

Echoes and Gaps: The Lion in Aristophanes of Byzantium's *Epitome* and the Aristotelian Tradition

Fabio Verthuy

Abstract: *This paper examines the section on the lion (Epit. 2.133-150) of Aristophanes of Byzantium's Epitome as preserved in the Byzantine Sylloge. Close textual comparison with the Historia animalium and other Aristotelian works shows that Aristophanes' epitome is not merely derivative, but reflects a deliberate process of selection and reorganization. While usually faithful to its source material, the epitome introduces notable divergences, ranging from stylistic compression to substantive deviations, including omissions and generalizations. The epitome also contains details unattested in extant sources, which may derive from now-lost works, from Aristophanes' own interpretive contributions, or from later additions by the compiler of the Sylloge. Crucially, Aristophanes' aim differs from Aristotle's: he produces a species-focused handbook for a different readership, largely omitting causal explanations central to Aristotle. The lion case demonstrates that epitomes are generative: they preserve, adapt, and at times innovate on their sources. Scholars should therefore treat epitomes both critically, when reconstructing sources, and productively, as witnesses to the organization and reception of knowledge in the Hellenistic and Byzantine worlds.*

In the summer of 1880, Spyridon Lambros uncovered a 13th-century manuscript in the library of the Dionysiou Monastery on Mount Athos, which included the previously lost second book of a zoological compilation prepared under the patronage of Emperor Constantine VII Porphyrogenitus.¹ The first

¹ *Athos Dionysiou* 180, ff. 335r-387v = S. P. Lambros, *Catalogue of the Greek Manuscripts on Mount Athos I* (Cambridge 1895) no. 3714. There, the manu-

book of this compilation, already known through a manuscript preserved in Paris (*Paris. suppl. gr.* 495) and published by Valentin Rose in 1870,² states in its heading that it was derived from an *epitomē* of Aristotle's zoological writings compiled by Aristophanes of Byzantium, and further enriched with material from Aelian, Timotheus of Gaza, and other authors.³ These additional sources are found exclusively in the second book; however, explicit attribution to individual authors appears only in the final section of the compilation (from 2.283 onward). In the earlier portion, the blending of texts is more pronounced, and the origins of specific excerpts often remain obscure.

In 1885, Lambros published both books for the *Supplementum Aristotelicum* under the Latin title *Excerpta Constantini de natura animalium*.⁴ The Greek title prefixed to the text reads: Συλλογὴ τῆς περὶ ζώων

script is dated to the 14th century. In his edition of the zoological compilation, however, S. P. Lambros, *Excerptorum Constantini de natura animalium libri duo. Aristophanis Historiae animalium Epitome subiunctis Aeliani Timothei aliorumque eclogis* (Berlin 1885) V offered a more precise dating: “exeunte s. XIII vel XIV ineunte scriptus”. On the manuscript's dating, see now V. Cuomo, “Athos Dionysiou 180 + Paris, Suppl. Grec 495: un nuovo manoscritto di Teodosio Principe,” *ByzZeit* 98 (2005) 23–34, at 28–34.

² V. Rose, in V. Rose (ed.), *Anecdota Graeca et Graecolatina. Mitteilungen aus Handschriften zur Geschichte der Griechischen Wissenschaft* II, 17–40. Rose had previously published some passages from the first book of this zoological compilation in *Aristoteles Pseudepigraphus, Pars Prima: Fragmenta Aristotelis Philosophica* (Leipzig 1863), 283–285.

³ Ar. Byz. *Epit.* p. 1.4–6 Lambros: Ἀριστοφάνους τῶν Ἀριστοτέλους περὶ ζώων ἐπιτομή, ὑποτεθέντων ἐκάστῳ ζῴῳ καὶ τῶν Αἰλιανῶ καὶ Τιμοθέῳ καὶ ἑτέροις τισὶ περὶ αὐτῶν εἰρημένων (“Aristophanes' epitome of the works of Aristotle about animals, to which has been added, for each animal, what has been said about them by Aelian and Timotheus and certain others”). The other authors include Agatharchides' *On the Red Sea*, Basilius of Caesarea's *Hexaemeron*, the pseudo-Aristotelian *Mirabilia*, Ctesias' *Indica* and Philostorgius' *Ecclesiastic History*.

⁴ S. P. Lambros, *Excerptorum Constantini de natura animalium*. The surviving portions that can be attributed to Aristophanes' *Epitome* are reprinted in the third volume of the Berlin edition of Aristotle's complete works: O. Gigon, *Aristotelis opera* III (Berlin 1987) 442–464. Interestingly, the excerpts from Aristophanes' *Epitome* were not included in W. J. Slater (ed.), *Aristophanis Byzantii fragmenta* (Berlin, New York 1986).

ιστορίας, χειρσαίων πτηνῶν τε καὶ θαλασσιῶν, Κωνσταντίνῳ τῷ μεγάλῳ βασιλεῖ καὶ αὐτοκράτορι φιλοπονηθεῖσα.⁵ For convenience, this work will be referred to throughout as the *Sylloge*.

As Valentina Cuomo has demonstrated, the *Paris. suppl. gr.* 495 and the *Athos Dionysiou* 180 are in fact two parts of the same codex. This manuscript once belonged to the library of Theodosios IV Prinkips, a descendant of the Villehardouin family and Patriarch of Antioch (1278-1283), and later passed into the collection of the Dionysiou Monastery.⁶

Despite its significance for the transmission of ancient zoological knowledge, the *Sylloge* remains understudied, particularly in terms of its internal mechanics of excerpting and attribution.⁷ Once modern scholarship recognized that certain passages could be attributed to Aristophanes drawing on Aristotle, or to later authors such as Aelian or Timotheus, those identifications were often treated as endpoints rather than points of departure. Such passages have rarely been subjected to detailed analysis aimed at tracing their transformations across layers of transmission.⁸

⁵ The title appears on fol. 8r of *Paris. suppl. gr.* 495: “Collection of the inquiry about animals terrestrial, winged, and aquatic, prepared as a labor of love for Constantine, the great king and emperor.”

⁶ Cuomo, *ByzZeit* 98 (2005) 23–34.

⁷ Lambros’ edition remains the only one to have undertaken a systematic attempt to identify the sources of all the passages in his *apparatus fontium*, despite several errors and uncertainties. For instance, he expunges the entire passage 2.166 on the lion, remarking: “haec particula unde divulsa huc inlata sit nescio” (“I do not know where this fragment was torn away from and how it was brought here”). Yet this paragraph can, in fact, be traced to a section of Aelian’s *De Natura Animalium*. Specifically, *NA* 12.7 exhibits correspondences with the *Sylloge*’s version, both in terms of content and lexical choices.

⁸ In the case of Aristophanes, for example, the entries on the wolf (2.207–216) have been closely analyzed by O. Hellmann, in W.W. Fortenbaugh and S.A. White (eds.), *Aristo of Ceos: Text, Translation, and Discussion* (New Brunswick 2006) 338–339 and A. Zucker, “Qu’est-ce qu’épitomiser? Étude des pratiques dans la *Syllogé* zoologique byzantine,” *Rursus* 7 (2012) § 4.3, while Hellmann, in *Aristo of Ceos* 343–344 has also examined the sections devoted to the hedgehog (2.424–427). Zucker, *Rursus* 7 (2012) § 4.2 further investigates the passages concerning the mating of arthropods (1.34–37). More recently A. Falcon, in S. Föllinger (ed.), *Aristotle’s Generation of Animals: A Comprehensive Approach* (Berlin 2022) 429–440 has compared a substantial portion of Aristophanes’

This paper undertakes a focused case study of Aristophanes of Byzantium's sections on the lion as preserved in the second book of the Byzantine *Sylloge*.⁹ The objective is not merely to recover the particulars of a single passage but to treat those sections as a window onto Aristophanes' wider editorial practice. Through close textual and intertextual comparison with passages in Aristotle's *Historia animalium* and related Aristotelian writings, I trace how Aristophanes operates in the service of a new goal. Indeed, epitomes remain bound to earlier authorities while also registering the editorial and authorial work that can transform those dependencies into a distinct textual form.¹⁰

text (1.27–90) with passages from *De generatione animalium* in order to demonstrate how Aristophanes of Byzantium made use of this Aristotelian treatise in the construction of his *Epitome*.

⁹ The account on the lion is based on two primary sources: paragraphs 133–150 are derived from Aristophanes of Byzantium's *Epitome*, while paragraphs 151–166 originate from Aelian's *De Natura Animalium*. On Aristophanes of Byzantium and the role of the zoological *Epitome* within his scholarly production, see R. P. Pfeiffer, *History of Classical Scholarship from the Beginnings to the End of the Hellenistic Age* (Oxford 1968) 171–173 and F. M. Montana, in F. Montanari, S. Matthaios, A. Rengakos (eds.), *Brill's Companion to Ancient Greek Scholarship I* (Leiden 2015) 118–123. For studies specifically on the *Epitome*, see E. L. De Stefani, "Per l'Epitome Aristotelis De Animalibus di Aristofane di Bizanzio," *StIt* 12 (1904) 421–445; W. Kullmann, in W. Kullmann, J. Althoff, M. Asper (eds.), *Gattungen wissenschaftlicher Literatur in der Antike* (Tübingen 1998) 121–139; F. Berger, *Die Textgeschichte der Historia Animalium des Aristoteles* (Wiesbaden 2005); F. Berger, "Die Textgeschichte der *Historia Animalium* des Aristoteles, Aristophanes von Byzanz und die zoologische *Sylloge* des Konstantinos Porphyrogenetos," *Rursus* 7 (2012); Hellmann, in *Aristo of Ceos* 329–359; O. Hellmann, in M. Horster and C. Reitz (eds.), *Condensing Texts – Condensed Texts* (Stuttgart 2010) 555–583; O. Hellmann, in F. Montanari, S. Matthaios, A. Rengakos (eds.), *Brill's Companion to Ancient Greek Scholarship II* (Leiden 2015) 1235–1266; Zucker, *Rursus* 7 (2012); T. Dorandi, in M. M. Sassi, E. Coda and G. Feola (eds.), *La zoologia di Aristotele e la sua ricezione dall'età ellenistica e romana alle culture medievali. Atti della X "Settimana di Formazione" del Centro GrAL, Pisa, 18–20 novembre 2015* (Pisa 2017) 59–80; M. Hatzimichali, in S.M. Connell (ed.), *The Cambridge Companion to Aristotle's Biology* (Cambridge 2021) 228–245; and Falcon, in *Aristotle's Generation of Animals* 421–442. The nature and function of the work remain subjects of scholarly debate among these authors.

¹⁰ As M. Formisano, P. F. Sacchi, in P. F. Sacchi, M. Formisano (eds.), *Epitomic Writing in Late Antiquity and Beyond: Forms of Unabridged Writing* (London, New

The sections on the lion function as a representative case that reveals recurrent editorial strategies and the methodological problems any scholar faces when working with an epitome—above all, the challenge of attributing material that does not map neatly onto extant works, and the caution required when using material transmitted through epitomes to reconstruct another author’s texts and ideas. The evidence developed below therefore aims to move from a tightly focused philological reading to broader claims about how epitomizing reshapes content, context and the possibilities for its use.

A Closer Look at Epit. 2.133–150: The Case of the Lion

Out of the twenty-two animals discussed by Aristophanes in the surviving section of his *Epitome*, the lion stands out as one of the nine animals examined in greater detail.¹¹ The description that follows adheres to a structured template established by Aristophanes himself at the beginning of the second book,¹² which includes name

York 2022) 8 highlight, “critics and philologists started laying claim to the *authoriality* of the epitomizer. The apology of the text is hence substantiated through the introduction of a new persona: the *worthy, skilful author*,” capable of producing a synthesis that is not merely a reduction but an interpretive and re-foundational act. A telling example of this authorial agency is Aristophanes’ omission of Aristotle’s discussion of insects, which he deems unworthy of inquiry (2.3: οὐκ ἄξιον ἱστορίας). This decision reflects not only his editorial selectivity but also his interpretive judgment about what constitutes valuable zoological knowledge.

¹¹ The other eight animals are the elephant (ἐλέφας: 2.68–82), the dog (κύων: 2.167–181), the wolf (λύκος: 2.207–216), the cat (αἴλουρος: 2.295–299), the bear (ἄρκτος: 2.326–336), the camel (κάμηλος: 2.446–459), the deer (ἔλαφος: 2.476–492), and the horse (ἵππος: 2.573–584).

¹² Ar. Byz. *Epit.* 2.1: ἐν τῆδε τῇ συντάξει, τὸν ἀριθμὸν οὔση δευτέρα, πειράσομαι, προγράφων περὶ οὗ ἐστὶν ὁ λόγος ζῴου ὄνομα, προσυποτάσσειν τούτῳ ὅσα τὸ προταχθὲν ζῴων μόρια κέκτηται, εἶτα περὶ τῆς ὀχείας αὐτοῦ καὶ πόσους κύειν δύναται μῆνας, περὶ τε τῆς ἐκτέξεως ποῖα καὶ πόσα ὑπομένει τίκτειν βρέφη· ἐπὶ πᾶσι δὲ τίς ὁ βίος τοῦ προγραφέντος ζῴου καὶ ποῖον τὸ ἦθος καὶ πόσα δύναται ζῆν ἔτη. (“In this composition, which is the second in number, first writing the name of the animal that is under discussion, I will try to put under this heading all the anatomical parts possessed by the animal named at the start. Then, I will speak about its mating, how many months it

(§ 133), anatomical features (§ 133–139), reproduction (§ 140–143), behavioral attributes and temperament (§ 144–149), and lifespan (§ 150).¹³

Epit. 2.133–139: Name and Anatomical Features

(133) ὁ λέων ἐστὶ μὲν καρχαρόδους καὶ πολυσχιδῆς, βαδίζει δὲ κατὰ σκέλος καθάπερ ἡ κάμηλος, λέγω ἀκολουθεῖν τῷ ἐμπροσθίῳ σκέλει τὸ ὀπίσθιον· τὰ γὰρ ἄλλα τετράποδα κατὰ διάμετρον πορεύεται χιάζοντα τοῖς σκέλεσιν. (134) ἔχει δὲ τὸ τοῦ ἀυχένος ὅστουν ὁ λέων ἓν, ἀλλ' οὐκ ἐκ πολλῶν σπονδύλων συγκεῖμενον. (135) κοπτομένων δὲ τῶν ὀστέων αὐτοῦ πῦρ ἕξεισι καθάπερ ἐκ τῶν λίθων. ἔχει δὲ τὰ ὀστᾶ ὡς ὅτι μάλιστα ἀμύελα καὶ μικρὰς ὀπὰς ἔχοντα. (136) ἔστι δὲ καὶ ὀπισθορητικὸν καθάπερ κάμηλος, καὶ γενόμενος ἕξαμηνιαῖος αἴρων τὸ σκέλος οὐρεῖ καθάπερ καὶ οἱ κύνες. (137) ἡ δὲ θήλεια ὑπὸ μικρὸν καθημένη οὐρεῖ· ἔχει δὲ καὶ μαστοὺς δύο ἐν τῇ γαστρὶ. (138) ἀνατμηθεὶς δὲ ὀσμήν ἔχει βαρεῖαν, ὥστε μὴ ὑποφέρειν, τὰ δὲ ἐντόσθια ὅμοια κυνί, κοιλίαν δὲ μόνην ὁμοίαν ἔχει ὑτί. (139) ἔχει δὲ ὁ μὲν ἄρρην χαίτας, ἡ δὲ θήλεια ψιλὴ ἐστὶ. βάλλει δὲ καὶ τῶν ὀδόντων τοὺς κυνόδοντας λεγομένους, δύο ἄνωθεν καὶ κάτωθεν δύο.

(133) The lion is saw-toothed and fissiped; it walks leg by leg, like the camel—that is to say, the hind leg follows the front leg. For the other quadrupeds walk cross-corner wise, crossing their legs. (134) The lion's neck consists of one single bone, not of multiple vertebrae. (135) When its bones are struck, fire will come out, just as from flints. It has bones that are as marrowless as possible and have small holes. (136) It is also retromingent like the camel, and, once it is six months old, it urinates lifting its leg like dogs. (137) The female, however, urinates while crouching low to the ground; she also has two breasts on her belly. (138) When it is dissected, it gives off a smell so heavy that it is impossible to endure; its inter-

is capable of gestation and, with regard to its birth, what kind of offspring it is able to bear and how many. After all these aspects, I will explain the way of life of the animal mentioned at the start, what kind of temperament it has and how many years it is able to live.” Cf. De Stefani, *StIt* 12 (1904) 431-432; Kullmann, in *Gattungen wissenschaftlicher Literatur* 127; Hellmann, in *Aristo of Ceos* 335–336; Falcon, in *Aristotle's Generation of Animals* 425-427.

¹³ In the following pages, the text of the *Epitome* is quoted according to Lambros' edition.

nal organs resemble those of the dog, except that it has a single stomach, similar to that of the pig (139) The male has a mane, whereas the female is smooth. The lion also sheds its so-called canine teeth, two above and two below.

The phrase ὁ λέων ἐστὶ μὲν καρχαρόδους καὶ πολυσχιδῆς attributes two distinct characteristics to the lion: καρχαρόδους (“with saw-like teeth”) and πολυσχιδῆς (“fissiped”). The term καρχαρόδους appears in several sections of Aristotle’s *Historia animalium*, where the lion is cited among the species that possess saw-like teeth. For instance, in *Hist. an.* 2.1, 501a16, Aristotle explicitly states that certain animals, such as the lion, the leopard, and the dog, have this dental morphology.¹⁴ Similarly, in *Hist. an.* 2.7, 502a6–7, Aristotle elaborates on variations in oral structures among animals, stating that certain species, including the lion, possess mouths that open wide, a feature common to saw-toothed animals. Moreover, in *Hist. an.* 7(8).5, 594b17, Aristotle underscores the carnivorous nature of the lion and associates this trait with its dental structure.

The second attribute, πολυσχιδῆς, is likewise attested in Aristotelian descriptions.¹⁵ This characteristic is explicitly mentioned in *Gen. an.* 2.6, 742a8–10, where Aristotle enumerates fissiped quadrupeds, including the lion.¹⁶ A similar observation is found in *Hist. an.* 2.1, 499b6–8, where Aristotle notes that among blooded viviparous quadrupeds some have multi-cloven feet. Furthermore, in *Hist. an.* 2.1, 499b23–26, Aristotle discusses anatomical variations among fissipeds, describing the distinctive structure of the lion’s ankle bone (ἄστράγαλος).¹⁷

The description of the way the limbs move follows closely *Hist. an.* 2.1, 498b5–10: the lion, which walks κατὰ σκέλος (“leg by leg”),

¹⁴ References to the *Historia animalium* here and throughout follow D. M. Balme (ed.), *Aristotle Historia Animalium I*, prepared for publication by A. Gotthelf (Cambridge 2002).

¹⁵ On the Aristotelian classification of viviparous quadrupeds according to the form of their feet see A. Zucker, *Les classes zoologiques en Grèce ancienne* (Aix-en-Provence 2005) 243–256.

¹⁶ *De generatione animalium* here and throughout is quoted from H. J. Drossaert Lulofs (ed.), *De generatione animalium* (Oxford 1965).

¹⁷ For a commentary on this passage see S. Zierlein, *Aristoteles. Historia Animalium Buch I und II* (Berlin 2013) 413–414.

like the camel, is contrasted with the other quadrupeds, which move κατὰ διάμετρον (“cross-corner wise”). For each of these two ways of walking, Aristophanes provides a brief explanatory phrase.¹⁸ The expression ἀκολουθεῖν τῷ ἐμπροσθίῳ σκέλει τὸ ὀπίσθιον has only two other parallels, in the *Hippiatrica*, a collection of Greek hippiatric texts spanning various periods.¹⁹ In those cases, while describing a condition that affects horses known as “opisthotonos,” by which the body is drawn backward and stiffens, one of the symptoms is said to be the failure of their hind feet to follow their forefeet (<οὐκ> ἀκολουθεῖ τὰ ὀπίσθια τοῖς ἐμπροσθίοις *CHG I* p. 186; οἱ ὀπίσθιοι <οὐκ> ἀκολουθοῦσιν τοῖς ἐμπροσθίοις *CHG II* p. 284). The verb χιάζω, in combination with πορεύω, appears only twice elsewhere in Aristophanes—once with certainty and once as a conjecture by Lambros.

¹⁸ Aristotle’s *Hist. an.* only explains κατὰ σκέλος. Aristotle articulates this explanation in a similar, yet different way: τὸ δὲ κατὰ σκέλος ἐστὶν ὅτι οὐ προβαίνει τῷ ἀριστερῷ τὸ δεξιόν, ἀλλ’ ἐπακολουθεῖ (“Walking leg by leg means that the right foot is not advanced before the left, but follows it”). On the meaning of κατὰ σκέλος see also Zierlein, *Aristoteles* 395–396, who argues that Aristotle’s use of the term κατὰ σκέλος to describe the gait of camels and lions should not be equated with the modern concept of the pace gait, despite apparent similarities. While camels do exhibit a lateral gait resembling pacing, Aristotle explicitly rejects the physical plausibility of such locomotion in *De incessu animalium* 712b1–9. Moreover, Aristotle’s inclusion of the lion among κατὰ σκέλος movers suggests that the term does not denote strict pacing. Rather, Zierlein suggests that κατὰ σκέλος may refer to a modified diagonal gait in which limb movement follows a specific sequence, without one side initiating locomotion ahead of the other. The meaning of κατὰ διάμετρον is presented, though not in Aristophanes’ own terms, in *De incessu animalium* 712a25–28, where Aristotle states: μετὰ γὰρ τὸ δεξιὸν τῶν ἐμπροσθεν τὸ ἀριστερὸν τῶν ὀπίσθεν κινουῦσιν, εἶτα τὸ ἀριστερὸν τῶν ἐμπροσθεν, μετὰ δὲ τοῦτο τὸ δεξιὸν τῶν ὀπίσθεν (“For after the right front leg, they move the left hind leg, next the left front leg, and after it the right hind leg.”) This distinctive diagonal gait is analyzed in detail by S. R. Jansen in A. Falcon, S. Stavrianeas (eds.), *Aristotle on How Animals Move: the De incessu animalium: Text, Translation, and Interpretative Essays* (Cambridge 2021) 269–273.

¹⁹ On the *Hippiatrica* see A. McCabe, *A Byzantine encyclopaedia of horse medicine: the sources, compilation, and transmission of the « Hippiatrica »* (Oxford, New York 2007) and S. Lazaris, in S. Lazaris (ed.), *A companion to Byzantine science* (Leiden 2020) 404–428. The standard edition remains E. Oder, C. Hoppe (eds.), *Corpus hippiatricorum graecorum I-II* (Leipzig 1924–1927).

In the first instance, it is used to describe the gait of the elephant.²⁰ In the second case, Lambros (p. 143) suggests that, since a portion of the text describing the horse's gait is damaged (*cetera corrossa*), it could be reconstructed by drawing a comparison with this passage on the lion.²¹ Moreover, unlike Aristotle, who differentiates between two species of camels—the Bactrian and the Arabian—Aristophanes refers to camels in general.

In the description of the lion's neck, Aristophanes inverts the original word order found in Aristotle (*Hist. an.* 2.1, 497b16–17: καὶ ὁ γε λέων τὸ τοῦ ἀνθρώπου ἔχει ἐν ὀστοῦν, σφονδύλους δ' οὐκ ἔχει). Two key differences stand out. One is Aristophanes' choice of the verb σύγκειμαι instead of Aristotle's simpler ἔχω. Another is that while Aristotle refers to vertebrae in general (σφονδύλους), Aristophanes speaks of multiple vertebrae (πολλῶν σπονδύλων).²² Moreover, in *Part. an.* 4.10, 686a21–24, Aristotle attributes the unique anatomical feature—observed not only in lions but also in wolves—of a neck composed of a single bone to the functional necessity of a strong neck in these particular species.²³ However, the basis for such a conclusion remains unclear, as both lions and wolves, like nearly all mammals, possess seven cervical vertebrae. Given that Aristotle appears to have had direct access to the internal anatomy of the lion—as suggested by his frequent and detailed references to dissection—he ought to have recognized the presence of seven cervical vertebrae. This discrepancy suggests that Aristotle's anatomical account of the lion, particularly with regard to the neck, may have been influenced—at least in part—by the uncritical acceptance of

²⁰ Ar. Byz. *Epit.* 2.68: ὁ ἐλέφας [...] πορεύεται δὲ κατὰ διάμετρον χιάζων, ἀλλ' οὐ κατὰ σκέλος. (“The elephant [...] walks cross-corner wise, in a crossed manner, but not laterally.”)

²¹ Ar. Byz. *Epit.* 2.573: ὁ ἵππος < [...] πορεύεται δὲ κατὰ διάμετρον <χιάζων τοῖς σκέλεσι.> (“The horse [...] walks cross-corner wise, <crossing its legs.>”)

²² Aristophanes' use of the graphic variant σπονδύλων is not particularly remarkable. In fact, the manuscript tradition of the *Historia animalium* exhibits the two variant readings σφονδύλων and σπονδύλων.

²³ *De partibus animalium* here and throughout is quoted from A. L. Peck, E. S. Forster (eds.), *Parts of animals; Movement of animals and Progression of Animals* (Cambridge, London 1937).

a now-lost source, rather than by firsthand empirical observation.²⁴

The section on the lion's bones corresponds to two passages from Aristotle (*Hist. an.* 3.7, 516b7–11; *Hist. an.* 3.20, 521b11–15). However, while Aristotle emphasizes the relative hardness (στερεά) of the lion's bones—a detail omitted by Aristophanes—both authors highlight their capacity to produce flames.²⁵ Note that different verbs are used to describe both the breaking out of fire from the lion's bones (ἔξειμι in Aristophanes, ἐκλάμπω in Aristotle) and the action that produces this effect (κόπτω in Aristophanes, συντρίβω in Aristotle). In contrast, entry seventy-four in pseudo-Antigonius' *Collection of Marvellous Investigations*, which is also drawn from Aristotle's *Historia animalium*, uses the verb κόπτω, as found in Aristophanes, alongside ἐκλάμπω, as used by Aristotle.²⁶ In the *Deipnosophistae* 353E, Athenaeus, while quoting Aristotle, similarly integrates these lexical choices by adopting both ἐκλάμπω and κόπτω.²⁷ The verb κόπτω in reference to lion bones is also attested in other later works, including Origen's *Fragmenta in Jeremiam (in catenis)*,²⁸ Horapollo's *Hieroglyphica*,²⁹ and the

²⁴ On this point see Zierlein, *Aristoteles* 384.

²⁵ Aristotle further elaborates on the reasons why lion bones are naturally and exceptionally hard in even greater detail in *Part. an.* 2.9, 655a12–16.

²⁶ Ps.-Antig. *Mir.* 74 Musso: τοῦ δὲ λέοντος οὕτως εἶναι τὰ ὀστᾶ στερεά, ὥστε πολλάκις κοπτομένων πῦρ ἐκλάμπειν. (“the lion's bones are so hard that often fire flashes forth when they are struck”). On the use of the *Historia animalium* by pseudo-Antigonius, see J. Lightfoot, *Wonder and the Marvellous from Homer to the Hellenistic World* (Cambridge 2021) 68–78. Dorandi, in *La zoologia di Aristotele* 79, building on Musso, “Sulla struttura del cod. Pal. Gr. 398 e deduzioni storico-letterarie,” *Prometheus* 2 (1976) 7–9, which demonstrated the existence of close structural and linguistic connections between Aristophanes' *Epitome* and the *Mirabilia* attributed to pseudo-Antigonius, raises the question of whether these elements might indicate that the *Epitome* could be assumed—albeit indirectly and distantly—as a model for at least some parts of the knowledge found in the *Mirabilia*.

²⁷ Ath. 353E: ἔτι ὁ λέων, φησί, στερέμνια ἔχει τὰ ὀστᾶ, καὶ κοπτομένων αὐτῶν ὡσπερ ἐκ τῶν λίθων πῦρ ἐκλάμπειν. (“Moreover, the lion, he says, has hard bones, and when they are struck fire flashes forth as from flints.”)

²⁸ Origen, *Fragmenta in Jeremiam (in catenis)* 3.7–8: λέγεται δὲ ὅτι καὶ ἐκ τῶν ὀστέων αὐτοῦ κοπτομένων ἢ πιτσομένων πῦρ ἐξέρχεται. (“It is said that, even when its bones are struck or pounded, fire comes out.”)

²⁹ Horap. *Hieroglyphica* 2.38.3–4: ἐπειδὴ τὰ ὀστᾶ τῶν σκύμων, κοπτόμενα, πῦρ ἐκβάλλει. (“Since the bones of the cubs, when they are struck, emit fire.”)

excerpt in the *Sacra Parallela* presumably from Clement of Alexandria's *De Pascha*.³⁰ However, each of these three authors uses a different verb to describe the emergence of fire: ἐξέρχομαι, ἐκβάλλω, and ἐξάπτω, respectively.³¹ Aelian (*NA* 4.34) uses the compound verb διακόπτω.³² Nonetheless, the verb συντριβῶ is more widely attested in reference to bones.³³

Regarding the presence of marrow in the lion's bones, Aristophanes uses the more concise expression ὡς ὅτι μάλιστα ἀμέλα, which succinctly encapsulates what Aristotle explains in greater detail—namely, that there is marrow only in hollow bones, though not necessarily in all of them; accordingly, in the lion, some bones lack marrow entirely, while others contain only a small amount. The information that lion bones have small holes (μικρὰς ὀπὰς) does not appear to be attested in any other author.³⁴ It may be an addition

³⁰ *Sacra Parallela* = *PG* 95.1584b: κοπτομένων τῶν λεοντίων ὀστέων, καθάπερ ἐκ τῶν πυριτῶν λίθων πῦρ ἐξάπτεται. (“When the lion's bones are struck, fire is kindled just as from flintstones.”)

³¹ The verb ἐξάπτω is also used by Aristotle in *Part. an.* 2.9, 655a14–15: οὕτω γὰρ ἔχει ταῦτα σκληρὰν τὴν φύσιν ὥστ' ἐξάπτεσθαι τυπτομένων καθάπερ ἐκ λίθων πῦρ. (“For they are so hard by nature that, when they are struck, fire is kindled as it is from flints.”)

³² *Ael. NA* 4.34.2–3: εἰ δέ τις τὰ ὀστᾶ τοῦ λέοντος διακόπτει, πῦρ αὐτῶν ἐξάλλεται. (“If someone cuts through the bones of a lion, fire leaps forth.”)

³³ For example, see *LXX, Exodus* 12.10.2; *LXX, Numeri* 9.12.2; *LXX, Isaias* 38.13.1; *Diod. Sic. Bibliotheca historica* III 35.10.5; *Gal. In Hippocratis librum de fracturis commentarii* III (13 occurrences: 18b330.9 Kühn; 18b330.17 Kühn; 18b366.12 Kühn; 18b393.17 Kühn; 18b397.14 Kühn; 18b398.7 Kühn; 18b400.14 Kühn; 18b404.5 Kühn; 18b408.9 Kühn; 18b412.17 Kühn; 18b429.10 Kühn; 18b438.5 Kühn; 18b534.2 Kühn); and *Tzetzes, Chiliades* 3.115.975.

³⁴ The term ὀπή appears only three times in Aristotle's extant biological works, all in the *Historia animalium*, and in none of these instances does it refer to bones. In *Hist. an.* 6.1, 559a4, Aristotle notes that the bee-eater is the only bird that nests in holes in the ground (εἰς τὰς ὀπὰς ἐν τῇ γῆ). In *Hist. an.* 8(9).6, 612b6, he states that hedgehogs exhibit a sensitivity to wind changes: those living underground shift the position of their entrance holes (οἱ μὲν ἐν τῇ γῆ τὰς ὀπὰς αὐτῶν μεταμείβουσιν) when there is a change between north and south winds. Lastly, in *Hist. an.* 8(9).39, 623a30, he observes that the better-proportioned spider keeps watch from above, concealed in a small hole (ὀπήν μικράν) within its web. When Aristotle refers to vertebrae in *Hist. an.*

by Aristophanes, possibly based on Aristotle's lost *Ἀνατομαί* (*Dissections*).³⁵

In addition to their way of walking, lions and camels share the characteristic of being retromingent animals, as stated in *Hist. an.* 2.1, 500b15–16 and *Part. an.* 4.10, 689a34–35. In contrast, the description of urinating while lifting a leg is clearly based on *Hist. an.* 7(8).5, 594b25–26. Apart from the use of different adverbs (*καθάπερ* in Aristophanes and *ὡςπερ* in Aristotle), the words used are identical, albeit arranged differently. Nevertheless, only Aristophanes explicitly specifies that this behavior begins at six months of age. This is probably taken from the corresponding section on the dog (*Epit.* 2.172), which the lion is compared to in this context. Conversely, Aristotle omits this detail, presumably because he believes that it can be easily inferred from his discussion of the dog. Note, however, that Aristotle's account of canine urination contains an inconsistency: initially, he states that the male begins lifting its leg at eight months (*Hist. an.* 6.20, 574a17–18), but later he changes it to six months (*Hist. an.* 6.20, 574b19–20).

The beginning of paragraph 137, which discusses the way lionesses urinate, also finds a correspondence in Aristophanes' section on dogs. In fact, the only two instances that state that the females of an animal urinate while crouched are those of the lioness and the bitch (*Epit.* 2.172). While the reference to bitches can be directly traced back to Aristotle (*Hist. an.* 6.20, 574b23), no analogous observation is made concerning the urination behavior of lionesses.

3.7, 516a13–14, he does not use *ὀπή* but rather describes them as “perforated” (*οἱ μὲν οὖν σφόνδυλοι πάντες τετρημένοι εἰσίν*).

³⁵ On this treatise, see O. Hellmann, in J. Althoff, B. Herzhoff, and G. Wöhrle (eds.), *Antike Naturwissenschaft und ihre Rezeption XIV* (Trier 2004) 65–86; A. L. Carbone, *Aristote illustré : représentations du corps et schématisation dans la biologie aristotélicienne* (Paris 2011); A.L. Carbone, “Anatomies of Aristotle's *Anatomai*,” *Anthropozoologica* 59 (2023) 107–114; J. G. Lennox, in A. Falcon and D. Lefebvre (eds.), *Aristotle's Generation of Animals: A Critical Guide* (Cambridge 2018) 249–272; C. Bubb, *Dissection in Classical Antiquity: A Social and Medical History* (Cambridge 2022) 25–33, 183–193. However, Berger, *Rursus* 7 (2012) argues that Aristophanes did not derive his anatomical knowledge from Aristotle's *Anatomai*, but rather from a more recent work. Dorandi, in *La zoologia di Aristotele* 77 supports this interpretation.

It is therefore plausible that Aristophanes transposed Aristotle's remarks on the female dog to his account of lions—particularly given that Aristotle himself, as previously noted, establishes a connection between the urination posture of lions and of dogs.

At this point, Aristophanes proceeds to discuss the anatomy of the lion. His source remains the *Historia animalium* [7(8).5, 594b26–28; 2.1, 497b17–18; 2.17, 507b18–25]. Note, however, that the process of dissection is introduced with the term ἀνατμηθείς rather than by using the aorist passive participle of the verb ἀνοίγω, as found in Aristotle. Indeed, Aristophanes never uses the latter verb in reference to dissections.³⁶ Furthermore, while Aristotle uses the term ἀτμός to describe the vapor emitted by the lion's dissected body, the same phenomenon is described by Aristophanes with the phrase ὄσμη βαρεῖα, which, in turn, is used by Aristotle to refer to the smell that the lion imparts to its food by breathing on it. As for the internal parts, Aristophanes uses the term τὰ ἐντόσθια, which appears only once in Aristotle's *De partibus animalium* (4.9, 685a3–4),³⁷ where he discusses the arrangement of the internal parts of cephalopods and conical-shelled testacea.

A particular issue is found in the description of the stomach: Aristophanes claims that the lion's is similar to the pig's. However, he appears to have misinterpreted Aristotle's text (*Hist. an.* 2.17, 507b18–25), which actually makes a distinction between animals with a large stomach (e.g., the pig and the bear) and those with a smaller stomach, only slightly larger than the intestine (e.g., the dog, the lion, and humans).

Finally, paragraph 139 is drawn from *Hist. an.* 6.31, 579b11–14. In this case, it is Aristophanes who reports the phenomenon of the loss of canine teeth in lions, without specifying the age at which it occurs.

³⁶ The verb ἀνοίγω appears three times throughout the *Sylloge*, in reference to the opening of the eyes (2.126; 2.151) and the mouth (2.418). In contrast, the verb Aristophanes uses specifically for dissections, in addition to ἀνατέμνω, is the compound διοίγω.

³⁷ This is, in fact, the reading printed by I. Bekker, *Aristotelis de partibus animalium libri quatuor* (Berlin, Boston 1829). However, certain manuscripts of the *De partibus animalium* transmit the diminutive form ἐντοσθίδια.

Epit. 2.140–143: *Reproduction*

(140) ὀχεύει δὲ <ὁ ἄρρην> καὶ ὀχεύεται ἡ θήλεια πᾶσαν ὥραν, καθάπερ ὁ ἄνθρωπος, καὶ ἄρχεται βαίνειν ὅταν γένηται δεκαμηνιαῖος.³⁸ ὀχεύει δὲ συγκαθιστάσης τῆς θηλείας· ἐπιβαίνει γάρ. (141) κύει δὲ δύο μῆνας. τίκει δὲ τὸν ὄλον βίον αὐτῆς ἡ λέαινα πεντάκις, καὶ τὸ μὲν πρῶτον πέντε σκυμνία, εἶτα τέσσαρα, ἐχομένως τρία, εἶτα δύο, ἐπὶ πᾶσιν ἕν, καὶ οὐκέτι συλλαμβάνει. (142) ἔστι δὲ τὰ τικτόμενα μικρὰ καὶ τυφλὰ καθάπερ κυνός, ὥστε μόλις μετὰ δίμηνον βαδίζειν. (143) ὁ δὲ λεγόμενος μῦθος ὅτι ἐκβάλλει τὰς μήτρας τεκοῦσα τῶν εἰκῆ πεπιστευμένων.

(140) <The male> breeds and the female is bred every season, just as in humans, and the lioness' cub starts walking once it is ten months old. Copulation occurs when the female lowers herself and the male mounts her. (141) The lioness is pregnant for two months. Her entire life, the lioness gives birth five times: the first time five cubs, then four, next three, then two, and finally one—after which she conceives no more. (142) The newborns are small and blind, like those of the dog, so that they can barely walk after two months. (143) The story that is told that it expels its womb when giving birth is among the things believed in vain.

The paragraphs concerning reproduction are drawn from *Hist. An.* 6.31, 579a32–579b11. However, the very first sentence already offers information that diverges from Aristotle's text. While Aristophanes asserts that lions bear πᾶσαν ὥραν ("every season"), like humans, Aristotle explicitly denies this (οὐ πᾶσαν ὥραν), stating instead that they reproduce once a year. It is possible that the negative particle οὐ was simply lost either in the epitome or in Aristophanes' copy of Aristotle's text. In any case, it is worth noting that, in *NA* 4.34, Aelian provides a statement that aligns with Aristophanes' claim: μίξεως δὲ αὐτὸν οὐδεμία ἔτους ἀναστέλλει ὥρα ("there is no season of the year in which it abstains from coupling").

I propose that the phrase ἄρχεται βαίνειν ὅταν γένηται δεκαμηνιαῖος, which appears in the section on the lion's mating behavior, may reflect a scribal corruption of βαίνειν ("walking") for <ἐπι>βαίνειν

³⁸ The manuscript reads δεκαμηνιαῖος ("ten months old"), but Lambros emended this to διμηνιαῖος ("two months old") in his edition. See below for discussion.

(“mounting”), especially since Aristophanes already states further down that lions do not begin walking until they are two months old. Moreover, the transmitted reading δεκαμηνιαῖος (“ten months old”) warrants reconsideration, as Lambros’ conjectural emendation to διμηνιαῖος (“two months old”) is grounded precisely in the subsequent statement.

Furthermore, Aristophanes offers a more general statement that lions give birth five times over the course of their lives (a claim also found in Ael. *NA* 4.34). Aristotle (*Hist. an.* 6.31, 579b8–11), however, specifies that this applies specifically to lions in Syria (οἱ δ’ ἐν Συρίᾳ λέοντες). This discrepancy may be the result of Aristophanes conflating two distinct statements by Aristotle. Earlier in *Hist. an.* 6.31, 579b1, Aristotle discusses the number of cubs a lioness typically gives birth to (τίκτει δ’ ὡς ἐπὶ τὸ πολὺ δύο, τὰ μέντοι πλεῖστα ἕξ· τίκτει δ’ ἐνίοτε καὶ ἕν), indicating that while two cubs are most common, a lioness may occasionally bear as few as one or as many as six. Aristophanes may have unintentionally merged these two passages, generalizing Aristotle’s statement about Syrian lions to all lions, thereby introducing the inaccuracy. In *Gen. an.* 3.1, 750a32–35 and 3.10, 760b23, Aristotle revisits this topic, discussing the underlying reasons for this phenomenon, though now referring to lions in general. He explains that the semen residue is used up and that the sperm itself diminishes as the prime of life abates. Unlike Aristotle, Aristophanes does not provide a causal explanation—an essential goal of Aristotle’s methodological approach—but rather limits himself to systematically collecting zoological information.

The claim that lions are born blind does not have a precise parallel in the *Hist. an.* The information instead seems to be drawn from *De generatione animalium*. While *Hist. an.* 6.31, 580a4–5, in discussing hares, states that most fissiped animals are born blind, *Gen. an.* 2.6, 742a8–11 explicitly includes lions among them. Moreover, *Gen. an.* 4.6, 774b10–13 provides an explanation for this initial blindness, attributing it to the fact that fissiped animals are multiparous. This characteristic causes, in the early stages, the embryos to be fully nourished; however, as they grow and reach a certain size, the mother’s body can no longer sustain their full development, leading them to be born in an imperfect condition.

Finally, as in Aristotle, there is an implicit critique of Herodo-

tus,³⁹ who, commenting on the supposed fact that the lioness only begets one litter in her life, claims that, as soon as a lion cub begins to move within the mother's womb, it tears the womb apart with its claws. This opinion is indicated by the phrase ὁ λεγόμενος λόγος in Aristophanes and ὁ λεχθεὶς λόγος in Aristotle (both without explicit mention of Herodotus' name). Aristotle was well acquainted with Herodotus' scientific observations but frequently disagreed with him. Interestingly, Aristophanes uses the same term as Herodotus, ἡ μήτρα, whereas Aristotle opts for ἡ ὑστέρα. Moreover, the expression τῶν εἰκῆ πεπιστευμένων appears in Aristophanes in two other instances. In *Epit.* 2.180, Aristophanes uses this phrase to express his disagreement with the interpretation found in Aristotle's *Hist. an.* 6.20, 574b29–575a1, which states that Argos, Odysseus' dog, lived for twenty years.⁴⁰ In *Epit.* 2.380, while discussing the weasel, he similarly distances himself from the notion that the weasel mates through the mouth,⁴¹ which appears to be a warped version of what

³⁹Hdt. 3.108.4: τοῦτο μὲν δὴ τοιοῦτόν ἐστι, ἡ δὲ δὴ λέαινα, ἐὼν ἰσχυρότατον καὶ θρασύτατον, ἄπαξ ἐν τῷ βίῳ τίκει ἓν· τίκτουσα γὰρ συνεκβάλλει τῷ τέκνῳ τὰς μήτρας. τὸ δὲ αἴτιον τούτου τόδε ἐστὶ· ἐπεὰν ὁ σκύμνος ἐν τῇ μητρὶ ἐὼν ἄρχηται διακινεόμενος, ὁ δὲ ἔχων ὄνυχας θηρίων πολλὸν πάντων ὀξύτατους ἀμύσσει τὰς μήτρας, αὐξόμενός τε δὴ πολλῶ μᾶλλον ἐσικνέεται καταγράφων· πέλας τε δὴ ὁ τόκος ἐστὶ καὶ τὸ παράπαν λείπεται αὐτέων ὑγιᾶς οὐδέν. (“While this is so with the hare, the lioness, who is a very strong and very bold animal, gives birth once in her life to a single offspring: for when she gives birth, she expels her womb along with the cub. This is the reason for it: when the cub first begins to stir while being in the mother, having much sharper claws than those of any other creature, it tears the womb, and, as it grows, by scratching it penetrates ever deeper; thus, when the hour of birth is near, absolutely nothing of it remains intact.”)

⁴⁰Ar. Byz. *Epit.* 2.180: ζῆ δὲ ὁ μὲν Λακωνικὸς ἔτη δέκα, ἡ δὲ θήλεια δώδεκα· αἱ δὲ ἄλλαι ζῶσι δεκατέσσαρα. τὸ δὲ μυθολογούμενον περὶ τοῦ τοῦ Ὀδυσσεῶς κυνός, ὡς εἴκοσιν ἔτη ἔζησε, τῶν εἰκῆ πεπιστευμένων ἐστίν. (“The Laconian dog lives for ten years, while the female lives for twelve; the other females live for fourteen years. As for the story about Odysseus' dog, that it lived for twenty years, is among the things believed in vain.”) On Aristotle's passage, see R. Mayhew, *Aristotle's lost «Homeric problems»: textual studies* (Oxford 2019) 55–57.

⁴¹Ar. Byz. *Epit.* 2.380: τὸ δὲ μυθολογούμενον ὡς διὰ τοῦ στόματος ὀχεύει τῶν εἰκῆ πεπιστευμένων· οὐ γὰρ ὀχεύει, ἀλλὰ ἴτιθασεύει† ὡς ἡ περιστέρα. (“The story that it mates through its mouth is among the things believed in

Aristotle states in *Gen. an.* 3.6, 756b13–757a2, namely that weasels are erroneously thought to give birth through the mouth simply because they usually carry their young in their mouth.⁴² Aristophanes' switching from "giving birth" to "mating" may be accounted for by the fact that, right before mentioning the weasel, Aristotle explained that, according to some ill-founded belief, raven-like birds copulate via the mouth.⁴³

Epit. 2.144–149: Behavioral Attributes and Temperament

(144) ἔστι δὲ ὁ λέων τὸ ἦθος λιμώττων μὲν χαλεπός, βεβρωκὸς δὲ πραῦς καὶ φιλοπαίγμων, καὶ οὔτε ὑπερόπτης οὔτε τῶν συνήθων ἀδικητικός. συσχεθεὶς δὲ τῇ θηρείᾳ ὑπὸ πολλῶν, οὐδέποτε φεύγει, οὐδὲ τὰ ὀπίσθια διδοῖ· ὑποβαίνει δὲ κατὰ σκέλος βρυχώμενος, καὶ τῷ μὲν βάλλοντι προσέρχεται, τῷ δὲ μὴ οὐ πρόσεισι. διώκων δὲ ἔχει δρόμημα σύντονον καθάπερ καὶ οἱ κύνες, συνεγγίζων δὲ τῷ διωκομένῳ καὶ ἐπιρρίπτει ἑαυτόν, ἵνα ταχύτερον ἐπιτύχη. πρὸς δὲ τὰς πόλεις ἔρχονται οἱ λέοντες ὅταν γένωνται γέροντες, ἵνα τοὺς ἀνθρώπους διώκωσιν, ἀδυνατοῦντες θηρεύειν. λέγεται δὲ κατ' αὐτοῦ ὡς ὅτι μάλιστα τὸ πῦρ φοβούμενος φεύγει. (145) ἔστι δὲ τῶν λεόντων γένη δύο, ὧν ὁ μὲν στρογγυλότερος καὶ οὐλοτριχότερος δειλός ἐστίν, ὁ δὲ μακρὸς καὶ εὐθριξ ἀνδρεῖος. (146) τῶν δὲ δηχθέντων ὑπὸ λέοντος οἱ ἐπίδεςμοι πλυνόμενοι οὐδέποτε ἀνιάσι τὸν ἰχώρα. (147) ἔστι δὲ καὶ τῶν ἀνόσων ζῳῶν ὁ λέων. (148) χρᾶται δὲ τῇ βρώσει λάβρως ὥστε ὅλα καταπίνειν μέλη· εἶτα διὰ τὴν λαβρότητα ἔστιν ὅτε μὴ φαγὼν διαλείπει ἡμέρας τρεῖς, ἔστι δὲ καὶ τῶν ὀλιγοποτούτων· διὸ καὶ τὸ περιττώμα προίεται διὰ τρίτης ἡμέρας ἐσφαιρωμένον· προίεται δὲ καὶ φύσαν δριμεῖαν καὶ οὖρον ὀσμὴν ἔχον σαπρᾶν. (149) γίνονται δὲ οἱ πλεῖστοι τῶν λεόντων μεταξὺ τοῦ Νέσσου καὶ

vain; for it does not mate, but †tames†, like the pigeon.”)

⁴² Arist. *Gen. an.* 3.6, 756b33–757a2: ἀλλὰ διὰ τὸ τίκτειν ἀμπαυ μικρὰ τὴν γαλῆν καθάπερ καὶ τᾶλλα σχιζόποδα, περὶ ὧν ὕστερον ἐροῦμεν, τῷ δὲ στόματι πολλὰκις μεταφέρειν τοὺς νεοτούς, ταύτην πεποίηκε τὴν δόξαν. (“But, because the weasel gives birth to very tiny young ones, as the other fissioned do as well, about which we shall speak later, and it often carries its young in the mouth, this fact has led to this belief.”)

⁴³ Arist. *Gen. an.* 3.6, 756b13–15: εἰσὶ γὰρ τινες οἱ λέγουσι κατὰ τὸ στόμα μίγνυσθαι τοὺς τε κόρακας καὶ τὴν ἴβιν καὶ τῶν τετραπόδων τίκτειν κατὰ τὸ στόμα τὴν γαλῆν. (“For there are some who say that ravens and the ibis mate by the mouth and that, among the four-footed animals, the weasel gives birth through the mouth.”)

Ἀγελάφου ποταμοῦ.

(144) In temperament, the lion is fierce when hungry but gentle and playful when sated. It is neither arrogant nor aggressive toward those familiar with it. Even when hunted by many, it never flees nor turns its back. Instead, it steps back laterally, roaring, and attacks the person shooting it, but it will not attack those who do not. When pursuing prey, it runs swiftly, as dogs also do. As it closes in on the prey pursued by it, it also hurls itself forward to seize it more quickly. Lions approach the towns after they have grown old, seeking to prey upon humans because they are unable to hunt. It is said that it fears fire above all else and flees from it. (145) There are two kinds of lions: one, rounder in shape and with curlier hair, is cowardly; the other, longer and with flowing hair, is brave. (146) As for those bitten by a lion, the bandages, even when washed, never stop the sero-purulent discharge. (147) The lion is also one of the animals resistant to disease. (148) It eats with such voracity that it swallows limbs whole. Next, because of its voracity, it sometimes takes an interval of three days in which it does not eat. It is also one of the animals that drink little. That is also why it discharges its excrement every other day in a round-like shape. Moreover, it discharges a pungent wind and urine with a putrid smell. (149) Most lions are found between the rivers Nessus and Achelous.

Beginning from paragraph 144, Aristophanes focuses on the character of the lion, drawing from *Hist. an.* 8(9).44, 629b8–29 as his source. However, his account differs significantly from Aristotle's in both style and content. A first distinction between the two texts lies in their sentence structure and overall flow. Aristophanes' passage is characterized by brevity and clarity, resembling an expository style with short, well-structured sentences. His presentation of information is straightforward and easily comprehensible. In contrast, Aristotle's passage employs longer and more complex sentences, resulting in a more fluid and descriptive narrative. This stylistic difference influences how the information is processed: Aristophanes delivers a concise and factual account, while Aristotle presents a more expansive and immersive discussion. A key stylistic divergence is Aristotle's incorporation of literary elements. While Aristophanes' passage remains plain and expository, Aristotle enriches his descriptions by referencing Homer, which lends an authoritative and poet-

ic dimension to his discussion of the lion's fear of fire.

Both texts examine similar aspects of lion behavior, including their reactions to hunger, hunting strategies, and fear of fire. However, Aristophanes emphasizes the lion's courage and steadfastness, asserting that it never flees, even when outnumbered. Aristotle, while addressing similar themes, offers a more detailed account of the lion's movements, particularly its adaptive strategies in response to different surroundings. This additional detail contributes to a more nuanced depiction of the lion's behavior in the face of threats.

A minor variation arises in their respective descriptions of the lion's interactions with familiar individuals. Aristotle characterizes the lion as playful and affectionate toward both those reared with it and those familiar with it (πρὸς τε τὰ σύντροφα καὶ συνήθη σφόδρα φιλοπαίγμων καὶ στερκτικός). In contrast, Aristophanes refers only to those familiar with the lion (πραῦς καὶ φιλοπαίγμων, καὶ οὔτε ὑπερόπτης οὔτε τῶν συνήθων ἀδικητικός), omitting any explicit mention of its bond with its rearing companions. Furthermore, a subtle distinction emerges in their portrayal of the lion's playfulness. In Aristophanes' account, lions exhibit playful behavior specifically when they are satiated, whereas Aristotle presents this as a general characteristic.

Another notable difference pertains to the lion's disposition. Aristotle describes the lion as being free of suspicion toward anything (οὐχ ὑπόπτῃς οὐδενός), whereas Aristophanes states that the lion is not arrogant (οὔτε ὑπερόπτης). This discrepancy raises the question of whether it originates from a textual corruption, either on Aristophanes' part or that of a later scribe.

Moreover, unlike Aristotle, Aristophanes differentiates between individuals who are attacked by the lion and those who are not (τῷ μὲν βάλλοντι προσέρχεται, τῷ δὲ μὴ οὐ πρόσσεισι). Aristotle, in contrast, simply states that, if an individual shooting at the lion misses, the lion will attack but will not harm the person.

Paragraph 145 is closely linked to *Hist. an.* 8(9).44, 629b33–35. In terms of word choice, both texts use the same vocabulary. In Aristophanes' account, however, the adjectives δειλός (cowardly) and ἀνδρείος (brave) denote absolute qualities. In contrast, Aristotle uses the comparative forms δειλότερον (more cowardly) and ἀνδρειότερον (braver), which imply a gradation rather than a strict dichot-

omy. Furthermore, Aristotle reinforces the categorical nature of this classification by positioning the term γένη at the beginning of the sentence, thereby emphasizing the distinction between the lion types.⁴⁴ Another difference concerns the lion's hair. The manuscript tradition of the *Historia animalium* appears to preserve the adjective εὔτριχον (both LSJ and the Brill Dictionary of Ancient Greek refer the reader to the lemma εὔθριξ, while Lampe translates it as “very hairy”), a rarely attested term whose earliest known occurrence is found in a verse from Euripides' *Heracles*.⁴⁵ However, the third Basel edition of Aristotle (1550) conjecturally emended this reading to εὐθύτριχον (“with straight hair”). The most recent critical edition of the *Historia animalium*, edited by Balme (2002), has retained εὔτριχον. In contrast, Aristophanes' text attests the form εὔθριξ, meaning “with beautiful/flowing hair.”

The subsequent paragraph examines the effects of bites inflicted by a lion, with particular emphasis on the difficulty in treating the sero-purulent discharge through bandages. This passage closely corresponds to *Hist. an.* 8(9)44, 630a5–8. However, Aristotle offers a more detailed description, characterizing ἰχώρ with the adjective ὄχρος (yellow) and comparing the treatment of such wounds to those caused by dog bites.

Paragraph 147 is particularly noteworthy, as it represents the earliest known instance of the adjective ἄνοσος used in conjunction with the noun ζῷον. Furthermore, no other known author states that the lion is among the animals resistant to disease. This unique attribution suggests that Aristophanes may have introduced an original observation or relied on a now lost source.

After that, Aristophanes examines the feeding and excretory habits of the lion, drawing from *Hist. an.* 7(8).5, 594b18–25 as his source. In terms of vocabulary, both texts exhibit significant lexical overlap. However, while Aristophanes describes the lion's excrement as being discharged in a rounded shape (ἐσφαιρωμένον— if Lambros' emendation is accepted), Aristotle characterizes it as ξηρὸν καὶ ἐξικμασμένον (dry and desiccated), emphasizing its texture rather than its form. It is important to note, however, that the

⁴⁴ For Aristotle's definitions of the term γένος, see *Metaph.* Δ 28.

⁴⁵ E. *HF* 934.

manuscript *Athos Dionysiou* 180 appears to read ἐσφυρωμένον instead. Given that the preceding statement—that the lion drinks little—functions as a premise for the subsequent conclusion introduced by διό (“therefore”), it is plausible to consider this a cause-effect structure. Therefore, perhaps the original reading was something akin to ἐξηρασμένον (“dried out”), which would reiterate the dryness of the excrement and thus better support the causal link Aristotle appears to establish between limited water intake and the consistency of the lion’s excrement.

The two accounts also diverge in their descriptions of the frequency of defecation. Aristophanes states that waste is expelled διὰ τρίτης ἡμέρας (every other day), whereas Aristotle provides a more flexible account, stating διὰ τρίτης γὰρ ἢ ὅπως ἂν τύχη (every other day or at random intervals), thereby acknowledging natural variability. Similarly, they differ in their depiction of the lion’s fasting duration. Aristophanes asserts a strict three-day period, while Aristotle allows for either two or three days. Furthermore, Aristophanes uses the adjective σαπρός in conjunction with ὄσμη, a lexical combination unattested in extant Greek literature before his time. This collocation, however, appears in later texts, including Alexander’s *In librum de sensu commentarium* (p. 95 Wendland: αἱ σαπραὶ ὄσμαϊ), Pseudo-Aristotle’s (Pseudo-Alexander’s) *Supplementa Problematorum* II 156 (p. 230 Kapetanaki and Sharples: ταῖς διεφθαρμέναις ὄσμαῖς καὶ σαπραῖς), the *Hippiatrica Berolinensia* (*CHG* I p. 102: ὄσμην ἔχοντα σαπράν; *CHG* I p. 352: ὄσμην ἔχον σαπράν), and the *Apophthegmata e cod. Coislin.* 126 356 (μετὰ σαπρῆς ὄσμῆς).

Finally, Aristophanes provides geographical information about lions, stating that most of them are located between the rivers Nessus and Achelous. This region, situated in northern Greece, extends from Acarnania to Thrace. His sources for this information are *Hist. an.* 6.31, 579b5–7 and 7(8).28, 606b14–16.⁴⁶ However, Aristotle underscores that lions are not only rare but also confined to specific regions. He further specifies that this area between the two rivers is the only place in all of Europe where lions are found.

⁴⁶ Nonetheless, the foundational authority on this geographical delineation is Herodotus (7.126). However, note that Herodotus calls the river Νέστος (not Νέσος).

Epit. 2.150: *Lifespan*

(150) βιοῖ δὲ ὅσα καὶ ὁ κύων ζῶν ἔτη δεκαοκτώ.

(150) It lives as long as the dog, which lives eighteen years.

While *Hist. an.* omits specific information regarding the lion's lifespan—only stating that lions live for many years [ἔτη δὲ ζῶσι πολλά, 8(9).44, 629b30]—Aristophanes addresses this gap by referencing the case of the dog, as he does for the wolf,⁴⁷ despite the absence of such a connection in the Aristotelian text. Whether this piece of information was introduced by Aristophanes himself—drawing from alternative sources or as his own deduction, transporting the lifespan of the dog to that of the lion—or by an intermediary in the textual tradition between Aristophanes and the Byzantine *Sylloge* remains uncertain, given that no other known work in Greek literature provides an indication of the lion's lifespan.

Nevertheless, this inclusion is significant, as it prompts a deeper investigation into the broader role of the dog within the *Epitome*. Notably, the dog is the most frequently mentioned animal in this text. The word κύων appears 134 times throughout the entire Byzantine *Sylloge*—46 occurrences more than in the *Hist. an.* This frequent citation indicates that the dog is a crucial point of comparison across multiple entries.

The particularly high frequency of references is most evident in the second book, which is specifically devoted to discussions of individual animals. In the passages attributed to Aristophanes of Byzantium, the dog is mentioned in relation to the lion (2.136, 2.138, 2.142, 2.144, 2.150), the wolf (2.210, 2.211, 2.216), the leopard (2.248), the jackal (2.286), the cat (2.296, 2.299), the striped hyena (2.311, 2.312, 2.313), the bear (2.331), the mouse (2.345), the fox (2.390, 2.391), the hare (2.409), the hedgehog (2.424), the deer (2.487), and the horse (2.578). Often these connections are made when it comes to anatomical similarities between dogs and these various species. Aristophanes' Alexandrian readers had likely never witnessed the dissection of a dog. However, they could derive addi-

⁴⁷ Ar. Byz. *Epit.* II 216: ζῆ δὲ ὁ λύκος ὅσα περ καὶ ὁ κύων ἔτη. ("The wolf lives the same number of years as the dog.")

tional information from the section on dogs. Aristophanes' comparisons can thus be understood as intratextual references, as pointed out by Hellmann.⁴⁸

In contrast, in the first book—best understood as a general introduction—the term κῶων appears seven times. Of these occurrences, six explicitly refer to the dog, highlighting its characteristics as a domesticated and friendly fissiped (1.16, 1.25) with saw-like teeth (1.6). Additionally, the text sheds light on the dog's gestation period, which closely aligns with that of the she-wolf, the lioness, the mouse, the panther, the leopard, the cat, and the mongoose (1.48, 1.50). The dog is also noted as the only animal able to vomit, besides man (1.110). The seventh occurrence of κῶων in the first book (1.44), however, refers not to the animal itself but to the *dog days*—the hottest period of summer.

Conclusion

The close reading of the sections on the lion from Aristophanes' *Epitome* confirms four interrelated conclusions with wider consequences for how we use epitomes as sources for ancient biological knowledge. First, Aristophanes depends heavily on Aristotle's *Historia animalium* as his primary source, but he rarely copies it *verbatim*: he paraphrases, reorganizes, and sometimes rephrases Aristotelian material to fit a species-by-species template that he explicitly sets out at the start of the second book. This patterned reordering—name, anatomy, reproduction, behavior, lifespan—means that the *Epitome* often preserves Aristotelian facts, yet presents them in a different textual and rhetorical frame.

Second, not everything in Aristophanes' account is traceable to the *Historia animalium*. The sections on the lion contain elements that are absent from the extant Aristotelian corpus (for example the precise lifespan equated with that of the dog), and they sometimes transfer details from other entries (notably the dog) into the lion's profile. These dislocations can reflect several possibilities that the case study highlights without resolving: dependence on additional sources (other Alexandrian or now-lost writings), selective bor-

⁴⁸ Hellmann, in *Aristo of Ceos* 350.

rowing from Aristotle's wider biological corpus (including works no longer extant), or authorial interpolation by Aristophanes himself. In practical terms, such material complicates any attempt to reconstruct Aristotle from epitomizing authors and shows the *Epitome* to be a generative, not merely derivative, witness in the transmission of zoological knowledge.

Third, some of Aristophanes' deviations look like erroneous paraphrase of Aristotle: they are consistent with the possibility that he worked from a faulty exemplar or that he misread or misunderstood his Aristotelian material. Recognizing this possibility matters methodologically: it warns against treating every divergence as evidence of an independent tradition and encourages close textual comparison with other witnesses before attributing novelty to Aristophanes himself.

Fourth, Aristophanes' *Epitome* departs decisively from the methodological program that underpins Aristotle's biological writings. Aristotle's approach—as he frames it in *Part. an.* 1.1, 639a15–22—is a question about level of inquiry: should we treat each substance (οὐσίᾳ) such as “human,” “lion,” “ox” separately, or should we instead investigate the accidents (συμβεβηκότα) common to all animals? Although Aristotle does not resolve the issue in this passage, his zoological project rests on the assumption that one must first assemble the relevant accidents and thereafter account for why those accidents pertain to the animals in question at the proper level of generality. Moreover, the opening to the *Historia animalium* sets out Aristotle's twofold plan: (1) collect and organize the differences and attributes that characterize animals, and (2) go on to discover and give causal explanations for those facts.⁴⁹

Aristophanes, in contrast, reorganizes material according to individual species and confines his action largely to the first stage, while systematically neglecting the second stage, causal inquiry. In the sections on the lion factual observations appear, yet explanations that would locate those facts within Aristotle's causal framework are absent. For example, the *Epitome* provides no causal account of why lion bones are particularly hard, why lion cubs may be born blind, or why certain anatomical features are attributed to the lion. That

⁴⁹ *Hist. an.* 1.6, 491a7–14.

absence matters methodologically because, without causal articulation, the listed facts remain formally unintegrated; they read as isolated data-points rather than pieces within an explanatory whole. What in Aristotle functions as data to be explained becomes in the *Epitome* an end in itself.

Why Aristophanes adopted this form remains an open question, but I argue that the evidence favors an intentional editorial choice: Aristophanes set out to produce a compact, species-oriented handbook for a readership different from Aristotle's (poets, scientists, or a more general, non-philosophical public). One can nevertheless concede other factors that likely shaped the *Epitome's* form: partial access to Aristotle's corpus (for example missing books that set out the theoretical program), or genuine misunderstanding of Aristotle's methodological priorities. Whatever the reason, the crucial point for interpretation is this: the *Epitome* reproduces the descriptive scaffolding of Aristotelian biology while largely excising the causal architecture that gives those descriptions their philosophical significance. Consequently, when using Aristophanes as evidence for Aristotle, scholars must distinguish between the descriptive observations the *Epitome* preserves and the causal, theoretical principles it omits.

Taken together, the case of the lion demonstrates that epitomes can be rich sources of information precisely because they transform their exemplars: they conserve, compress, adapt, and at times innovate. For scholars, this implies two cautions and two opportunities. The cautions are (a) to avoid treating epitomes as transparent mirrors of their sources and (b) to exercise care when using epitomes to reconstruct lost works. The opportunities are (a) to use patterned divergences (repetitions, transpositions, new vocabulary) to trace chains of transmission and lost sources, and (b) to study epitomes as a distinct literary and intellectual phenomenon that reshaped how knowledge was organized and consumed in the Hellenistic and Byzantine worlds.

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Università degli Studi di Padova / Sorbonne Université
fabio.verthuy@phd.unipd.it
ORCID: 0009-0005-5759-5230