DIGITAL CLASSICS ONLINE

Towards a Smart Edition of Apollodorus' *Library*

Gregory R. Crane, Sergiusz Kazmierski, Alison Babeu, Farnoosh Shamsian

Abstract: This paper serves a dual purpose. First, it shows how independent open data projects in multiple countries and increasingly sophisticated automated systems have already provided the components, including translation alignment, linguistic analysis using treebanks, open data of names of people, places and groups, textual notes, and links to passages in other primary sources and images, that can be combined into a first approximation for a truly born-digital smart edition of the *Library* of Apollodorus. Second, it highlights a subset of the larger network of open scholarship that has emerged and that will, hopefully, grow over time. In view of the said purposes, this paper explores the possibility of a born-digital smart edition of Apollodorus' *Library*. First, the requirements are described for such an edition and it is shown how they are motivated. Second, already existing components are discussed and evaluated against the background of the requirements. Third, in a concluding section the results are summarized.

1. Introduction[1]

1.1 Why Apollodorus?

Greek myth is a phenomenon of ancient cultures, the comprehensive study of which is dependent on the analysis of a large number of material and non-material testimonies of antiquity and thus on the investigation by all disciplines of classical studies. This is demonstrated not only by relevant modern handbooks on Greek and ancient myth,[2] but also more specifically, for example, by the *Lexicon Iconographicum Mythologiae Classicae* (*LIMC*).[3] Although the comparison of textual and image evidence can prove to be extremely fruitful, for example, in order to highlight myth traditions that are not documented textually or are documented differently,[4] the examination of the texts nevertheless forms the fundamental starting point.

1 This paper was first presented in the workshop *dm4myth. Digital Methods for Mythological Research* in Aarhus, Denmark, on December 3, 2024. The authors of this article would like to thank the workshop organizers, Franziska Pannach and Bruno Sartini, for their kind invitation and helpful discussions. Many thanks also go to Sarah Abowitz for solving some critical formatting problems.

2 Cf., e. g., Reinhardt (2011).

3 LIMC (1981−1999; 2009), cf. Digital LIMC (2024).

4 E. g., the Sophoclean *Antigone*, cf. Kazmierski (2016), 68.

The *Library* (*Bibliotheca*), traditionally attributed to Apollodorus,[5] is one of the qualitatively and quantitatively richest ancient sources for this. The quantitative importance of *Apollodorus* for the transmission of the Greek myth is shown by the frequency with which it is used as a reference text in various *compendia*. For example, in Graves (1955), who divides the entire Greek mythological tradition into 171 thematic fields and corresponding chapters, in only 23 chapters a reference to *Apollodorus* is completely absent.[6] That the use of *Apollodorus* as a source is a natural preference of Graves and others can be shown, among other things, by the recent list in Reinhardt (2011).[7] *Apollodorus* thus undoubtedly represents one of the most important resources for modern research on Greek myth, alongside the Homeric hymns and epics, Hesiod, Pindar, Greek tragedy, Hyginus and Ovid.

But the *Library* is also qualitatively most important for the transmission of Greek myths. For those who (like one of the co-authors) explore possible relationships between *Homeric Epics* and the earlier Greek heroic and mythological traditions, *Apollodorus* preserves stories that can be much more similar in form and structure to Homeric analogues than later sources such as Hyginus or Antoninus Liberalis. While few, if any, advanced Greek classes read Apollodorus, the *Library* makes such a contribution to our understanding of Greek mythological and epic traditions that it should be among the first instances of born-digital 'smart' editions. At the same time, compared with Homer and later sources Apollodorus' summaries on ancient Greek myths come closest to what, in traditional scholarly work, is called 'Stoff',[8] i.e. the pure mythological core information without narrative figuration. Thus, *Apollodorus* seems to represent a mythological view on myths that is uninfluenced by Pindar, the great tragedians of the 5th century BC or Apollonius of Rhodes and can be located in the 6th century BC.[9]

1.2 Transmission of the Text

The transmission of the text of Apollodorus' *Library* mainly depends on sources[10] which, except the *Oxoniensis*, all are digitally available (see tab. 1):

Sigla	Codex information
R	Parisinus graecus 2722
	Parisinus
	Paris, Bibliothèque Nationale
	14th c.
	17 of 29 pages preserved, text ends at 3.16.2.
	https://gallica.bnf.fr/ark:/12148/btv1b525238520 (IIIF)
E	Vaticanus graecus 950
	Epitome

5 For convenience, from this point on, we refer to the *Library* simply as *Apollodorus*. − Since Kastor of Athens and his *Chronika* are mentioned in *Library* 2.1.3, which covers the period up to 61/60 BC, the author of the *Library* cannot be Apollodorus of Athens, who lived in the 2nd century BC and to whom the work has traditionally been attributed. Cf. Dräger (2005), 837−840.

6 See Graves (1955), passim.

7 Cf. Reinhardt (2011), 509−515.

8 Cf. Zgoll (2019).

9 Cf. Dräger (2005), 854−891.

10 On the manuscripts, see the summary by Dräger (2005), 840−43 and Frazer (1921), XXXIII−XXXVI; on the older edition history, see Frazer (1921), XXXVII−XLIII.

	Rome, Biblioteca Apostolica Vaticana
	14th c.
	23 of 73 pages on the lost part of books 3 and 4, maybe compiled by Johannes Tzetzes, first published in: Wagner (1891), in Latin
	https://archive.org/details/bub_gb_JUgVAAAAQAAJ/mode/2up (no IIIF)
S	Sabbaiticus graecus 366
	Fragmenta Sabbaitica
	Jerusalem, Library of the Patriarch
	13th c.
	17 of 28 pages on the lost part of the *Library*, including important scholia; excerpts probably by Johannes Tzetzes, 12th c., cf. his scholia on the *Alexandra* by Lycophron, first published in: Papadopoulos-Kerameus (1891), in Latin
	http://www.rhm.uni-koeln.de/046/Kerameus.pdf (no IIIF)
O	Oxoniensis Laudianus Graecus 55
	Oxoniensis
	Oxford, Bodleian Library
	15th c.
	depending on R
	https://medieval.bodleian.ox.ac.uk/catalog/manuscript_6867 (description only).
M	Monacensis graecus 182
	Monacensis
	Munich, Bayerische Staatsbibliothek
	15th c.
	depending on R, independent from O
	https://daten.digitale-sammlungen.de/~db/0001/bsb00012910/images/index.html (IIIF)

Tab. 1: Main manuscript resources for the text of *Apollodorus*.

As R shows, the text for books 1−3 (16.2 end) is transmitted. For the lost parts of books 3 and 4 the manuscripts E, S, scholia found in manuscripts of other works (by Plato, Zenobius, Sophokles, Euripides and Homer), and the *Chiliades* by Johannes Tzetzes are most important. The excerpts from the *Library* in the *Bibliotheca* by Photius (9th c.) are also important, "the first known writer to quote him,"[11] although wrongly ascribing the work to Apollodorus the Athenian (2nd c. BC).

11 Cf. Frazer (1921), XIII.

1.3 On Purposes of and General Requirements for Digital (Smart) Editions

As the complicated transmission history and the older and younger edition histories, which cannot be evolved in this paper, show, the text of the *Library* is today well edited. Nonetheless, the presentation of the preserved parts of the *Library* and the reconstruction of the lost parts could significantly profit from a digital edition not only because the textual decisions made could be demonstrated using scans from the manuscripts, but also because all the resources for the edition could be brought together in one single environment. At the same time, the comparison between the summaries of the lost parts on the one hand and the summaries of the preserved text of books 3 and 4 aligned with the preserved text of books 3 and 4 could be used to train an algorithm in order to make 'smart' suggestions for an additional layer of the reconstruction of the lost parts of books 3 and 4.[12]

But, as the new environment of *Perseus 6.0* will show[13] and we will present in this paper,[14] modern digital editions have more functions than only presenting the best possible text and the resources on which this text is based. And smart editions are designed from the ground up so that audiences can explicitly customize them and so that the editions themselves can automatically personalize themselves, in constructive and transparent ways, to the behaviors of audiences. Customization can include choosing whether to see the original Greek text, a modern language translation or both at once. A reading environment can personalize itself by, for example, tracking what words a reader looks up and thus reminding them when and where they have asked for information about a given word before. One goal of such a smart edition is to make a primary source intellectually accessible to as many different readers from as many different cultural, linguistic, and educational backgrounds as possible. A second goal is to provide a smooth pathway from casual use to the deepest, most detailed possible engagement: start as a casual reader but develop, if you so desire, into an expert on the content and, indeed, original language of the source. Such an edition is not static but evolves over time, as members of the community make new contributions and as automated systems of analysis and visualization evolve.[15]

An edition that aims to serve such a broad range of audiences must depend, as much as possible, on open data and open research.[16] Specialist publications restricted behind corporate paywalls have no significance except insofar as they enhance open scholarship. Copyright protects original expression and scholars committed to the public good can always disseminate interesting ideas from corporate publications to society as a whole but scholars who wish to advance human understanding should not have to waste time summarizing ideas that their colleagues have relegated to specialist cliques.

2. Purpose and Method of this Paper

2.1 On the Dual Purpose

This paper thus serves a dual purpose. First, it shows how independent open data projects in multiple countries and increasingly sophisticated automated systems have already provided the components that can be combined into a first approximation for a truly born-digital smart edition of the *Library* of Apollodorus. Second, it highlights a subset of the larger network of open scholarship that has emerged and that will, hopefully, grow over time.

12 See section 4.2.4 below. We will show a piece of this work in an upcoming paper.

13 Cf. Crane et al. (2023) and Crane et al. (2025).

14 See section 4 below.

15 Cf. Zenzaro (2024); Van Mierlo (2022); Franzini et al. (2019); Sahle (2016).

16 Cf. Schlicht (2020).

2.2 Method and Structure

In view of the said purposes, this paper explores the possibility of a born-digital smart edition of *Apollodorus*. First, the requirements are described for such an edition and it is shown how they are motivated. Second, tools that already exist are discussed and evaluated against the background of the requirements. Third, the results are summarized in a concluding section.

3. Requirements for a Smart Edition of *Apollodorus* and their Motivation

The selection of requirements – textual alignment, treebanks, names, textual notes, links to passages in other primary sources, links to images – presented in this paper[17] follows the purpose to make the text of the *Apollodorus* accessible and understandable to a wide range of users from laymen to scholars. Moreover, it serves the purpose to prepare a reading environment which is dynamic in the sense that the edition is not only able to adapt to the habits of the users but also to the need of future emendations of the text. Users are provided with the tools and methods that can educate them to work on the edition itself. In such an environment, both the edition and its users evolve together.

Textual alignment is strongly needed because born-digital scholarly editions should not only be linked to their particular source texts but should also be designed from the start to optimize machine translation into as many other languages as possible. Ideally, native speakers will be able (and eager) to enhance the machine translation but machine translation will often serve as a starting point and should be as good as possible. In the ideal case, translators should be able to compare machine translations into multiple languages, including non-Indo-European languages (e.g., Arabic, Mandarin, Japanese, Tagalog, Finnish, Turkish). Such comparisons can help identify and remove ambiguities from the initial translation language (in our case English).

Treebanks can support close reading. Syntactic relationships can clarify the expert interpretation of particularly complex or problematic sentences but they also allow readers with little or no knowledge of the language to see how each word contributes to the meaning of a sentence. When readers combine translation alignment and treebanks, they can begin close reading of primary sources in languages with which they have little or no familiarity.

Links to **Names** and **Textual notes** are maybe the most natural reference format for users of a digital edition. However, in a smart digital edition, users will be encouraged not only to receive the already provided notes but also to pose questions on problematic passages not seen as such before and therefore to work on the improvement and completion of the edition.

Links to passages in other primary sources are able to contextualize the text of the *Library* within Ancient literature. This part of the edition is meant to grow also with the help of the users, as almost every work of ancient literature has references to the mythological tradition.

Links to images can not only support the understanding of the context of the *Library* (images from Ancient art history and its reception) but also help users in the work on textual transmission (images of manuscripts and editions). They could substantiate or justify textual decisions in the edition and bring forward future insight into the text, such as new textual variants.

Further information of the requirements and the evaluation limits of the already available tools is given in the subsections 4.2.1−4.2.6.

17 See sections 4.2.1−4.2.6.

4. Existing Networks, Resources and Tools and their Evaluation against the Requirements

4.1 Existing Networks

Fortunately, for the study of Greco-Roman culture, a small but robust, growing and decentralized scholarly community has begun producing a network of complementary resources, including scholarship, data, software and models.[18] Data has begun to circulate: digitized by one project, manually annotated by another, used to generate models by a third project, then providing automatically generated data as the starting point for curated editing or for new text mining projects. Many members of this self-organizing community, focused as they are upon their own projects, are not in a position to appreciate quite how dynamic the intellectual network is of which they are a part. We are all at a very early stage of building a fundamentally new infrastructure for the study of the past. The editions and reference works of print culture provide an initial starting point but we must constantly strive not to mistake the accommodations forced upon us by print technology as either necessities to endure or virtues to cultivate.

4.2. *Apollodorus* within the Framework of *Perseus*

A generation ago, the *Perseus Digital Library*,[19] when designing *Perseus 1.0*, chose to include not only the *Apollodorus* but also the edition by Sir James Frazer.[20] The XML for this edition is available on GitHub[21] and can be freely edited and reused. It provides a starting point for not only the English translation and Greek text but also for initial commentary and for a machine-actionable network of mythological stories as they appear in primary sources. The digitized version of this print edition can serve as a starting point for a true digital edition – in fact, the Greek text and English translation have already been reused as foundations for next generation projects.[22] In the following sections some core elements of a digital *Apollodorus* are discussed and evaluated as they can be built up within the framework of the forthcoming 6th generation of *Perseus* and are already visible on *Beyond Translation.*[23]

4.2.1 Textual Alignment

Readers of a modern edition should expect an accompanying translation. Editors who assume that their audience has advanced command of the language – whether that language is ancient or modern – have excluded the vast majority of their potential audience.[24] Scholars have become accustomed to producing editions for advanced students of a language because print publications are static and cannot explain themselves to their readers. A reader with no knowledge of Greek will, in practice, never make use of a printed Greek text. Adding a facing translation to the source text allows readers with some knowledge of the language to do more with the primary source but the translation cannot explain its relationship to the source text and the source text cannot explain how each word and phrase contributes to its meaning. A truly digital edition contains an edition that is aligned, at the word and phrase level, to the source text that it renders (see fig. 1).

---

18 Cf. Wigdorowitz et al. (2023); Crane et al. (2023), Bond et al. (2021), see also the concluding section 5 below, Tab. 5: *Available tools*, with an overview over some of the respective projects.

19 Cf. http://www.perseus.tufts.edu/hopper/ (last access 15.12.2025).

20 Cf. Frazer (1921).

21 Cf. https://github.com/PerseusDL/canonical-greekLit/tree/master/data/tlg0548 (last access 15.12.2025).

22 E.g., the *GLAUx treebanks* and *TopposText* named entity datasets, see below.

23 Cf. https://beyond-translation.perseus.org (last access 15.12.2025).

24 Cf. Palladino et al. (2021).

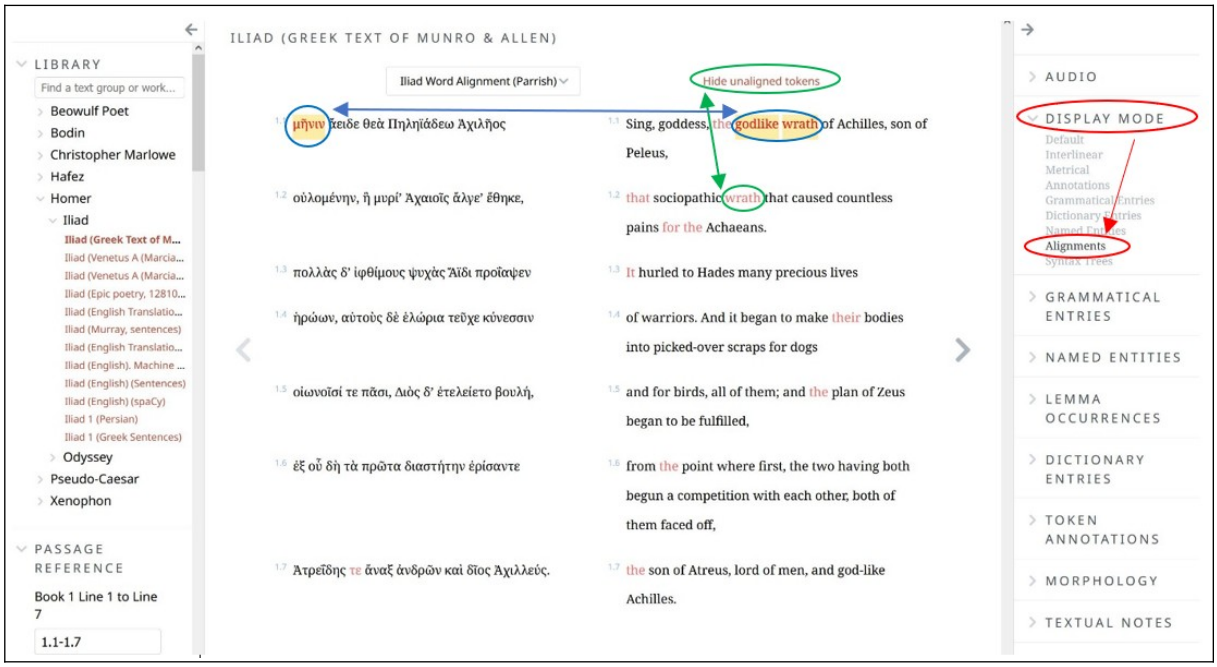

Fig. 1: Alignment of source text and translation (of *Iliad* 1.1–1.7 in *Beyond Translation*: 'Display mode' → 'Alignment') with mouseover marking of corresponding tokens (bold red and yellow, here "godlike wrath" corresponding with "μῆνιν" in line 1) and unaligned tokens (light red only, here "wrath" in line 2).

Editors can add explanations of the decisions they make in translation. In a digital environment they can – and often should – include both a literary translation for fluid reading and a more literal translation that helps elucidate the source text – the 19th century French *Hachette* series published such dual translation editions for not only Greek and Latin but also Arabic and German.

The translation is reasonably clear and does not deviate unnecessarily from the Greek original. Tab. 2 provides the opening two sentences of 2.2.2 of the *Library* which reflects the general nature of the translation.

Greek source text	English translation
καὶ γίνεται Ἀκρισίῳ μὲν ἐξ Εὐρυδίκης τῆς Λακεδαίμονος Δανάη,	And Acrisius had a daughter Danae by Eurydice, daughter of Lacedaemon,
Προίτῳ δὲ ἐκ Σθενεβοίας Λυσίππη καὶ Ἰφινόη καὶ Ἰφιάνασσα.	and Proetus had daughters, Lysippe, Iphinoe, and Iphianassa, by Stheneboea.
αὗται δὲ ὡς ἐτελειώθησαν,	When these damsels were grown up,
ἐμάνησαν,	they went mad,
ὡς μὲν Ἡσίοδός φησιν,	according to Hesiod,
ὅτι τὰς Διονύσου τελετὰς οὐ κατεδέχοντο,	because they would not accept the rites of Dionysus,
ὡς δὲ Ἀκουσίλαος λέγει,	but according to Acusilaus,
διότι τὸ τῆς Ἥρας ξόανον ἐξηυτέλισαν.	because they disparaged the wooden image of Hera.

Tab. 2: Apollodorus 2.2.2 aligned with translation.

In the passage above, many editors would change “damsels” to “young women,” but otherwise the language is reasonably clear. Most important, perhaps, the translation is sufficiently close that we can, using the models published in Yousef et al. (2022), automatically generate very reasonable word-level alignments between source text and translation (see tab. 3).

Translation	Source text	Translation	Source text
And	[καὶ]	up	[0]
Acrisius	[᾽Ακρισίῳ]	they went	[ἐμάνησαν]
had	[γίνεται]	mad	[ἐμάνησαν]
Ø	[μὲν]	according to	[ὡς]
a daughter	[0]	Ø	[μὲν]
Danae	[Δανάη]	῾Ησίοδός	[Hesiod]
by	[ἐκXXX]	Ø	[φησιν]
Eurydice	[Εὐρυδίκης]	because	[διότιXXX]
daughter	[τῆς]	they	[κατεδέχοντο]
of Lacedaemon	[Λακεδαίμονος]	would	[κατεδέχοντο]
and	[δὲ]	not	[οὐ]
Proetus	[Προίτῳ]	accept	[κατεδέχοντο]
had daughters	[0]	the	[τὸXXX]
Lysippe	[Λυσίππη]	rites	[τελετὰς]
Ø	[καὶ]	of Dionysus	[Διονύσου]
Iphinoe	[᾽Ιφινόη]	but	[δὲ]
and	[καὶ]	according to	[ὡς]
Iphianassa	[᾽Ιφιάνασσα]	Acusilaus	[᾽Ακουσίλαος]
by	[ἐκ]	Ø	[λέγει]
Stheneboea	[Σθενεβοίας]	because	[διότι]
When	[ὡς]	they disparaged	[ἐξηυτέλισαν]
these	[αὗται]	the	[τὸ]
Ø	[δὲ]	wooden image	[ξόανον]
damsels	[0]	Ø	[τῆς]
were grown	[ἐτελειώθησαν]	of Hera	[῞Ηρας]

Tab. 3: Automatically generated word-level alignments between the Greek and a translation of Apollodorus 2.2.2.

In the representation of tab. 3, Greek words follow the English words to which they correspond.

- Where the translation has added words for the sake of clarity we have added [0] (marked red): “a daughter”, “had daughters”, “damsels”, “up.”

- In three cases, alignments were incorrect (marked green). First, “by” appears twice. In the first instance it corresponds to ἐξ, which is a form used when a word begins with a vowel or diphthong, as is the case in Εὐρυδίκης, and not to ἐκ. In the second instance it is correctly aligned with ἐκ. Second, “the” appears twice. In the first instance it corresponds not to τὸ but to τὰς [sc. τελετὰς], in the second instance it does correspond to τὸ, where the alignment is correct. Third, “because” appears twice. In the first instance it corresponds to ὅτι not to διότι, which is slightly different in meaning, but in the second instance it does correspond to διότι. In all three cases a word repeated in the English corresponds to two different words or word-forms in the Greek. If an English word shows up more than one time in a chunk, the current alignment implementation assigns what it judges to be the one best Greek alignment.

- In eight cases (marked orange), the English leaves out a Greek word. E.g., where English reports “according to Hesiod” and “according to Acusilaus,” the Greek says “as Hesiod/Acusilaus says.” The English instances of “according to” can be aligned in each case to ὡς but the Greek words φησιν and λέγει have no English equivalent.

In a truly born-digital edition, the editor would design the translation to be aligned to the Greek and would comment on passages where the translation needed explanation. Pre-existing translations are often so loose (and often unnecessarily so) that the editor who tries to align the pre-existing translation ends up creating an entirely new translation.[25] The Frazer translation is, however, sufficiently disciplined and the underlying Greek sufficiently clear that it may be possible to align text and translation with modest changes.

The simple presence of aligned translation and source text already transforms the way audiences read, making editorial additions to the translation transparent and allowing readers to track how any word is translated in different passages (e.g., *mênis* can be translated as “anger” or “wrath”) as well as what Greek words lie behind the same English word (e.g., *mênis* and *cholos* can both be translated as “anger”).

4.2.2 Treebanks

Translation alignments do not, however, by themselves explain the function that each word plays in the source text. Readers who see that *mênis*, *mênidos* and *mênin* are aligned to “anger” and/or “wrath” may infer that these are forms of the same word but the alignments do not explain that these forms are in the nominative, genitive and accusative cases or what role those forms play in their different contexts. For that we need another layer of information: linguistic annotations, commonly stored in what are called treebanks (see fig. 2 and 3).

25 Cf. Palladino / Yousef (2023).

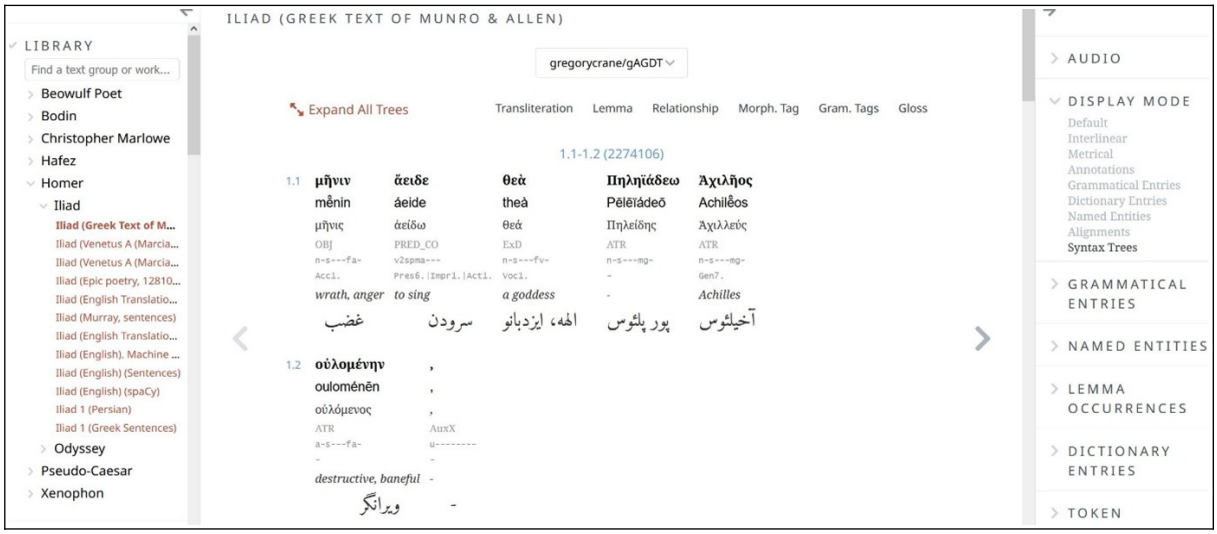

Fig. 2: Alignment of source text and translation (*Iliad* 1,1–1,2 in Beyond Translation: 'Display mode' → 'Syntax Trees') with transliteration, lemma, syntactic relationship, morphological tag, grammatical tag and glossary translation into English and Persian.

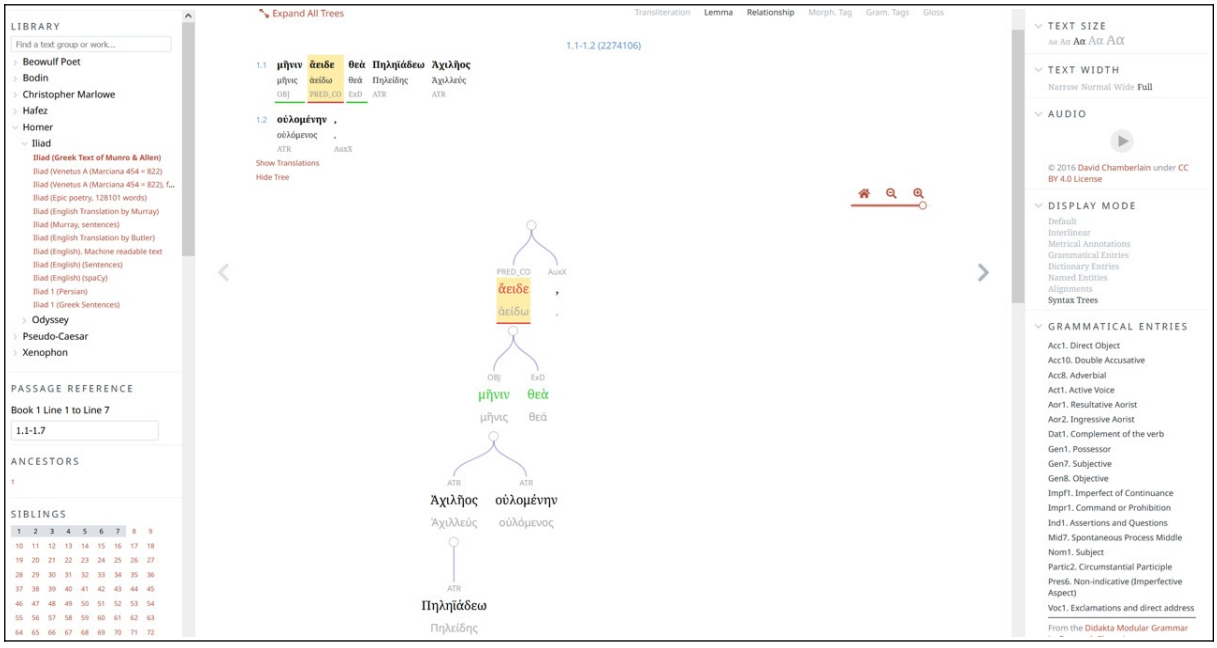

Fig. 3: Source text (*Iliad* 1.1–1.2, see fig. 2), here with treebank and mouseover marking of syntactic relations and dependencies (e.g., *mênin* as object, marked green, of predicate *aeide*, marked red and yellow).

Treebanks are textual databases in which every word has a linguistic analysis.[26] These textual databases typically record the standardized dictionary form, called lemma (e.g., in the passage above the standardized form of ᾽Ακρισίῳ is ᾽Ακρίσιος), the part of speech (e.g., ᾽Ακρισίῳ is masculine dative singular), the syntactic role (e.g., ᾽Ακρισίῳ is the object) and dependency (e.g., ᾽Ακρισίῳ depends on γίνεται).

Treebanks are prerequisites for the quantitative analysis of any language, making it possible to explore the content and language. Tab. 4 below, for example, lists the ten most common nouns in the *Apollodorus*. It reports the frequency per 10,000 words and provides the frequencies from Xenophon's *Anabasis* as a comparison.

26 Cf. Haug (2015).

Word number	Word	*Library*	*Anabasis*	Gloss
1	παῖς	97.78	6.63	a child
2	Ζεύς	57.13	3.31	Zeus
3	θυγάτηρ	51.64	1.04	a daughter
4	Ἡρακλῆς	41.38	0.87	Heracles
5	Ποσειδῶν	26.73	0	Poseidon
6	θεός	25.63	16.59	god
7	γυνή	21.24	5.06	a woman
8	πατήρ	17.94	1.39	a father
9	Ἀπόλλων	17.94	1.04	Apollo
10	Ἥρα	17.57	0	Hera

Tab. 4: Frequencies of the ten most common nouns in the *Library* per 10,000 words in comparison with Xenophon's *Anabasis*.

The content of the *Library* emerges immediately, with the importance of genealogy and of the most important gods and the most important hero standing out clearly. The treebank, however, allows for more sophisticated kinds of analysis. Two of the supplementary volumes of Roscher's *Ausführliches Lexikon der griechischen und römischen Mythologie*[27] are dedicated to the epithets of the gods, with one focused on Greek[28] and the other on Latin.[29] Treebanks allow us to identify all adjectives modifying any noun, as well as the verbs for which a noun is the subject or object and other relations.

The *GLAUx corpus 2.0*[30] includes a manually curated treebank for *Apollodorus*. Editors of *Apollodorus* must, of course, review all, and will inevitably modify some, of the *GLAUx* annotations. In tab. 4 above, for example, παῖς and θυγάτηρ are the first and third most common nouns in *Apollodorus*. If παῖς always describes "son(s)" while θυγάτηρ means "daughter(s)," the disparity in frequency may seem to reflect the greater prominence of men vs. women in the *Library*. In fact, 145 of the 267 instances of παῖς are in the plural, more than half of the total, and can designate both male and female children. Such references to male and female children are, in fact, certainly closer than the initial statistics suggest but we cannot derive precise statistics from the treebank as it stands. The *GLAUx* treebanks code the gender of παῖς as common, i.e., as being either male or female, even when we have a form of this word that clearly designates a male child. An editor of *Apollodorus* should distinguish those passages where παῖς applies to male and female children from those where it clearly designates male children and from those passages where the referent is unclear.

The default treebank categories provide a very powerful starting point but an editor should add other features:

- **Coreference resolution**: In languages such as English, this involves identifying the referents of pronouns (e.g., in "I saw Alice while she was working", "she" refers to Alice and Alice is the subject of the verb "working"). In languages such as Greek, this also involves identifying

27 Cf. https://de.wikisource.org/wiki/Ausführliches_Lexikon_der_griechischen_und_römischen_Mythologie (last access 18.12.2025).

28 Cf. Bruchmann (1893).

29 Cf. Carter (1902).

30 See https://github.com/alekkeersmaekers/glaux (last access 18.12.2025); cf. Keersmaekers (2021).

the subjects of verbs where no pronoun is present. Once we have coreferences resolved, we can pose queries such as "what are the verbs of which Zeus is the subject?"

- **Language-specific grammatical explanations**: In the example cited above, the treebank can tell us that Ἀκρισίῳ is in the dative and that it is the object of γίνεται, but it cannot explain that this is an instance of the dative of possession, a standard idiom to express an idea such as "Acrisius had a daughter." We need to supplement the syntactic categories of the treebank with language-specific grammatical annotations. Some researchers accomplish this by extending the default annotation tags to include language-specific features[31] or by adding a separate layer of annotation.[32]

4.2.3 Names

Names of people (mortal and divine), places and groups play a particularly prominent role in a work such as the *Library*. Any edition, print or digital, must identify these named entities and distinguish between different entities with the same name (e.g., Telamonian Ajax vs. Ajax the son of Oileus). An editor of *Apollodorus* will naturally find things to change and augment but most of the hard, basic work of linking entities to authority lists has been done.[33]

One of the (many) reasons *Perseus* chose to enter the Frazer edition of *Apollodorus* as one of its first editions was that Frazer has added an elaborate back-of-the-book index. A digitized version of this index is available as part of merged back-of-the-book indices for Herodotus, *Apollodorus*, and Pausanias that was produced in 1990 for *Perseus 1.0*: the (rather grandly named) *Perseus Encyclopedia*.[34]

The *MANTO Dynamic Digital Portal of Greek Myth*[35] covers personal names in *Apollodorus*. Although the data is not (yet) public, it can be published as structured data (e.g., CSV) and would provide an enormous help for any new edition of *Apollodorus*.

The *ToposText* project published annotated named entities in the Frazer translation of *Apollodorus* that it downloaded from *Perseus*. This data is available in the publicly accessible HTML5 file.[36] *ToposText* includes *Wikidata* IDs for many personal names but its main focus is on geotagging place names. *ToposText* uses its own gazetteer but that gazetteer has links to the *Pleiades*[37] gazetteer that many students of Greco-Roman culture use.

4.2.4 Textual Notes

Textual notes are often the first things that traditional editors look for in a critical edition and, indeed, any serious edition needs to alert its readers to the most important variants that they did not include in their particular reconstruction of the original text.[38] A truly digital *Apollodorus* would not simply include machine-actionable textual notes but would also identify different classes of variants. The *Digital Latin Library* allows readers to exclude or display orthographic, morphological and lexical vari-

31 As with *The Tufts University Treebanked Commentaries* edited by Harrington in 2015, cf. https://perseids-publications.github.io/harrington-trees/ (last access 18.12.2025).

32 Cf., e.g., Celano / Crane (2015) and Shamsian et al. (2024).

33 Cf. Ehrmann et al. (2023).

34 Cf. https://github.com/gregorycrane/Perseus_Encyclopedia (last access 18.12.2025).

35 Cf. https://www.manto-myth.org/manto (last access 18.12.2025).

36 Cf. the *Library*: https://topostext.org/work/150 (last access 18.12.2025); the *Epitome*: https://topostext.org/work/837 (last access 18.12.2025).

37 Cf. https://pleiades.stoa.org/ (last access 18.12.2025).

38 Frazer (1921) included 799 and 292 textual notes in his Greek texts of the *Library* and the *Epitome*.

ants.[39] An edition that includes machine-actionable components such as aligned translation, treebank and named entity data needs to link these to the textual notes. Readers should be able to see those textual variants that entail changes to the translation, to the treebank, to the named entities or to any other category of annotation added to the edition.[40]

Apollodorus offers one other opportunity for computational analysis. We possess not only an *Epitome* for the *Library* that does not survive but also the *Epitome* for the surviving part.[41] Thus, we can align the surviving portion of the *Library* to the corresponding sections of the *Epitome*. We should be able to generate a model that we can use to gain insights into what the *Epitome* removed from the parts of the *Library* that do not still survive.[42]

4.2.5 Links to Passages in other Primary Sources

Perhaps the most appealing part of Frazer's edition were the extensive footnotes. While these notes are not, of course, as extensive as the citations in reference works such as Pauly-Wissowa's *Realecyclopaedie der classischen Altertumswissenschaft*[43] or Roscher's already mentioned *Ausführliches Lexikon*,[44] they lead readers from stories cited in *Apollodorus* to many of the most important parallels in Greek and Latin sources. *Perseus* not only digitized these notes and included them in their XML but also tagged citations to primary sources that it included in its collections.[45] Even more citations to works that have since been published under an open license can now be tagged and converted to machine-actionable links.[46] Many of these new citations point to sources that have rarely been translated[47] but the *Canopus Repository*[48] has already published translations of mythological narratives from the *Iliad* D Scholia that are relevant to Greek mythology and other sources, setting the stage for fuller smart editions of scholia and other sources. All of the editions that Frazer cites are now in the public domain. Many are now available as openly-licensed TEI XML and most (probably the vast majority) are available online as scanned books in the *Internet Archive*,[49] the *Hathi Trust*,[50] the *German Digital Library*[51] and other collections such as the *Harvard Library Public Domain Corpus* produced by Harvard and Google in June 2025[52] representing the machine generated text for just under 1 million public domain books, which includes more than 200 million words of Ancient Greek source texts and 7.7 billion words of Latin.

We viewed the Frazer notes as a first step towards a broader mythological encyclopedia with exhaustive citations to primary sources. A *Digital Roscher* would be a suitable next step, particularly now

39 See, e.g., https://ldlt.digitallatin.org/editions/bellum_alexandrinum/58.html (last access 18.12.2025).

40 Cf. Fischer (2019) and Huskey / Cayless (2022).

41 See section 1.2 above.

42 See the first paragraph of section 1.3 above.

43 Cf. https://de.wikisource.org/wiki/Paulys_Realencyclopädie_der_classischen_Altertumswissenschaft (last access 18.12.2025).

44 Cf. n. 27 above.

45 1841 in the *Library* and 631 in the *Epitome*.

46 2617 in the *Library* and 835 in the *Epitome.*

47 395 in the *Library* and 112 in the *Epitome*, respectively, to scholia for example.

48 Cf. https://www.manto-myth.org/canopos (last access 18.12.2025).

49 Cf. https://archive.org/ (last access 18.12.2025).

50 Cf. https://www.hathitrust.org/ (last access 18.12.2025).

51 Cf. https://www.deutsche-digitale-bibliothek.de/?lang=de (last access 18.12.2025).

52 Cf. https://library.harvard.edu/services-tools/harvard-library-public-domain-corpus (last access 18.12.2025).

when machine translation from dedicated systems and LLMs would allow us to generate usable versions of Roscher's German text in English and other languages. Students of *Apollodorus* and of Greco-Roman mythology should take advantage of the Smith *Dictionary of Greek and Roman biography and mythology*.[53] As with the Frazer notes, many primary source citations have been tagged but many also remain to be tagged and linked to the original sources.

4.2.6 Links to Images

The *International Image Interchange Framework (IIIF)*[54] has emerged as a de facto standard among libraries and museums. Images and metadata for a large and growing number of objects are available via a standard API.

Images, in this context, include those of manuscripts. This way, the textual decisions made in the edition can be substantiated or justified. The paleographer is able to verify readings and the student to start working on the manuscript tradition and to familiarize himself with the deciphering of manuscripts.

But, of course, images include also illustrating and explaining the context of the *Library*. An edition of *Apollodorus* should, from its start, begin linking relevant passages from *Apollodorus* and from other linked primary sources to images available via IIIF and should include copies of relevant openly-licensed images (see fig. 4).

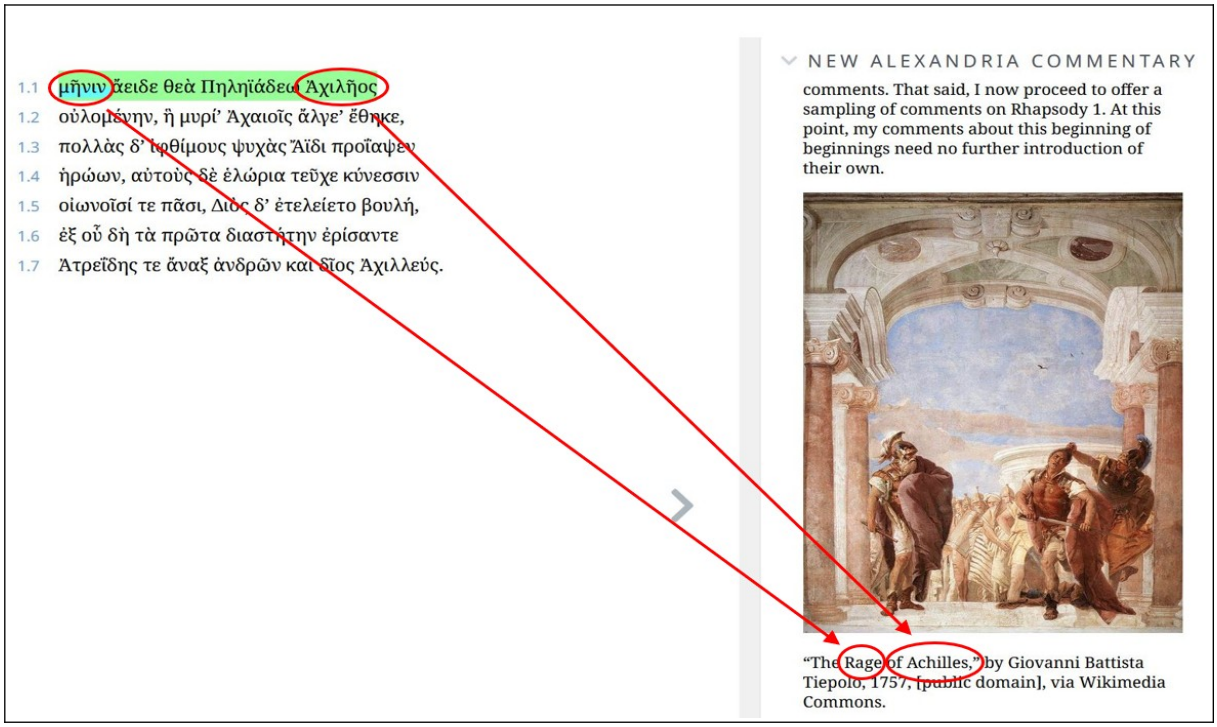

Fig. 4: Alignment of Greek source text (*Iliad* 1.1) with the example of an image from the reception in art history.

The *Digital LIMC* would be the obvious starting point for such work, but copyright restrictions must be checked in individual cases. As speculative as the direct, unambiguous connection between text and image must remain in many cases (cf. fig. 5), the connection between text and image can nevertheless provide the opportunity to show at least the quantitative significance of *Apollodorus* for the transmission of Greek myth in ancient culture.

53 A TEI XML version of this reference work is already available: https://github.com/gregorycrane/SmithDicts (last access 18.12.2025).

54 Cf. https://iiif.io/ (last access 18.12.2025).

Fig. 5: Image on a Lucanian Nestoris, 390−380 BC, London, British Museum, F 175.[55]

5. Conclusion

Tab. 5 below lists the discussed (1) requirements for a reading environment in which the data set for a smart digital-born edition of *Apollodorus* can be built up, (a) that can enhance the knowledge of its users, (b) accustoms to their habits and (c) can implement the improvements that have been identified as necessary in its use, (2) open access tools that are already available that can meet those requirements and (3) an evaluation of those tools against the requirements.

Requirements	Available Tools	Evaluation
Textual alignment (section 4.2.1), on sentence, phrase and word-level, necessary for non-scholars to work with the source text	(1) Display mode 'Alignment' in Beyond Translation-*Perseus 6.0* with various mouseover marking functions that show corresponding and non-corresponding phrases of source texts and translations. (2) The models published in Yousef (2022) can automatically generate word-level alignments between source text	(1) Data sets of source texts of *Apollodorus* taken directly from manuscripts and secondary text transmission (section 1.2), have to be built up together with data sets of source text translations into as many languages as possible. (2) Comments necessary on passages where the translation needs explanation that can be implemented into the reading environ-

55 Cf. LIMC, vol.1, Cat. no. 13. For the description of the picture in its relation to *Antigone*, vv. 384sqq., where only one guard appears, cf. Kazmierski (2016), 68.

	and translation.	ment of *Perseus 6.0*.
Treebanks (section 4.2.2), necessary to analyze the text on a word and sentence level	(1) Display mode 'Syntax trees' in Beyond Translation-*Perseus 6.0* with various mouseover marking functions that show corresponding and non-corresponding tokens and their relations, enabling quantitative analysis. (2) *GLAUx corpus 2.0*, includes a manually curated treebank for *Apollodorus.*	(1) More data of source texts as well as translations has to be built up. (2) Annotations have to be reviewed by editors; language-specific grammatical explanations have to be added.
Proper names (section 4.2.3), necessary to explain named entities and to clear up misunderstandings about homonymous names	(1) *Perseus* Encyclopedia. (2) *MANTO Dynamic Digital Portal of Greek Myth.* (3) *ToposText* project.	(1) Has to be augmented to meet the requirements of *Apollodorus*. (2) Data not (yet) public, can be published as structured data (e.g., CSV). (3) Published annotated named entities in the Frazer translation of *Apollodorus* that is downloaded from *Perseus*; uses its own gazetteer but that gazetteer has links to the *Pleiades gazetteer*.
Textual notes (section 4.2.4), necessary (a) to alert readers to the most important textual variants that are not included in the particular reconstruction of the original text and (b) to not transmitted parts of the text (beginning with *Library* 3.16.3)	(1) Digital Latin Library, allows readers to exclude or display orthographic, morphological and lexical variants. (2) Model not yet available.	(1) Textual variants have to be linked to aligned translation, treebank and named entity data; readers should be able to see those textual variants that entail changes to the translation, to the treebank, to the named entities or to any other category of annotation added to the edition. (2) Necessary to gain insights into what the *Epitome* removed from the parts of the *Library* that have not survived; enlargement of the data set of the source texts is needed (see above the evaluation on "textual alignment").
Links to passages in other primary sources (section 4.2.5), necessary for contextualization and explanation	(1) *Perseus 6.0* provides tagging of citations of primary sources that it included in its collections (1841 in the *Library* and 631 in the *Epitome*). (2) Canopus Repository has al-	(1) More citations to works that have since been published under an open license can now be tagged and converted to machine-actionable links (2617 in the *Library* and 835 in the *Epitome*) (2) Translation data has to be im-

	ready published translations of mythological narratives from the *Iliad* D Scholia that are relevant to Greek mythology and other sources.	plemented into or connected with the edition of *Apollodorus*, in order to build up a digital mythological encyclopedia (*Digital Roscher*).
Links to images, (section 4.2.6), necessary for substantiation and justification of textual decisions (images of manuscripts and editions) and understanding of "Apollodorus" (images related to myths and mythological entities)	(1) International Image Interchange Framework (IIIF): (2) Digital LIMC	(1) Images of manuscripts and editions, mythological entities and myths have to be implemented into the edition in IIIF standard (see the resources in tabl. 1, section 1.2). (2) Starting point for implementation of images of mythological entities and myths, but copyright restrictions must be checked in individual cases.

Tab. 5: Requirements, available tools and evaluation (not yet available tool marked red).

The evaluation of the available tools and data against the requirements for a build-up of a smart digital-born edition of *Apollodorus* shows that most of the tools are already available. In one case, a new model is needed in order to help reconstruct the lost parts of *Apollodorus*, which is a desideratum of research as well. Data that is already available open access or not yet accessible or digitized has to be built up. For the built-up of all data sets the Harvard Library Public Domain Corpus (see section 4.2.5) will be indispensable in the future.

List of Abbreviations

DARIAH	Digital Research Infrastructure for the Arts and Humanities
ISAW	Institute for the Study of the Ancient World, New York University
JOCCH	Journal on Computing and Cultural Heritage
LREC	Language Resources and Evaluation Conference
LIMC	Lexicon Iconographicum Mythologiae Classicae
MythoS	Mythological Studies, book series, De Gruyter, ed by A. Zgoll and C. Zgoll
TLT	International Workshops on Treebanks and Linguistic Theories

Sources

Online Sources

http://www.rhm.uni-koeln.de/046/Kerameus.pdf (last access 15.12.2025).

https://archive.org/details/bub_gb_JUgVAAAAQAAJ/mode/2up (last access 15.12.2025).

https://daten.digitale-sammlungen.de/~db/0001/bsb00012910/images/index.html (last access 15.12.2025).

https://de.wikisource.org/wiki/Ausführliches_Lexikon_der_griechischen_und_römischen_Mythologie (last access 18.12.2025).

https://de.wikisource.org/wiki/Paulys_Realencyclopädie_der_classischen_Altertumswissenschaft (last access 18.12.2025).

https://gallica.bnf.fr/ark:/12148/btv1b525238520 (last access 15.12.2025).

https://github.com/alekkeersmaekers/glaux (last access 18.12.2025).

https://github.com/gregorycrane/Perseus_Encyclopedia (last access 18.12.2025).

https://github.com/gregorycrane/SmithDicts (last access 18.12.2025).

https://github.com/PerseusDL/canonical-greekLit/tree/master/data/tlg0548 (last access 15.12.2025).

https://iiif.io/ (last access 18.12.2025).

https://ldlt.digitallatin.org/editions/bellum_alexandrinum/58.html (last access 18.12.2025).

https://medieval.bodleian.ox.ac.uk/catalog/manuscript_6867 (last access 15.12.2025).

https://perseids-publications.github.io/harrington-trees/ (last access 18.12.2025).

https://topostext.org/work/150 (last access 18.12.2025).

https://topostext.org/work/837 (last access 18.12.2025).

Digital Corpora

Beyond Translation, https://beyond-translation.perseus.org (last access 15.12.2025).

Canopus Repository, https://www.manto-myth.org/canopos (last access 18.12.2025).

Digital LIMC, https://weblimc.org/ (last access 12.12.2025).

German Digital Library, https://www.deutsche-digitale-bibliothek.de/?lang=de (last access 18.12.2025).

Harvard Library Public Domain Corpus, https://library.harvard.edu/services-tools/harvard-library-public-domain-corpus (last access 18.12.2025).

HathiTrust Digital Library, https://www.hathitrust.org/ (last access 18.12.2025).

Internet Archive, https://archive.org/ (last access 18.12.2025).

MANTO, https://www.manto-myth.org/manto (last access 18.12.2025).

Perseus Digital Library, http://www.perseus.tufts.edu/hopper/ (last access 15.12.2025).

Pleiades, https://pleiades.stoa.org/ (last access 18.12.2025).

ToposText, https://topostext.org/ (last access 18.12.2025).

The Library of Digital Latin Texts, ldlt.digitallatin.org (last access 18.12.2025).

Text Editions

Dräger (2005): P. Dräger (ed./transl./comm.), Apollodorus, Bibliotheke. Götter- und Heldensagen, Düsseldorf / Zürich 2005.

Frazer (1921): J. G. Frazer (ed./transl./comm.), Apollodorus, The Library. 2 vol., London / New York 1921.

Papadopoulos-Kerameus (1891): A. Papadopoulos-Kerameus, Apollodori bibliothecae fragmenta Sabbaitica, Rheinisches Museum 46 (1891), 161−192.

Wagner (1891): R. Wagner, Epitoma Vaticana ex Apollodori Bibliotheca. Leipzig 1891.

References

Bond et al. (2021): S. E. Bond / P. Dilley / R. Horne, Linked Open Data for the Ancient Mediterranean: Structures, Practices, Prospects, ISAW Papers 20/1 (2021), http://hdl.handle.net/2333.1/c2fqzh3d (last access 15.12.2025).

Bruchmann (1893): Epitheta deorum quae apud poetas graecos leguntur collegit disposuit edidit Carolus F. H. Bruchmann, Ausführliches Lexikon der griechischen und römischen Mythologie, hrsg. v. W. H. Roscher. Supplement 1, Leipzig 1893, https://hdl.handle.net/2027/hvd.ah3cvl (last access 18.12.2025).

Carter (1902): Epitheta deorum quae apud poetas latinos leguntur collegit disposuit edidit J. B. Carter, Ausführliches Lexikon der griechischen und römischen Mythologie, hrsg. v. W. H. Roscher. Supplement 2, Leipzig 1902, https://hdl.handle.net/2027/hvd.ah3cvm (last access 18.12.2025).

Celano / Crane (2015): G. G. A. Celano / G. Crane, Semantic Role Annotation in the Ancient Greek Dependency Treebank, in: M. Dickinson / E. Hinrichs / A. Patejuk / A. Przepiórkowski (eds.), Proceedings of the Fourteenth International Workshop on Treebanks and Linguistic Theories (TLT14) in Warsaw, Poland, 11–12 December 2015, 26–34, https://pure.knaw.nl/ws/files/1712331/2015_Wouden_TLT14_proceedings.pdf#page=34 (last access 18.12.2025).

Crane et al. (2023): G. Crane / A. Babeu / L. Cerrato / A. Parrish / C. Penagos / F. Shamsian / J. Tauber / J. Wegner, Beyond Translation: Engaging with Foreign Languages in a Digital Library, International Journal on Digital Libraries 24/3 (2023), 163–176, https://doi.org/10.1007/s00799-023-00349-2 (last access 15.12.2025).

Crane et al. (2025): G. Crane / J. Tauber / A. Babeu / L. Cerrato / C. Pletcher / C. Wulfman / S. Kazmierski / F. Shamsian, The Sixth Generation of the Perseus Digital Library and a Workflow for Open Philology, Transformations: A DARIAH Journal 1 (2025), 1–25, https://doi.org/10.46298/transformations.14780 (last access 15.12.2025).

Ehrmann et al. (2023): M. Ehrmann / A. Hamdi / E. Linhares Pontes / M. Romanello / A. Doucet, Named Entity Recognition and Classification in Historical Documents: A Survey, ACM Computing Surveys 56/2 (2023), 1–47, https://doi.org/10.1145/3604931 (last access 18.12.2025).

Fischer (2019): F. Fischer, Digital Classical Philology and the Critical Apparatus, in: M. Berti (ed.), Digital Classical Philology. Ancient Greek and Latin in the Digital Revolution, Berlin / Boston 2019, 203–220, https://doi.org/10.1515/9783110599572-012 (last access 18.12.2025).

Franzini et al. (2019): G. Franzini / M. Terras / S. Mahony, Digital Editions of Text: Surveying User Requirements in the Digital Humanities, JOCCH 12/1 (2019), 1–23, https://doi.org/10.1145/3230671 (last access 15.12.2025).

Graves (1955): R. v. Ranke-Graves, The Greek Myths. 2 vol., London 1955.

Haug (2015): D.T.T. Haug, Treebanks in Historical Linguistic Research, in: C. Viti (Ed.), Perspectives on Historical Syntax, Amsterdam 2015, 188–202, https://doi.org/10.1075/slcs.169.07hau (last access 17.12.2025).

Huskey / Cayless (2022): S. J. Huskey / H. Cayless, The Digital Critical Apparatus: Thoughts from the Field, The Classical Journal 117/3 (2022), 337–355, https://shareok.org/handle/11244/336712 (last access 18.12.2025).

Kazmierski (2016): S. Kazmierski, Der Wald vor lauter Bäumen. Aristoteles, Sophokles und die Wirtlichkeit, Blick in die Wissenschaft 25/33−34 (2016), 63–70, https://doi.org/10.5283/bidw.v25i33/34.69 (last access 12.12.2025).

Keersmaekers (2021): A. Keersmaekers, The GLAUx Corpus: Methodological Issues in Designing a Long-Term, Diverse, Multi-Layered Corpus of Ancient Greek, in: N. Tahmasebi et al. (eds.), Proceedings of the 2nd International Workshop on Computational Approaches to Historical Language Change 2021, Association for Computational Linguistics 2021, 39–50, https://aclanthology.org/2021.lchange-1.6/ (last access 18.12.2025).

LIMC (1981−1999, 2009): Lexicon Iconographicum Mythologiae Classicae: LIMC, Zürich / München 1999.

Palladino et al. (2021): C. Palladino / M. Foradi / T. Yousef, Translation Alignment for Historical Language Learning: a Case Study, Digital Humanities Quarterly 15/3 (2021), https://www.digitalhumanities.org/dhq/vol/15/3/000563/000563.html (last access 15.12.2025).

Palladino / Yousef (2023): C. Palladino / T. Yousef, To Say almost the Same Thing? A Study on Cross-Linguistic Variation in Ancient Texts and their Translations, Digital Scholarship in the Humanities 38/3 (2023), 1200–1213, https://doi.org/10.1093/llc/fqac086 (last access 16.12.2025).

Reinhardt (2011): U. Reinhardt, Der antike Mythos. Ein systematisches Handbuch, Freiburg et al. 2011.

Sahle (2016): P. Sahle, What is a Scholarly Digital Edition?, in: M. J. Driscoll / E. Pierazzo (Eds.), Digital Scholarly Editing: Theories and Practices. Vol. 1, Cambridge 2016, 19–39, https://doi.org/10.11647/OBP.0095.02 (last access 12.12.2025).

Schlicht (2020): H. Schlicht, Open Access, Open Data, Open Software?: Proprietary Tools and Their Restrictions, in: S. Schwandt (Ed.), Digital Methods in the Humanities, Bielefeld 2020, 25–58, https://doi.org/10.1515/9783839454190-002 (last access 12.12.2025).

Shamsian et al. (2024): F. Shamsian / G. Crane / F. Rahimi, Adapting Digital Annotations for Teaching Ancient Greek in Persian, in: 11th Digital Humanities Benelux Conference in Leuven, Belgium, 5–7 June 2024, https://2024.dhbenelux.org/wp-content/uploads/2024/05/DHB24_paper_Shamsian_Crane_Rahimi.pdf (last access 18.12.2025).

Van Mierlo (2022): W. Van Mierlo, The Scholarly Edition as Digital Experience: Reading, Editing, Curating, Textual Cultures 15/1 (2022), 117–125, https://www.jstor.org/stable/48687518 (last access 12.12.2025).

Wigdorowitz et al. (2023): M. Wigdorowitz / B. McGillivray / M. Ribary, How Data Papers Present a Unique Contribution To Open Research In The Humanities and Social Sciences, Edinburgh Open Research. Conference Proceedings 2 (2023), https://doi.org/10.2218/eor.2023.8116 (last access 12.12.2025).

Yousef et al. (2022): T. Yousef / C. Palladino / F. Shamsian / A. d'Orange Ferreira / M. Ferreira dos Reis, An Automatic Model and Gold Standard for Translation Alignment of Ancient Greek, in: N. Calzolari (Ed.), Proceedings of the 13th Conference on Language Resources and Evaluation (LREC 2022), 5894–5905, https://aclanthology.org/2022.lrec-1.634 (last access 16.12.2025).

Zenzaro (2024): S. Zenzaro, Models for Digital Humanities Tools: Coping with Technological Changes and Obsolescence, International Journal of Information Science and Technology 8/2 (2024), 1–10, http://dx.doi.org/10.57675/IMIST.PRSM/ijist-v8i2.283 (last access 12.12.2025).

Zgoll (2019): C. Zgoll, Tractatus mythologicus. Theorie und Methodik zur Erforschung von Mythen als Grundlegung einer allgemeinen, transmedialen und komparatistischen Stoffwissenschaften, MythoS 1, Berlin / Boston 2019.

Figure References

Fig. 1: Alignment of source text and translation (of *Iliad* 1.1−1.7) with mouseover marking of corresponding tokens and unaligned tokens and additional self-set markings, Beyond Translation, https://beyond-translation.perseus.org/reader/urn:cts:greekLit:tlg0012.tlg001.perseus-grc2:1.1-1.7?mode=alignments&rs=urn%3Acite2%3Ascaife-viewer%3Aalignment.v1%3Ail-iad-word-alignment-parrish-998078bc3bab42978b47fa8e8b852cae (last access 18.12.2025).

Fig. 2: Alignment of source text and translation (*Iliad* 1.1−1.2) with transliteration, lemma, syntactic relationship, morphological tag, grammatical tag and glossary translation into English and Persian, Beyond Translation, https://beyond-translation.perseus.org/reader/urn:cts:greekLit:tlg0012.tlg001.perseus-grc2:1.1-1.7?mode=syntax-trees&collectionUrn=urn%3Acite2%3Abeyond-translation%3Atext_annotation_collection.atlas_v1%3Ail_gregorycrane_gAGDT&entryUrn=urn%3Acite2%3Ascafife-viewer%3Adictionary-entries.atlas_v1%3Acambridge-greek-lexicon-26128 (last access 18.12.2025).

Fig. 3: Source text (*Iliad* 1.1−1.2) with treebank, mouseover marking of syntactic relations and dependencies, and additional self-set markings, Beyond Translation, https://beyond-translation.perseus.org/reader/urn:cts:greekLit:tlg0012.tlg001.perseus-grc2:1.1-1.7?mode=syntax-trees&collectionUrn=urn%3Acite2%3Abeyond-translation%3Atext_annotation_collection.atlas_v1%3Ail_gregorycrane_gAGDT&entryUrn=urn%3Acite2%3Ascafife-viewer%3Adictionary-entries.atlas_v1%3Acambridge-greek-lexicon-29086 (last access 18.12.2025).

Fig. 4: Alignment of Greek source text (*Iliad* 1,1) with the example of an image from the reception in art history and additional self-set markings, Beyond Translation, https://beyond-transla-

tion.perseus.org/reader/urn:cts:greekLit:tlg0012.tlg001.perseus-grc2:1.1-1.7 (last access 18.12.2025).

Fig. 5: Image on a Lucanian Nestoris, 390–380 BC, London, British Museum, F 175. Copyright: Trustees of the British Museum.

Author Contact Information[56]

Gregory R. Crane
Department of Classical Studies
Tufts University
Eaton Hall
5 The Green, 3rd Floor
Medford, MA 02155
United States of America
E-mail: gregory.crane@tufts.edu

Sergiusz Kazmierski
Institute of Classical Philology
University of Regensburg
Universitätsstrasse 31
93053 Regensburg
Germany
E-mail: sergiusz.kazmierski@ur.de

Alison Babeu
Department of Classical Studies
Tufts University
Eaton Hall
5 The Green, 3rd Floor
Medford, MA 02155
United States of America
E-mail: alison.babeu@tufts.edu

Farnoosh Shamsian
Faculty of Philology
Institute of Applied Linguistics and Translatology (IALT)
Leipzig University
Beethovenstrasse 15
04107 Leipzig
Germany
E-mail: farnoosh.shamsian@uni-leipzig.de

56