

*Theophrastus on Animals*Table AII.1 *Theophrastus on animals*

1. Περὶ ἑτεροφωνίας ζώων τῶν ὁμογενῶν α'	1. <i>On the Diversity of Voice in Animals of the Same Kind</i> , one book
2. Περὶ τῶν ἀθρόον φαινομένων α'	2. <i>On [Animals] That Appear in Swarms</i> , one book ¹
3. Περὶ δακέτων καὶ βλητικῶν α'	3. <i>On [Animals] That Bite and Sting</i> , one book
4. Περὶ τῶν ζώων ὅσα λέγεται φθονεῖν α'	4. <i>On Animals That Are Said to Be Malicious</i> , one book
5. Περὶ τῶν ἐν ξηρῷ διαμενόντων α'	5. <i>On [Animals] That Live on Land</i> , one book
6. Περὶ τῶν τὰς χροῶς μεταβαλλόντων α'	6. <i>On [Animals] That Change Color</i> , one book
7. Περὶ τῶν φωλευόντων α'	7. <i>On [Animals] That Hibernate</i> , one book
8. Περὶ ζώων α' β' γ' δ' ε' ζ'	8. <i>On Animals</i> , seven books
9. Περὶ τῶν αὐτομάτων ζώων α'	9. <i>On Animals Generated Spontaneously</i> , one book.
10. Ἐπιτομῶν Ἀριστοτέλους περὶ ζώων α' β' γ' δ' ε' ζ'	10. <i>Summary of Aristotle's On Animals</i> , six books
11. Περὶ ζώων φρονήσεως καὶ ἡθους α'	11. <i>On the Intelligence and Characters of Animals</i> , one book
12. Περὶ ζώων	12. <i>On Animals</i>

The titles listed in Table AII.1 are found in the catalog of books reported in Theophrastus's *Life of Theophrastus*.² An educated guess is that this catalog goes back to the pinacographical activity of Hermippus of Smyrna (third century BC). In this scenario, Hermippus drafted his catalog (πίνακες) as an appendix to his *Life of Theophrastus*.³

¹ I supply "animals." Robert Sharples amplifies his translation with "creatures." But this amplification ends up obfuscating the distinction between animals and plants.

² Diogenes Laertius V 42–50. Full discussion of these titles is in REGENBOGEN 1950: 1423–1434 and SHARPLES 1995: 41–48.

³ For Hermippus and his biographical writings, the reference book is BOLLANSÉE 1999. On the origin of the catalog, see BOLLANSÉE 1999: 168–170 (with additional bibliographical information).

The information preserved in the catalog helps us correct the impression that Theophrastus was engaged in a study of plants to the exclusion of animals. His interest was in both kinds of perishable living beings, and his research output on the topic of animals was second only to that of Aristotle. It is not difficult to see why the subsequent tradition has transmitted his works on plants to the exclusion of his writings on animals. His writings on animals were largely concerned with difficult or remarkable cases. Of course, they are difficult or remarkable cases *for a certain theory*: the theory that can be extracted from the extant works on animals transmitted under the name of Aristotle. But this also explains why his writings on animals enjoyed limited success. They were taken to be secondary with respect to Aristotle's works on animals, and they were even considered to be expendable with respect to the zoological theory that can be extracted from those works. I will not try to correct this impression. Instead, I would like to stress that there is no need to read in Theophrastus's focus on difficult or remarkable cases an attempt to challenge, let alone reject, Aristotle's theory. His motivation to deal with these cases must be found within this theory. To the extent that they can be reconstructed, his writings betray the ambition to make sense of these difficult cases in terms of the theory. This is so even when the question of the extent to which the theory can be applied to these cases is not explicitly answered.⁴

Let us consider the only extant work on animals by Theophrastus, which is transmitted in the manuscript tradition with the rather misleading title *On Fish*.⁵ This work is almost certainly identical to the fifth item on our list: *On [Animals] That Live on Land*, one book.⁶ Theophrastus is concerned with animals that live in water but also spend time on dry land. These animals live a double life with respect to water and dry land. In Aristotle's terminology, they dualize (ἐπαμφοτερίζειν).⁷ Theophrastus adopts Aristotle's explanation of how animals control their bodily temperature by taking in water or air to deal with a few remarkable cases. What makes these cases remarkable is that the animals appear to take in both water and air. The qualification "θαυμαστόν" (remarkable) qualifies a few

⁴ This addition is needed since the lack of an explicit answer in the text can in principle be taken to imply a challenge.

⁵ An edition of the Greek text is in SHARPLES 1992.

⁶ Athenaeus (*Deipn.* VII 312 B, 317 F) quotes from this book, which he knows under the title *On [Animals] That Spend Time* (διατρωμένων and διατριβόντων instead of διαμενόντων) *on Dry Land*. The most likely title for our short essay is the one preserved in the catalog rather than the one transmitted by the manuscript tradition.

⁷ Theophrastus adopts this technical term at the outset of the essay to signal that he is concerned with dualizers (*On Fish* 1.5–10). On dualizers, see LLOYD 1983: 44–53.

of the cases discussed by Theophrastus.⁸ The subsequent tradition lost interest in the underpinning zoological theory but preserved a gusto for the remarkable as such; by contrast, Theophrastus was driven by a theoretical agenda he shared with Aristotle.

An interest in remarkable cases can also be inferred from the following titles: *On [Animals] That Appear in Swarms*, *On [Animals] That Change Color*, and *On Animals That Are Said to Be Malicious*. The extant information regarding the first of these three lost essays (*On [Animals] That Appear in Swarms*) is especially interesting. Photius was still able to read this short text in Byzantium in the ninth century AD, so he left a record of its contents.⁹ Based on Photius's synopsis, Sharples suggested that Theophrastus carried out a study of spontaneous generation.¹⁰ While this is quite possible, the focus of the work must have been broader. Animals that swarm include snails, frogs, snakes, and mice. These animals swarm after they have been generated sexually often due to exceptional atmospheric phenomenon such as heavy rains and sudden floods. Theophrastus's interest in the phenomenon of spontaneous generation is at any rate documented by the title *On Animals Generated Spontaneously*. This work may have fulfilled a promise Theophrastus made in the context of his study of plants.¹¹ Photius has also summarized the contents of the essays *On Animals That Change Colors* and *On Animals That Are Said to Be Malicious*.¹² The first was concerned with the ability of the octopus, the chameleon, and the very mysterious *tarandos*¹³ to change color in order to take on the colors of the adjacent plants, rocks, and localities.¹⁴ The second deals with our projection of human motives onto animal behavior. Put differently, the focus of this work is on animals that *are said* to be malicious but in fact are not.

The remaining titles transmitted in the catalog imply that Theophrastus had an interest in animal behavior with a special focus on hibernation, habitat, and ecology. Robert Sharples has argued that the differences in

⁸ Here are the first three occurrences of the term in connection with the first two cases discussed: "most remarkable of all" (θαυμαστότατον) is the case of the so-called outsleeper, a fish that makes its bed on dry land every day (*On Fish* 1). "Remarkable" (θαυμαστό) are the little fish found in India that come out of the rivers onto the dry land and jump around and go back into the water again like frogs (*On Fish* 2). In the end, however, this case is "less remarkable" (ἥττον θαυμαστόν) than the case of the outsleeper.

⁹ Photius, *Biblioth.* 278, 527b11–528a39 (= FHS&G 359A). ¹⁰ SHARPLES 1995: 43–44.

¹¹ Theophrastus, *CP* I 5.5. ¹² Photius, *Biblioth.* 278, 528a40–b27 (= FHS&G 362A).

¹³ Compare [Aristotle], *Mir.* 30, 832b8–16. The *tarandos* is described as a wild animal native to Scythia, having the size of an ox and the head of a deer. Instead of changing the color of its skin like the octopus and the chameleon, the *tarandos* reportedly changed the color of its hair.

¹⁴ On this lost work, see LERODIAKONOU 2020a: 81–119.

voice discussed are those linked to local variation.¹⁵ On this suggestion, the essay *On the Diversity of Voice in Animals of the Same Kind* also circulated under the title *On Differences According to Locality*.¹⁶

The entry *On Animals*, seven books, need not refer to a separate work on animals. It may well be evidence that the seven short monographs, which were written as independent and self-contained essays by Theophrastus, were subsequently assembled into a single work.¹⁷

The title *Summary of Aristotle's On Animals*, six books, is noteworthy because it contains an explicit reference to Aristotle. Apparently, this title refers to an abridgment in six books of the works on animals authored by Aristotle. At the very least, we can infer from this title that Aristotle's works on animals were clearly distinguished from what writers such as Theophrastus himself and Eudemus of Rhodes may have contributed to the study of animals. This is far from a trivial observation, especially if we bear in mind that, at least in his extant writings on plants, when Theophrastus refers to the study of animals, he never distinguishes what Aristotle has accomplished from what he may have contributed to this study. His references to the study of animals are self-consciously impersonal. I argued that this practice suggests the existence of a shared project within the Peripatos. Still this title suggests that the works that Aristotle contributed to the study of animals enjoyed a somewhat special status.¹⁸

I do not see any reason to doubt that Theophrastus compiled an abridgment of Aristotle's study of animals. We do not know the motivations that may have prompted Theophrastus to produce such a compilation. We should recall, however, that Aristophanes of Byzantium in the third century BC wrote a summary of Aristotle's works on animals. His stated goal was to make everything Aristotle wrote on animals available to the reader in one place.¹⁹ While we have no reason to think that there was any special relation between the extant summary by Aristophanes and the abridgment made by Theophrastus, we can speculate that, very early on, the corpus of works on animals was felt to be too large

¹⁵ This is a topic taken up by Aristotle in *HA* IV 9, 535a28–536b33 *GA* V 7, 786b7–788b3.

¹⁶ Athenaeus, *Deipn.* IX 390 A: περί τῶν κατὰ τόπους διαφορῶν.

¹⁷ For this hypothesis, see BOLLANSÉE 1999: 167–168. Sharples (in SHARPLES 1995: 41–42) remains skeptical.

¹⁸ Aristotle's cross-references to plants are equally impersonal. See Appendix I.

¹⁹ Aristophanes, *Epitome* II 1: “I will try to do this so that you need not go through Aristotle's study of animals [πραγματεῖα περὶ ζώων], which is spread over many books, but you could have the factual information [ιστορία] on each animal *together in one place*” (my emphasis). More on Aristophanes and his project in FALCON 2022b: 421–442.

and too technical. As a result, a condensation and simplification of this corpus – maybe also motivated by didactic reasons – was deemed necessary.

We should not rule out that Aristophanes and Theophrastus approached Aristotle's corpus of writings on animals from different angles. Recall that Aristophanes was a grammarian interested in Homeric textual criticism, Attic comedy, and a lexicography. His goal was to produce a reference work for scholars and poets interested in scientific data for their own literary activity.²⁰ By contrast, Theophrastus was Aristotle's colleague and his most important collaborator. We can safely assume that his summary reflected the scientific concerns that motivated Aristotle's study of animals in the first place.

Finally, we cannot rule out that other titles in the catalog may have dealt with animals. It has been suggested, for instance, that the lost *On [Kinds of] Hair* may fit well with the project of *GA* 5 – that is, explaining accidental features of animals in terms of material causes.²¹

²⁰ HATZIMICHALI 2021: 228–245 and FALCON 2022b: 421–442. Compare also HELLMANN 2006: 354–355.

²¹ LEFEBVRE 2016b: 18.