ARISTOTLE ON THE ΣΚΩΠΕΣ IN ODYSSEY 5.66

Abstract: In the description in Odyssey 5 of the area around Calypso's cave, three birds are named, one of which is the $\sigma\kappa\omega\psi$ (plural $\sigma\kappa\omega\pi\epsilon$). (This bird is generally thought to be the Scops Owl, Otus scops.) The focus of the present essay is a set of fragmenta or testimonia (the most important being Aelian, NA 15.28), which claim that according to Aristotle, Homer in fact wrote $\kappa\omega\pi\epsilon$, not $\sigma\kappa\omega\epsilon$ (at the beginning of Odyssey 5.66). These texts have received virtually no attention. The aim of this essay is to determine what if anything can be said about them. In the end, little is established with certainty, though the interpretive possibilities – concerning the source of what is attributed to Aristotle, whether it is an accurate attribution, and if so why Aristotle said what he did – are made clear.

Keywords: Aristotle, Homer, Odyssey, σκῶπες, Aelian

My focus in this brief essay is a set of fragmenta (or testimonia) attributed to Aristotle and concerning a kind of bird $(\sigma\kappa\omega\psi)^1$ mentioned in Od. 5.66. These texts have received virtually no attention, so I would like to determine what if anything can be said about them. In the end I establish little with certainty, though I do make clear the interpretive possibilities, concerning the source of what is attributed to Aristotle, whether it is an accurate attribution, and if so why Aristotle said what he did.

Early in Od. 5, Zeus sends Hermes to Calypso, to tell her to release Odysseus. Following his arrival on her island there is a description of the area around her cave, and lines 63–67 name three birds there and where they roost:

ύλη δὲ σπέος ἀμφὶ πεφύκει τηλεθόωσα, κλήθρη τ' αἴγειρός τε καὶ εὐώδης κυπάρισσος. ἔνθα δέ τ' ὄρνιθες τανυσίπτεροι εὐνάζοντο, σκῶπές τ' ἴρηκές τε τανύγλωσσοί τε κορῶναι εἰνάλιαι, τῆσίν τε θαλάσσια ἔργα μέμηλεν.

¹⁾ This bird is generally thought to be the Scops Owl (*Otus scops*): see W. Arnott, Birds in the Ancient World from A to Z (New York 2007) 217–18 and D. W. Thompson, A Glossary of Greek Birds (Oxford 1895) 156. As ancient discussion of the bird's identity is an issue that concerns me here, in my translations I leave the word untranslated ($\sigma\kappa\omega\psi$ for the singular, $\sigma\kappa\omega\pi\varepsilon\zeta$ for the plural).

A luxuriant wood grew around the cave, alder and poplar, and fragrant cypress too. And there, long-winged birds roosted: $\sigma \kappa \hat{\omega} \pi \epsilon \zeta$ and hawks² and long-tongued crows of the shore,³ who do their work on the sea.

Before turning to the above-mentioned fragments, I want first to present the relevant passages from Aristotle's extant works. Among these works, he discusses the σκώψ only in his *Historia Animalium*. He first mentions it in a discussion of crook-taloned birds, and says merely that it is smaller than the $\gamma\lambda\alpha\dot{\nu}\xi^4$ (7[8].3.592b11–14). HA 8(9).28, however (which I quote in its entirety), is devoted to the σκώψ (617b31–618a7):⁵

σκῶπες δ' οἱ μὲν ἀεὶ πᾶσαν ὥραν εἰσί, καὶ καλοῦνται ἀεισκῶπες, καὶ οὐκ ἐσθίονται διὰ τὸ ἄβρωτοι εἰναι: ἔτεροι δὲ γίνονται ἐνίοτε τοῦ φθινοπώρου, φαίνονται δ' ἐφ' ἡμέραν μίαν ἢ δύο τὸ πλεῖστον, καὶ εἰσίν ἐδώδιμοι καὶ σφόδρα εὐδοκιμοῦνι. καὶ διαφέρουσι τῶν ἀεισκωπῶν καλουμένων οὖτοι ἄλλω μὲν ὡς εἰπεῖν οὐδενί, τῷ δὲ πάχει: καὶ οὖτοι μέν εἰσιν ἄφωνοι, ἐκεῖνοι δὲ φθέγγονται. περὶ δὲ γενέσεως αὐτῶν ἡτις ἐστίν, οὐδὲν ὧπται, πλὴν ὅτι τοῖς ζεφυρίοις φαίνονται: τοῦτο δὲ φανερόν.

Of σκῶπες, some are always present at every season and are called everσκῶπες; they are not eaten because they are inedible. The others occur sometimes in autumn and appear for one day or two at most; they are edible and are thought very well of. These differ from the so-called ever-σκῶπες in practically no other respect but in fatness. And these are voiceless while the former have a call. Of the nature of their generation nothing has been observed except that they appear in the west winds: that is evident.

²⁾ LSJ s.v. ίέραξ: 'hawk', 'falcon'. See Arnott (n. 1 above) 66-68.

³⁾ Although εἰνάλιαι is more accurately rendered 'of the sea' (e.g. as Fagles does), I translate it 'of the shore' (following Lombardo) to distinguish εἰνάλιαι from θαλάσσια at the end of the verse. On the identity of this bird, note Thompson (n. 1 above) 100: "An undetermined sea-bird. . . . It may be another name for a Cormorant." Cf. Arnott (n. 1 above) 116; and see also A. Heubeck / S. West / J. B. Hainsworth, A Commentary on Homer's Odyssey, vol. 1 (Oxford 1988) 262, who take it to be either of two species of cormorant (Phalacrocrax carbo or aristotelis), "unless we have a poetical term for the ubiquitous gulls".

⁴⁾ On the $\gamma \lambda \alpha \acute{\nu} \xi$ (the owl *Athene noctua*) see Arnott (n. 1 above) 55–57 and Thompson (n. 1 above) 45–46.

⁵⁾ HA 8(9).7–36 is Aristotle's discussion of the characteristics and behavior of birds.

Translation from D. Balme, Aristotle: History of Animals: Books VII–X, Cambridge, MA / London 1991, slightly modified.

Not only do these *HA*-passages say nothing about the bird in Od. 5.66, as we shall see they in general have little connection to the fragments that interest me here, which I turn to now.

Aelian devotes a chapter (NA 15.28) to the σκώψ. He begins by recalling the mention of this bird in the *Odyssey*, as one that roosted around Calypso's cave,⁷ and by claiming that people say that it can be caught by dancing and that as a result the word σκώψ is the origin of the verb σκώπτειν ('to mock'). Aelian mentions a few other things said about the σκώψ: for instance, like Aristotle he claims that it is smaller than the γλούξ. Later in this chapter, Aelian attributes to Aristotle a claim not found in the *Historia Animalium* (= Arist. fr. 349 Rose / 270.45 Gigon):

λέγει δὲ Ἀριστοτέλης τοὺς παρ' Ὁμήρω διὰ τοῦ σίγμα μὴ λέγεσθαι, ἀλλὰ ἀπλῶς ὀνομάζεσθαι κῶπας. τοὺς οὖν τιθέντας τὸ σίγμα ἀμαρτάνειν τῆς κατὰ τὸ ὄνομα ἀληθείας καὶ τῆς Ὁμήρου περὶ τὸν ὄρνιν κρίσεως τε καὶ γνώσεως.

Aristotle says that these [birds] in Homer are not said with a sigma, but are simply named $\kappa \hat{\omega} \pi \epsilon \varsigma$. So those who add the sigma [he says] are mistaken about the true name and about Homer's judgment and knowledge concerning the bird.

The implication seems to be that according to Aristotle there are at issue two kinds of birds: the $\sigma\kappa\omega\psi$ (the bird Aelian is discussing in NA 15.28), and the one in the *Odyssey* which Homer knew was not the $\sigma\kappa\omega\psi$, namely the $\kappa\omega\psi$.

This implication is missing from all the other fragments on Aristotle and the $\sigma\kappa\omega\psi$ – for instance, Athenaeus 9.391C (= fr. 349.1 Rose / 258 Gigon):

ό δὲ Μύνδιος Ἀλέξανδρός φησι τοὺς παρ' Όμήρφ χωρὶς τοῦ σ κῶπας εἶναι, καὶ Ἀριστοτέλη οὕτως αὐτοὺς ἀνομακέναι.

Alexander of Myndus [1st c. AD?] claims that these [birds] in Homer are $\kappa \hat{\omega} \pi \epsilon \varsigma$, without the sigma, and that Aristotle refers to them this way.⁸

It could be that Aelian and Athenaeus have the same source, but that the latter's text has lost something in the process of being con-

^{7) ...} τοὺς σκῶπας, ὧν καὶ Ὁμηρος ἐν Ὀδυσσείᾳ μέμνηται ("the σκῶπες, which in fact Homer mentions in the *Odyssey*").

⁸⁾ The opening of schol. Theocritus 1.136 (Wendel) claims that according to Alexander one should read $\sigma\kappa\hat{\omega}\pi\epsilon\varsigma$ in Homer and not $\kappa\hat{\omega}\pi\epsilon\varsigma$. So either Athenaeus or this scholiast is confused about what Alexander of Myndus said about $\sigma\kappa\hat{\omega}\pi\epsilon\varsigma$, or they are each talking about a different Alexander.

densed by Athenaeus and / or of being filtered through Alexander of Myndus. Or, these two texts could be offering different interpretations of what Aristotle said: According to Aelian, there are two kinds of birds – the $\sigma\kappa\acute{\omega}\psi$ and the $\kappa\acute{\omega}\psi$ – and Aristotle claims Homer correctly included the $\kappa\acute{\omega}\psi$ and not the $\sigma\kappa\acute{\omega}\psi$ in Od. 5.66; according to Alexander of Myndus, however, there is one kind of bird, and the issue is its name – which, according to him, Aristotle claims is $\kappa\acute{\omega}\psi$ not $\sigma\kappa\acute{\omega}\psi$.

Also noteworthy is a passage from Herodian's *De Prosodia Catholica*, from a section on monosyllabic words with acute accent, ending in psi (τὰ εἰς ψ μονοσύλλαβα ὀξύνεται) (vol. 3.1, p. 404 Lentz = fr. 349 Rose / 294 Gigon):

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κνίψ, ὁ δὲ Ἀριστοτέλης μετὰ τοῦ σ σκνίψ.<sup>9</sup> σκώψ, ὁ σκώπτης, Ἀριστοτέλης δὲ χωρὶς τοῦ σ.<sup>10</sup> κνίψ, Aristotle however [says it] with the sigma, σκνίψ. σκώψ, the scoffer, Aristotle however [says it] without the sigma.<sup>11</sup>
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Now what is the ultimate source of the idea that Aristotle proposed reading $\kappa \hat{\omega} \pi \epsilon \zeta$ in place of $\sigma \kappa \hat{\omega} \pi \epsilon \zeta$ in Od. 5.66? Olson, in a note to his translation of the Athenaeus passage quoted above (i. e. 9.391C), ¹² claims that it is the accidental product of scribal error:

The word [sc. σκῶπες] ... stands at the head of the line at Od. 5.66, and either form¹³ is thus technically possible. But Alexander is presumably doing nothing more than ascribing unnecessary authority to a minor scribal error he found both there and in his copy of the *Historia Animalium*, and which Athenaeus (or another source) also found in Speusippus (below).¹⁴

The κνίψ is a small insect that infests various fruits. Aristotle apparently did use both forms: see H. Bonitz, Index Aristotelicus (Berlin 1861) 395, s.v. κνίπες et σκνίπες.

¹⁰⁾ I follow Gigon (fr. 294) in ending the Aristotle-text here, whereas Lentz ends it: ... χωρὶς τοῦ σ, Κρώψ. Κρῶπας γὰρ Ἀνδροτίων φησὶ Κρωπιὰν δῆμον τῆς Λεοντίδος φυλῆς. But surely κρώψ begins another example of a monosyllabic word ending in psi.

¹¹⁾ Note also this derivative entry from the ninth century *Canons* of Theognostus the Grammarian (fr. 349.3 Rose / not in Gigon): σκώψ, ὁ σκώπτης, Άριστοτέλης δὲ χωρὶς τοῦ σ. Cf. Eust. Od. 5.66 (vol. 1, p. 200 Stallbaum), οn σκῶπες: τινὲς δὲ κῶπας γράφουσι δίχα τοῦ σίγμα.

¹²⁾ S.D.Olson, Athenaeus: *The Learned Banqueters*, Books 8-10.420e Cambridge, MA / London 2008, 315 n.141.

¹³⁾ I. e. with or without the initial sigma.

¹⁴⁾ By 'below' Olson means Athenaeus 9.391D = Speusippus fr. 26 Tarán: καὶ Σπεύσιππος δ' ἐν δευτέρφ Ομοίων χωρὶς τοῦ σ κῶπας αὐτοὺς ὀνομάζει ("Speu-

Olson is claiming that Alexander of Myndus found the same reading (κῶπες for σκῶπες, κώψ for σκώψ) – a scribal error that he took to be a textual variant – in both his copy of the *Odyssey* and his copy of the *Historia Animalium*, ¹⁵ and that Athenaeus (or his source) encountered the same scribal error in Speusippus, which Athenaeus (or his source) likewise erroneously took to represent Speusippus' view of the correct reading for the name of this bird. At the very least this account invites alternative hypotheses – and in light of Aelian, NA 15.28, Olson's explanation is in fact highly improbable. So I want to consider the account found in Aelian, namely, that Aristotle actually did propose reading κῶπες in place of σκῶπες in Od. 5.66, ¹⁶ and that he did so as part of a defense of Homer's judgment and knowledge concerning this bird.

Assuming the ancient evidence is correct, and Aristotle objected to $\sigma \kappa \hat{\omega} \pi \epsilon \zeta$ in Od. 5.66 and so suggested reading $\kappa \hat{\omega} \pi \epsilon \zeta$ instead, we must ask: Why?¹⁷ I.e. why did he object to $\sigma \kappa \hat{\omega} \pi \epsilon \zeta$? And why did he think $\kappa \hat{\omega} \pi \epsilon \zeta$ was an adequate alternative? What kind of bird did he think (that Homer thought) it referred to?

So, why did Aristotle think that Homer knew better than to include $\sigma \kappa \hat{\omega} \pi \epsilon \zeta$ in Od. 5.66? I can come up with – and this is entirely speculative – a couple of reasons why he would object to $\sigma \kappa \hat{\omega} \pi \epsilon \zeta$: (1) that the $\sigma \kappa \hat{\omega} \psi$ is not a sea bird, whereas the three birds

sippus in the second book of *Similar Things* names them κῶπες, without a sigma"). The comment on fr. 26 in L. Tarán, Speusippus of Athens: A Critical Study With a Collection of the Related Texts and Commentary (Leiden 1981) 254, is not helpful: "Aristotle in *His. Animal.* 617 B 31 has σκῶπες. . . . It may be that later scribes emended the text of Aristotle. Be that as it may, the question of spelling goes back to Athenaeus, not to Speusippus."

¹⁵⁾ σκώψ appears twice in HA 7(8).3 (592b11, 13), σκῶπες once in 8(9).28 (617b31). According to D. Balme, Aristotle: *Historia Animalium*, vol. 1: Books I–X: Text, prepared for publication by A. Gotthelf (Cambridge 2002) 342 and 421 (app. crit., ad loc.), there are no variations in the manuscripts.

¹⁶⁾ Aristotle's conjecture has long been recognized by editors of the *Odyssey*: see the app. crit., ad loc. in Ludwich, Allen, and von der Mühll. It is however usually passed over without mention (or without mentioning Aristotle) in commentaries on the *Odyssey*. See e. g. Heubeck et al. (n. 3 above) 262, which refers to Athenaeus but not to Aelian or Aristotle.

¹⁷⁾ The answer cannot be that he simply thought σκώψ was a mistaken version of the word κώψ, for (1) he used σκώψ in the *Historia Animalium* but nowhere uses κώψ or its cognates; and (2) Aelian's testimony counts against this.

¹⁸⁾ This is not to suggest that these are compelling reasons according to modern standards of Homeric scholarship.

in Od. 5.66–67 are; and (2), that the σκώψ is nocturnal, whereas those three birds are diurnal. Unfortunately, in HA 8(9).28 (the chapter devoted to the σκώψ, quoted above) there is no mention of habitat, or of the time of day in which this bird is active. I think it worth noting, however, that Aristophanes of Byzantium – both Homeric scholar and scholar of Aristotle's biology – in his *Epitome of the Historia Animalium* (1.23), says that birds are classified according to whether they are nocturnal or diurnal, and according to whether they are sea, river, or land dwellers. The σκώψ, he says, is nocturnal; and, he does not classify it as a sea bird.¹⁹

(1) Aristotle may have assumed that all three birds in Od. 5.66–67 were sea-birds, 20 but did not consider the σκώψ to be a sea-bird, and that might have led him to look for an alternative. In HA 8(9).12, where Aristotle discusses sea and river birds (615a20–b5), he does not mention the σκώψ. 21 But as the birds on Calypso's island roost inland (in "a luxuriant wood"), and as some subspecies of scops owls (e. g. Otus scops mallorcae) are known to be common to certain islands, such a case for replacing σκῶπες would be particularly weak (which is no guarantee that Aristotle did not make such a case). (2) Aristotle does not say that the σκώψ is nocturnal, but he must have known it was (as he says the γλαύξ is: see HA 8[9].34.619b18). Further, the other two birds of Od. 5.66–67 (a hawk or falcon, and some kind of seabird) are diurnal. This would have been a stronger objection to σκῶπες than (1).

¹⁹⁾ τῶν δὲ πτερωτῶν ὀρνίθων ἂ μέν ἐστιν εἴδη νυκτερινὰ ἃ δὲ ἡμερινά, καὶ ὰ μὲν θαλάσσια ὰ δὲ ποτάμια ὰ δὲ χερσαῖα. ἡμερινὰ μὲν οὖν ἐστι τὰ πᾶσι φαινόμενα καθ' ἡμέραν, νυκτερινὰ δὲ γλαὺξ ἐλεὸς βύας νυκτικόραξ αἰγωλιὸς σκώψ, θαλάσσια δὲ ἀλκυὼν κήρυλος αἴθυια λάρος χαραδριὸς καταρράκτης κέπφος κίγκλος. ὑπὲρ δὲ τοῦ βίου τούτων καὶ τῆς μορφῆς καὶ καθόλου τῶν ἄλλων ὀρνίθων ἐν τῷ τετάρτφ δηλώσω.

²⁰⁾ The third is clearly some kind of sea-bird. In the case of the second bird (a hawk or falcon), consider the Eleonora's falcon (*Falco eleonorae*), which today breeds (among other places) on the sea cliffs of uninhabited Greek islands. See S. M. Xirouchakis et al., Variation in breeding parameters of Eleonora's falcon (*Falco eleonorae*) and factors affecting its reproductive performance, Ecological Research 27 (2012) 407–416.

²¹⁾ Cf. F. Weick, Owls (Strigiformes): Annotated and Illustrated Checklist (New York 2006) 252, which, on the habitat of the *Otus scops*, comments: "Semi-open or rather open country with scattered trees or small woods, cultivated areas with groups of trees, rocky landscapes, parks" etc. There is no mention of the sea.

²²⁾ See Arist. Poet. 25.1460b17-32, and R. Mayhew, Aristotle's Biology and His Lost *Homeric Puzzles*, CQ 65 (2015) 110-11.

Now had the received text included $\sigma\kappa\tilde{\omega}\pi\epsilon\varsigma$, and Aristotle knew of no reasonable alternative, he might have defended Homer on the grounds of having made a scientific, not an esthetic, error. It is unlikely that he would have removed the sigma because he objected to $\sigma\kappa\tilde{\omega}\pi\epsilon\varsigma$, but left $\kappa\tilde{\omega}\pi\epsilon\varsigma$ in its place, if he thought the latter was a nonsense word. But Aristotle it seems held that there was an alternative word that fit the verse – one he believed Homer was aware of – and therefore he thought he was able to defend Homer against the charge of zoological inaccuracy.

So, what did Aristotle think Homer intended by κῶπες? One can merely speculate here as well, as there is no certain word κώψ. Can a case (even a speculative one) be made for κώψ referring to a kind of bird? Thompson raises the possibility that κώψ is connected to κυβήνη, another name for the γλαύξ or for a bird that is like the γλαύξ.²³ If κώψ refers to a kind of an owl, however, it is not an improvement over σκώψ. A more promising possibility is found in Hesychius γ 1044: γῶπας· κολοιούς, Μακεδόνες – i. e. γώψ is Macedonian for κολοιός, jackdaw (Corvus monedula). Frisk (s. v. σκώψ) suggests (without elaboration) a possible connection between γώψ and κώψ.²⁴ So one might speculate that Aristotle suggested changing the received text of Od. 5.66 to read κῶπες in place of σκῶπες, taking it to be the equivalent of κολοιοί. (One could further speculate that, having lived in Macedonia, Aristotle would likely have known the alternative name γώψ and its variant κώψ.) And as it happens, jackdaws are diurnal and can live by the sea.²⁵ Assuming Aristotle did suggest replacing σκῶπες with κῶπες in Od. 5.66 (and I see no reason to doubt the assumption), this would be his most likely reason for having done so, and this is the most likely interpretation of κῶπες.

²³⁾ Thompson (n. 1 above) 156–57. He refers to L. Doederlein, Homerisches Glossarium, vol. 3 (Erlangen 1858) 263–64. LSJ (s. v. κυβήνη) simply has "= γλαύξ", relying on Hesychius κ 4383: κυβῆναις· γλαῦξαις.

²⁴⁾ H. Frisk, Griechisches Etymologisches Wörterbuch II (Heidelberg 1970) 746–47. He makes no reference to our Aristotle-fragments. Moreover, if I understand him correctly, he takes σκώψ, κώψ, and γώψ to all be names for the same bird, despite his awareness of Hesychius γ 1044: "Eine Nebenform κώψ wird mehrfach erwähnt . . .; dazu γῶπας· κολοιούς, Μακεδόνες."

²⁵⁾ On its living by the sea: "It is gregarious and vocal, living in small groups with a complex social structure in farmland, open woodland, on coastal cliffs, and in urban settings" (Avibase: http://avibase.bsc-eoc.org/species.jsp?lang=EN&avibaseid=D4C32F8E792B65BA&sec=wiki).

I conclude with a comment on the likely work in which Aristotle discussed κῶπες and σκῶπες in Od. 5.66. Rose and Gigon each assign (some set of) these texts to a lost work of Aristotle on animals.²⁶ Their reasoning must have been that these passages are about animals, but do not come from the extant biological works. I would suggest, however, that if they do accurately represent something Aristotle wrote about, then the source is much more likely a discussion of Od. 5.66 in one of his lost works on poetry, the most obvious candidate being the *Homeric Puzzles* or *Problems*.²⁷ Three considerations support this hypothesis: (1) in his Homeric Puzzles, Aristotle was interested in issues involving the animals mentioned in the Homeric epics;²⁸ (2) Aristotle (like other Homeric scholars, ancient and modern) believed that certain Homeric problems could be solved or avoided by emendation;²⁹ (3) σκῶπες (which is a hapax legomenon in Homer) was a word discussed by ancient Homeric scholars, who were interested in the identity of this bird, and Aristotle was part of (if not the start of) that discussion.³⁰ So I think it clear that the Homeric Puzzles is a much more likely source for these fragments than a lost biological work, and that any future collection of the fragments of Aristotle should relocate them accordingly.³¹

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²⁶⁾ V. Rose, Aristotelis qui ferebantur librorum fragmenta (Leipzig 1886), and O. Gigon, Aristotelis Opera (ex recensione I. Bekkeri) III²: Librorum Deperditorum Fragmenta (Berlin 1987).

²⁷⁾ See e.g. Diogenes Laertius 5.26.28) See Mayhew (n. 22 above).

²⁹⁾ See Poet. 25.1461a9-31 (especially 1461a21-23) and SE 4.166b1-10, and H. Hintenlang, Untersuchungen zu den Homer-Aporien des Aristoteles (Diss. University of Heidelberg 1961) 53-94. I mention this, not because this approach is unique to Aristotle – on the contrary, it was (and is) ubiquitous – but merely because if there were no evidence that he saw emendation as one possible solution to Homeric problems, that would tend to count against my claim here.

³⁰⁾ Note for example the end of schol. Od. 5.66b5 (Pontani), on σκῶπες: βούφονες M^b / οἱ κόρακες M^e / κουκουβάγιαι T. This first is unknown (ox-killer?), the second of course means 'crows', the third is another (later) name for owls generally or a species of owl (LSJ supplement s. v. κουκούβη: "a species of owl"). (I wish to thank F. Pontani for giving me access, prior to publication, to his edition of the scholia on Od. 5.66, in: Scholia Graeca in Odysseam, vol. 3: Scholia ad libros ε – ζ [Rome 2015].)

³¹⁾ I wish to thank the journal's editor, and anonymous referees, for critical comments that improved this essay significantly.