυς, ὁ)</td>
<td></td>
</tr>
<tr>
<td>λύκος, ὁ</td>
<td>wolf</td>
</tr>
<tr>
<td>ὄρυς, ὁ</td>
<td>antelope</td>
</tr>
<tr>
<td>μέλισσα, ἦ</td>
<td>bee</td>
</tr>
<tr>
<td>ὄψις, ὁ</td>
<td>snake</td>
</tr>
<tr>
<td>ἁμόσχος, ὁ</td>
<td>calf</td>
</tr>
<tr>
<td>πάνθερ, ὁ</td>
<td>panther</td>
</tr>
<tr>
<td>ὁμυγολῆ, ἦ</td>
<td>field-mouse</td>
</tr>
<tr>
<td>πάπρακες, ὁι</td>
<td>a fish (?)</td>
</tr>
<tr>
<td>μύρμηχ, ὁ</td>
<td>ant</td>
</tr>
<tr>
<td>πελείας, ἦ</td>
<td>dove</td>
</tr>
<tr>
<td>μῦς, ὁ</td>
<td>mouse</td>
</tr>
<tr>
<td>περιστερή, ἦ</td>
<td>pigeon</td>
</tr>
<tr>
<td>νεβρός, ὁ</td>
<td>fawn</td>
</tr>
<tr>
<td>ποίμνη, ἦ</td>
<td>flock</td>
</tr>
<tr>
<td>νῆσσα, ἦ</td>
<td>duck</td>
</tr>
<tr>
<td>ποίμνια, τά</td>
<td>flock</td>
</tr>
<tr>
<td>νυκτερίς, ἦ</td>
<td>bat</td>
</tr>
<tr>
<td>πρόβατα, τά</td>
<td>cattle, sheep</td>
</tr>
</tbody>
</table>
(° = 1st mentioned in Herodotus)

πύγαργος, ὁ  white-rump antelope
οὐδρος, ὁ  watersnake
σαύρη, ἡ  lizard
ὑποκύμιον, τὸ  pack-animal
σκύλως, ὁ  puppy, whelp
οὐστρίς, ὁ  hedgehog
σκύλως, ὁ  whelp
στροβύθος, ὁ  sparrow
φθείρ, ὁ  louse
στροβύθος κατάγας, ὁ  ostrich
φοίνιξ, ὁ  phoenix
σφῆς, ὁ  wasp
φώκη, ἡ  seal
σφιγξ, ἡ  sphinx
χάμψη, ἡ (see κροκόδειλος, ὁ)
στέρικος, ὁ  a salted fish
χελιδών, ὁ  swallow
ταῦρος, ὁ  bull
χέλων, ἡ  tortoise
tίλωνες, ol  a fish (?)
χήν, ὁ  goose
τράγος, ὁ  he-goat
χηνώλαπης, ὁ  fox-goose
τροχύλος, ὁ  sandpiper
χοῖρος, ὁ  pig
αὐγα, ἡ  hyena
APPENDIX B

Proper Nouns with Animal Cognates

<table>
<thead>
<tr>
<th>Greek</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>ὁ Αλυκόρης</td>
<td>ο Λέων</td>
</tr>
<tr>
<td>ἡ Αλυρόσσα</td>
<td>ο Λεωβώτης</td>
</tr>
<tr>
<td>οι Αλύσ Ποταμοί</td>
<td>οι Λεωνίδης</td>
</tr>
<tr>
<td>αι 'Αλώπεκαι</td>
<td>αι Λεωπρέπης</td>
</tr>
<tr>
<td>αι 'Αργυππαιοί</td>
<td>αι Λύκαιος Ζεύς</td>
</tr>
<tr>
<td>ἦ 'Ἀρκτός</td>
<td>ἦ Λυκάρητος</td>
</tr>
<tr>
<td>τὸ Βουκολικόν στόμα</td>
<td>ἦ Λυκίδης</td>
</tr>
<tr>
<td>αἱ Δέλφι</td>
<td>ἦ, ἦ Λύκιος</td>
</tr>
<tr>
<td>αἱ 'Εγχελέες</td>
<td>ἦ Λυκομήδης</td>
</tr>
<tr>
<td>[ὁ 'Ητών]</td>
<td>ὁ Λύκος</td>
</tr>
<tr>
<td>ὁ Ἰππάρχος</td>
<td>ὁ Λύκος ποταμός</td>
</tr>
<tr>
<td>ὁ Ἰππιής</td>
<td>ὁ Λυκόφρων</td>
</tr>
<tr>
<td>ὁ Ἰπποκλέιδης</td>
<td>ὁ Λυκώπης</td>
</tr>
<tr>
<td>ὁ Ἰπποκλός</td>
<td>ἦ Μέλισσα</td>
</tr>
<tr>
<td>ὁ Ἰπποκόων</td>
<td>ὁ Μήλης 3</td>
</tr>
<tr>
<td>ὁ Ἰπποκράτης</td>
<td>ὁ Μήλευς κόλπος</td>
</tr>
<tr>
<td>ὁ Ἰπποκρατίδης</td>
<td>αἱ Μήλαιοι</td>
</tr>
<tr>
<td>ἦ Ἰππόλεω ἱκρη</td>
<td>ἦ Μήλης</td>
</tr>
<tr>
<td>ὁ Ἰππόλοχος</td>
<td>αἱ Μόσχαι</td>
</tr>
<tr>
<td>ὁ Ἰππόμαχος</td>
<td>ὁ Μύρμηξ</td>
</tr>
<tr>
<td>ὁ Ἰππόνικος</td>
<td>ὁ Μῦς</td>
</tr>
<tr>
<td>αἱ Ἰχθυφάγοι</td>
<td>αἱ Οἰλοκόρος</td>
</tr>
<tr>
<td>ὁ Κρίς</td>
<td>αἱ 'Ουείται</td>
</tr>
<tr>
<td>ἦ Κροκοδείλων πόλις</td>
<td>αἱ 'Ορνεύται</td>
</tr>
<tr>
<td>ὁ Κυνέγειρος</td>
<td>αἱ Σαυρομάται</td>
</tr>
<tr>
<td>ὁ Κυνής</td>
<td>ἦ Σκυλάκη</td>
</tr>
<tr>
<td>αἱ Κυνήσαι</td>
<td>ὁ Σκύλας</td>
</tr>
<tr>
<td>αἱ Κυνηστες</td>
<td>αἱ Ταύροι</td>
</tr>
<tr>
<td>ὁ Κυνίκος</td>
<td>αἱ 'Υάται</td>
</tr>
<tr>
<td>αἱ Κυνοκέφαλαι</td>
<td>ὁ Φαίνιππος</td>
</tr>
<tr>
<td>τὸ Κυνόσαργες</td>
<td>ὁ Φαίλιππίδης</td>
</tr>
<tr>
<td>ἦ Κυνόσαρα</td>
<td>ὁ Φαίλιππος</td>
</tr>
<tr>
<td>αἱ Κυνόμαι</td>
<td>αἱ Χοιρεῖται</td>
</tr>
<tr>
<td>ἦ Κυνώ</td>
<td></td>
</tr>
</tbody>
</table>
Notes to Appendix B

1 A few adjectives are included in this list.

2 To this list might be added αι Αλγαί, αι Αλγαίαι, το Αλγαίον, and other possible cognates of αιξ. Note, however the following comment by H. Frisk (Griechisches Etymologisches Wörterbuch, Vol. 1, p. 42):

   Inwieweit das Wort [αιξ] für Ziege in griechischen Ortsnamen enthalten ist (Αλγαί, Αλγαίος, Αλγαία usw.), ist strittig.

3 Words with μηλ- may either be cognate with μηλον ("sheep") or μηλον ("apple"). The ambiguity can be seen in the word Μηλώδες which Liddell and Scott define as "nympha of the flocks or of the fruit-trees."
Beeves, I.C. Insects and Other Invertebrates in Classical Antiquity (Univ. of Exeter, 1988).
Borggreve, B. "Noch einmal das Federnland Herodots," Ausland 49 (1876) 238.
Diels, H. "Herodot und Hekataios," Hermes 22 (1887) 430-432.


Kádár, Z. "Some Problems concerning the Scientific Authenticity of Classical Authors on Libyan Fauna: A Zoological Commentary on Description of Libya by Herodotus," *ACD* 8 (1972) 11-16.


Lankester, E.R. *Science from an Easy Chair* (London, 1913).


Naber, S.A. "Ἰβις λευκόπτερος," in *Études archéologiques, linguistique et historiques dédiées à C. Leemans* (Leide 1885) 10.


Powell, J.E. A Lexicon to Herodotus (Cambridge, 1938).


Saint-Loup, M.R. "Hérodote naturaliste," Revue scientifique 47 (1891) 139-142.

Schiern, F. Sur l'orien de la tradition des fourmis qui ramassent l'or (Kopenhagen, 1873).


Soho, A.M. Did the Lions Exist in Greece within Historic Times? (Johns Hopkins, 1898).


Tripodi, B. "La Macedonia, la Peonia, il carro sacro di Serse (Herodot. 8,115-116)," GIF 38 (1986) 243-251.


Van Groningen, B.A. "Un oracle de Delphes (Hérodote IV, 159,3)," Mnemosyne 9 (1956) 295.


Verrall, A.W. "Herodotus and the Phoenix," The Academy 25 (1884) 387.


