A quick guide to the Perseus Digital Library: Investigating words with the Word Study Tool

This document provides a quick guide on how use the Word Study Tool to investigate dictionary entries and find where words are used in works in the collections of the Perseus Digital Library, followed by a step-by-step example that you can work through for practice.

Quick guide

Each Greek word in the texts is hyperlinked to the Word Study Tool, which provides potential definitions and elaboration information about the morphology of the specific form of that word.

To access the information, click the word, and the Word Study Tool opens in a new tab. This provides:

- potential lemmas (lemma = dictionary form, or base form).
- possible morphology of that form.
- a simple definition.
- links to different dictionaries with full lexicon entries.
- word frequency statistics with links to search results that show where else the word is used within the same text, and 'more statistics' to find it in other works.

Step-by-step example

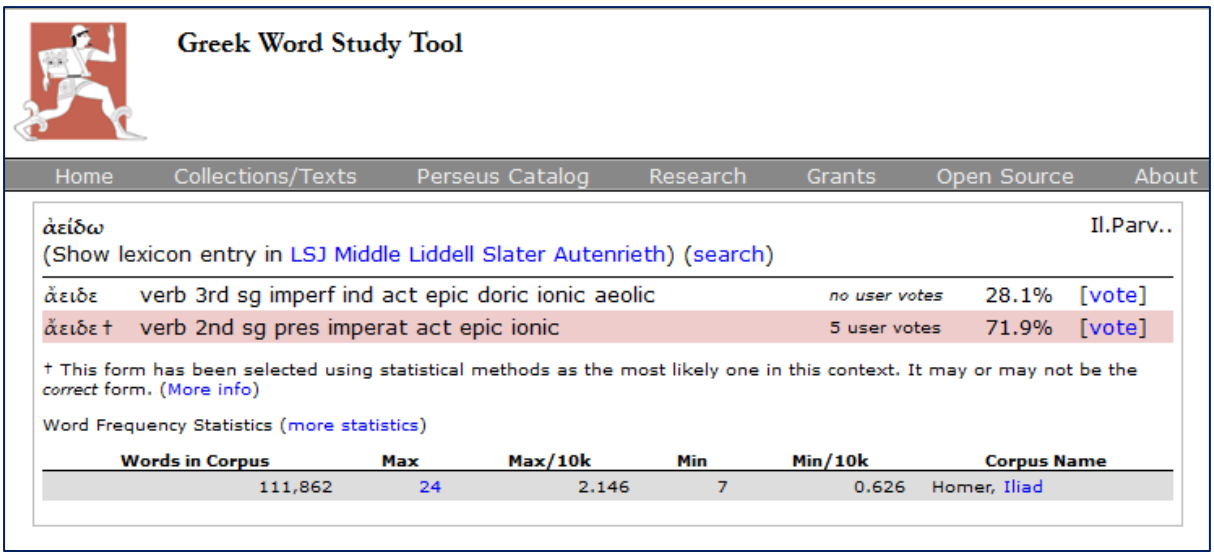
This example demonstrates how to investigate words using the functions in the Word Study Tool.

If you do not already have the first page of the *Iliad* displayed, follow this link to start:
http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0133%3Abook%3D1%3Acard%3D1

Finding the basic information for a word in the Word Study Tool

Click on the second word, **ἄειδε**.
The Greek Word Study Tool opens in a new tab.

In the Word Information box, it shows the dictionary form (lemma) at the top, in this case **ἀείδω**, and the possible forms below (morphology section).

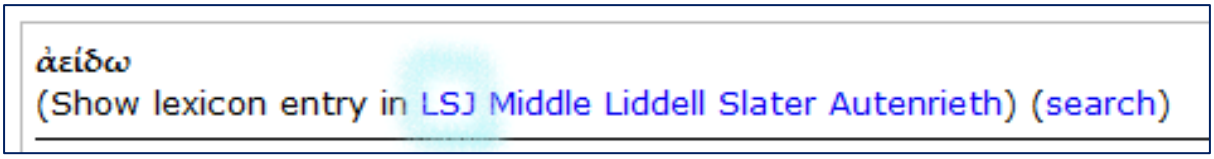


Notice the following information:

- In this case, there are two possible forms of the verb that are spelt the same way in Greek. The most likely form is highlighted in pink.
- The basic morphology information such as the part of speech, or if it is singular or plural, which might help in deciphering a passage. In this example it is a verb, second person ("you"), singular, present imperative (command), active, which would mean "Sing!"
- Simple definitions are collected by an automated process, and are sometimes unclear (as in this example). You can look at a dictionary entry to give a more exact definition.
- Below the lemma there are links to each dictionary (lexicon) entry:
    - **LSJ** (Liddell, Scott, and Jones), which is the most detailed
    - **Middle Liddell**, which is useful if you want a general definition or range of meanings
    - **Slater** which is focused on terms used in Pindar's works
    - **Autenrieth** which is focused on terms used in the Homeric works.

Showing and reading a lexicon entry

Select the **LSJ** link.



The lexicon entry for **ἀείδω** is displayed.

ἀείδω , Ion. and poet. form used by *Hom.*, *Pi.*, and sometimes in Trag. and Com. (even in trim., A.Ag.16, *E.Fr.188*; intetram., *Cratin. 305*), also in Ion. Prose; contr. ᾄδω (also *Anacr.45*, *Theoc.*), Trag., *Pl.*, etc.: impf.

A. **[select]** "ἤειδον" *Od.*, Ep. "ἄειδον" *Il.*, etc.; Trag. and Att. "ᾖδον" E.Alc.761, Th.2.21: fut. "ἀείσομαι" Od.22.352, *Thgn.943*, but "ᾄσομαι" h.Hom.6.2, 32.19, *Thgn.243*, and alwaysin Att. (ᾄσεις, ᾄσουσιν in Ar. Pax1297, Pl.Lg.666d are corrupt); rarely in act. form ἀείσω, *Sapph. 11*, *Thgn.4*, Ar.Lys.1243 (Lacon.), and late Poets, as Nonn.D.13.47 (in E.HF681 ἀείδω is restored by Elmsl.); still more rarely ᾄσω, *Babr. 12.13*, Men.Rh.*p.381S.*, *Him.Or.1.6*; Dor. "ᾀσεῦμαι" Theoc.3.38, "ᾀσῶ" Id.1.145: aor. "ἤεισα" Call.Epigr.23.4, Opp.C.3.1, Ep. ἄεισα [α^] Od.21.411; "ἄεισον" E.Tr.513 (lyr.); "ἀείσατε" Ar.Th.115 (lyr.); "ᾖσα" Ar.Nu. 1371, Pl.Ti.21b:—Med., aor. ἀεισάμην (in act. sense) *PMag.Lond. 47.43*, imper. "ἀείσεο" h.Hom.17.1 (nisi leg. ἀείσεο):—Pass., "ἀείδομαι" *Pi.*, *Hdt.*: poet. impf. "ἀείδετο" *Pi.*: aor. ᾔσθην, v. infr. *11.1*: pf. "ᾖσμαι" *Pl.Com.69.11*. (ἀϝείδω, cf. αὐδή, ὑδέω.) [α^: but α_ metri gr. Od. 17.519, h.Hom.12.1, 27.1, *Il.Parv..1*, *Thgn.4*, Theoc.7.41, etc.]:— *sing*, **Il.1.604**, etc.: hence of all kinds of vocal sounds, *crow* as cocks, *Pl.Smp..223c*; *hoot* as owls, Arat.1000; *croak* as frogs, *Arist. Mir.835b3*, *Thphr.Sign.3.5*, etc.; οἱ τέττιγες χαμόθεν ᾄσονται Stes. ap.Arist.Rh.1412a23:—of other sounds, *twang*, of the bow-string, Od.21.411; *whistle*, of the wind through a tree, Mosch.Fr.1.8; *ring*, of a stone when struck, Theoc.7.26:—prov., πρὶν νενικηκέναι ᾄδειν '*to crow* too soon', Pl.Tht.164c.—Constr.:—ἀ. τινί *sing to* one, Od.22.346; also, *vie with* one *in singing*, Theoc.8.6; ἀ. πρὸς αὐλὸν ἢ λύραν *sing* to . . , *Arist.Pr..918a23*; "ὑπ᾽ αὐλοῖς" *Plu.2.41c*:—ἀείσας . . χαίρειν Δημοκλέα, poet. for εἰπών, *Epigr.Gr.237.7* (Smyrna).

II. **[select]** trans.,

1. **[select]** c. acc. rei, *sing of, chant*, "μῆνιν ἄειδε" **Il.1.1**; "παιήονα" **1.473**; κλέα ἀνδρῶν, νόστον, **9.189**, Od.1.326; "τὸν Βοιώτιον νόμον" S.Fr.966: c. gen. (sc. μέλος), *sing* an air of . ., "Φρυνίχου" Ar.V.269, cf. 1225: abs., ἀ. ἀμφί τινος *to sing* in one's praise, Od.8.266; "ἀμφί τινα" *Terp.2*, cf. E.Tr.513; "εἴς τινα" Ar.Lys. 1243: later, simply = καλεῖν, Ael.NA3.28:—Pass., of songs, *to be sung*, Hdt.4.35; "τὰ λεχθέντα καὶ ᾀσέντα" Pl.Ly.205e; ᾆσμα καλῶς ᾀσθέν, opp. λόγος καλῶς ῥηθείς, X.Cyr.3.3.55; ᾄδεται λόγος the story *runs*, *Ph.1.189*.

2. **[select]** of persons, places, etc., *sing, praise, celebrate*, B.6.6, etc.:—Pass., ἀείδεται θρέψαισ᾽ ἥρωας *is celebrated* as the nurse of heroes, Pi.P.8.25, cf. 5.24.

3. **[select]** Pass., *to be filled with song*, "ἀείσετο πᾶν τέμενος . . θαλίαις" Pi.O.10(11).76.

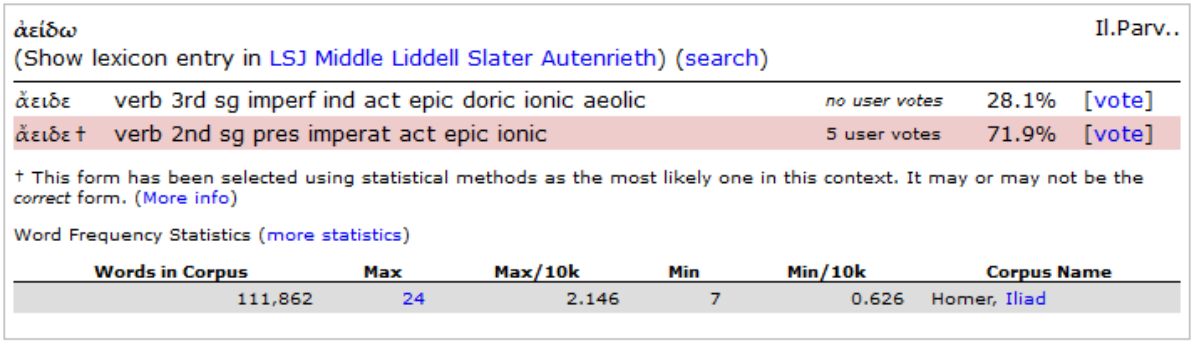
There is a lot of information here:

- The initial portion provides various forms of the word as attested in the literature, including abbreviations of the authors and works.
- The base meaning is given after the em dash **:——**

  (ἀϝείδω, cf. αὐδή, ὑδέω.) [α^: but α_ metri gr. Od. 17.519, h.Hom.12.1, 27.1, *Il.Parv..1*, *Thgn.4*, Theoc.7.41, etc.]:— *sing*, **Il.1.604**, etc.: hence of all kinds of vocal sounds, *crow* as cocks, *Pl.Smp..223c*; *hoot* as owls, Arat.1000; *croak* as frogs, *Arist. Mir.835b3*, *Thphr.Sign.3.5*, etc.; οἱ
- First level (usually capital letters) are different/distinct uses.
- Second level (usually roman numerals) are differences in meaning.
- Third level (arabic numerals, maybe lower case letters) are specific shades of meaning and particular instances of use in context.

Finding where else the word is used

1. In the main Word Information box, look at the **Word Frequency Statistics**:



ἀείδω Il.Parv..

(Show lexicon entry in LSJ Middle Liddell Slater Autenrieth) (search)

ἄειδε	verb 3rd sg imperf ind act epic doric ionic aeolic	*no user votes*	28.1%	[vote]
ἄειδε †	verb 2nd sg pres imperat act epic ionic	5 user votes	71.9%	[vote]

† This form has been selected using statistical methods as the most likely one in this context. It may or may not be the *correct* form. (More info)

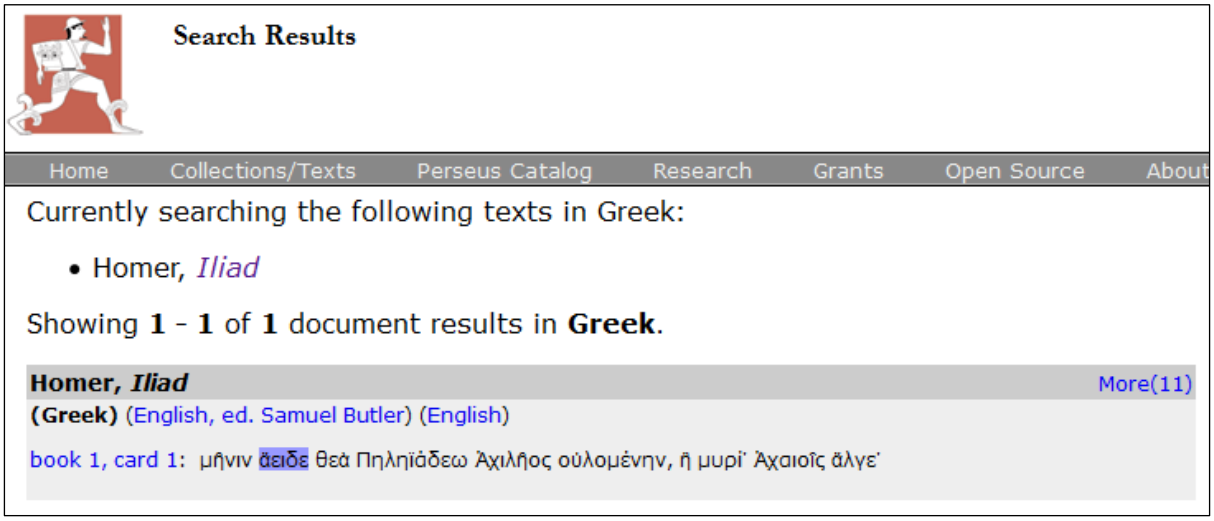
Word Frequency Statistics (more statistics)

Words in Corpus	Max	Max/10k	Min	Min/10k	Corpus Name
111,862	24	2.146	7	0.626	Homer, Iliad

In this example, the statistics are for *Iliad* because you came to the entry from *Iliad*. Notice that the verb **ἀείδω** occurs in all its forms between 7 and 24 times in this work.

2. Click the number **24** under **Max**.
A new tab opens with the Search Results for the word. The first instance of the word is displayed, highlighted, with the surrounding text.

Notice that in the grey band, **More(11)** indicates that the word occurs in 11 sections within *Iliad*.



Search Results

Home | Collections/Texts | Perseus Catalog | Research | Grants | Open Source | About

Currently searching the following texts in Greek:

- Homer, *Iliad*

Showing **1** - **1** of **1** document results in **Greek**.

Homer, *Iliad* More(11)

(Greek) (English, ed. Samuel Butler) (English)

book 1, card 1: μῆνιν ἄειδε θεὰ Πηληϊάδεω Ἀχιλῆος οὐλομένην, ἣ μυρί' Ἀχαιοῖς ἄλγε'

3. Click the **More(11)** link to expand the list.

Currently searching the following texts in Greek:

- Homer, *Iliad*

Showing **1** - **1** of **1** document results in **Greek**.

Homer, *Iliad* Less

(Greek) (English, ed. Samuel Butler) (English)

book 1, card 1: μῆνιν ἄειδε θεὰ Πηληϊάδεω Ἀχιλῆος οὐλομένην, ἣ μυρί' Ἀχαιοῖς ἄλγε'

book 1, card 458: ... : οἳ δὲ πανημέριοι μολπῇ θεὸν ἱλάσκοντο καλὸν ἀείδοντες παιήονα κοῦροι Ἀχαιῶν μέλποντες ἑκάεργον: ὁ δὲ φρένα

book 1, card 568: ... φόρμιγγος περικαλλέος ἣν ἔχ' Ἀπόλλων, Μουσάων θ' αἳ ἄειδον ἀμειβόμεναι ὀπὶ καλῇ. αὐτὰρ ἐπεὶ κατέδυ λαμπρὸν

book 2, card 581: ... στεῦτο γὰρ εὐχόμενος νικησέμεν εἴ περ ἂν αὐταὶ Μοῦσαι ἀείδοιεν κοῦραι Διὸς αἰγιόχοιο: αἳ δὲ χολωσάμεναι πηρὸν θέσαν

book 8, card 335: ... ἐπαλεξήσουσαν ἀπ' οὐρανόθεν προΐαλλεν. εἰ γὰρ ἐγὼ τάδε ᾔδε' ἐνὶ φρεσὶ πευκαλίμῃσιν εὖτέ μιν εἰς Ἀΐδαο πυλάρταο

book 9, card 162: ... πόλιν Ἠετίωνος ὀλέσσας: τῇ ὅ γε θυμὸν ἔτερπεν, ἄειδε δ' ἄρα κλέα ἀνδρῶν. Πάτροκλος δέ οἱ οἶος ἐναντίος ἧστο σιωπῇ, δέγμενος Αἰακίδην ὁπότε λήξειεν ἀείδων, τὼ δὲ βάτην προτέρω, ἡγεῖτο δὲ δῖος Ὀδυσσεύς

book 10, card 168: ... τοῖς δ' ἅμα Μηριόνης καὶ Νέστορος ἀγλαὸς υἱὸς ᾖσαν: αὐτοὶ γὰρ κάλεον συμμητιάασθαι. τάφρον δ' ἐκδιαβάντες ὀρυκτὴν

book 13, card 295: ... : τοῖοι Μηριόνης τε καὶ Ἰδομενεὺς ἀγοὶ ἀνδρῶν ᾖσαν ἐς πόλεμον κεκορυθμένοι αἴθοπι χαλκῷ. τὸν καὶ Μηριόνης

book 17, card 491: ... τοῖσι δ' ἅμα Χρομίος τε καὶ Ἄρητος θεοειδὴς ᾖσαν ἀμφότεροι: μάλα δὲ σφισιν ἔλπετο θυμὸς αὐτώ τε

book 18, card 561: ... πάϊς φόρμιγγι λιγείῃ ἱμερόεν κιθάριζε, λίνον δ' ὑπὸ καλὸν ἄειδε λεπταλέῃ φωνῇ: τοὶ δὲ ῥήσσοντες ἀμαρτῇ μολπῇ

book 22, card 367: ... καὶ κεῖθι φίλου μεμνήσομ' ἑταίρου. νῦν δ' ἄγ' ἀείδοντες παιήονα κοῦροι Ἀχαιῶν νηυσὶν ἔπι γλαφυρῇσι νεώμεθα, τόνδε

4. Click on the '**book/card**' heading to be taken to that section of text.
In this example, click **book 9, card 162**. That section of the text is displayed.
Scroll down and notice that two forms of the word are highlighted:
ἄειδε in line 189, and **ἀείδων** in line 191:

- book 9
  - lines 1-49
  - lines 50-88
  - lines 89-113
  - lines 114-161
  - lines 162-204
  - lines 205-243
  - lines 244-285
  - lines 286-327
  - lines 328-373
  - lines 374-416
  - lines 417-452
  - lines 453-491
  - lines 492-537
  - lines 538-580
  - lines 581-619
  - lines 620-668
  - lines 669ff.
- book 10
- book 11
- book 12
- book 13
- book 14

τὼ δὲ βάτην παρὰ θῖνα πολυφλοίσβοιο θαλάσσης
πολλὰ μάλ' εὐχομένω γαιηόχῳ ἐννοσιγαίῳ
ῥηϊδίως πεπιθεῖν μεγάλας φρένας Αἰακίδαο.
Μυρμιδόνων δ' ἐπί τε κλισίας καὶ νῆας ἱκέσθην, 185
τὸν δ' εὗρον φρένα τερπόμενον φόρμιγγι λιγείῃ
καλῇ δαιδαλέῃ, ἐπὶ δ' ἀργύρεον ζυγὸν ἦεν,
τὴν ἄρετ' ἐξ ἐνάρων πόλιν Ἠετίωνος ὀλέσσας:
τῇ ὅ γε θυμὸν ἔτερπεν, ἄειδε δ' ἄρα κλέα ἀνδρῶν.
Πάτροκλος δέ οἱ οἶος ἐναντίος ἧστο σιωπῇ, 190
δέγμενος Αἰακίδην ὁπότε λήξειεν ἀείδων,
τὼ δὲ βάτην προτέρω, ἡγεῖτο δὲ δῖος Ὀδυσσεύς,
στὰν δὲ πρόσθ' αὐτοῖο: ταφὼν δ' ἀνόρουσεν Ἀχιλλεὺς
αὐτῇ σὺν φόρμιγγι λιπὼν ἕδος ἔνθα θάασσεν.
ὣς δ' αὔτως Πάτροκλος, ἐπεὶ ἴδε φῶτας, ἀνέστη. 195
τὼ καὶ δεικνύμενος προσέφη πόδας ὠκὺς Ἀχιλλεύς:
'χαίρετον: ἦ φίλοι ἄνδρες ἱκάνετον ἦ τι μάλα χρεώ,
οἵ μοι σκυζομένῳ περ Ἀχαιῶν φίλτατοί ἐστον.

Close the Search Results tab to return to the Word Study Tool tab.

Finding the word in other works

In the Word Study Tool tab:
To display the frequency across all the works in the Perseus Digital Library, click the '**more statistics**' link .
A list is displayed showing where else the word occurs.

In the case of **ἀείδω** in all its forms, there is a long list:

Word frequency information for ἀείδω

Home | Collections/Texts | Perseus Catalog | Research | Grants | Open Source | Abo

Click on a column heading to sort by that field

Words in Corpus	Max	Max/10k	Min	Min/10k	Corpus Name
399409	57	1.427	14	0.351	Cassius Dio Cocceianus, Historiae Romanae
311666	3	0.096	3	0.096	Polybius, Histories
305870	9	0.294	9	0.294	Flavius Josephus, Antiquitates Judaicae
298102	89	2.986	75	2.516	Aristides, Aelius, Orationes
288825	6	0.208	4	0.138	Strabo, Geography
284417	3	0.105	3	0.105	Dionysius of Halicarnassus, Antiquitates Romanae, Books I-XX
279736	130	4.647	100	3.575	Athenaeus, Deipnosophistae
265446	124	4.671	94	3.541	Athenaeus, The Deipnosophists
224591	1	0.045	1	0.045	Procopius, de Bellis
218450	80	3.662	64	2.93	Pausanias, Description of Greece
192194	3	0.156	3	0.156	Diodorus Siculus, Library
184947	97	5.245	5	0.27	Herodotus, The Histories
177900	18	1.012	18	1.012	Dio Chrysostom, Orationes
150173	40	2.664	4	0.266	Thucydides, The Peloponnesian War
146389	3	0.205	3	0.205	Basil, Saint, Bishop of Caesarea, Epistulae
137783	5	0.363	5	0.363	New Testament
121554	5	0.411	1	0.082	Diodorus Siculus, Bibliotheca Historica, Books I-V
116927	1	0.086	1	0.086	Appian, The Civil Wars
112327	3	0.267	3	0.267	Isocrates, Speeches
111862	24	2.146	7	0.626	Homer, Iliad
110982	13	1.171	9	0.811	Diogenes Laertius, Lives of Eminent Philosophers
105765	4	0.378	0	0	Appian, The Foreign Wars
104806	31	2.958	25	2.385	Plato, Laws
103320	44	4.259	42	4.065	Aelian, De Natura Animalium
99674	6	0.602	2	0.201	Eusebius of Caesarea, Historia ecclesiastica
88388	15	1.697	7	0.792	Plato, Republic
87185	60	6.882	26	2.982	Homer, Odyssey
83898	34	4.053	34	4.053	Philostratus the Athenian, Vita Apollonii
80346	21	2.614	11	1.369	Epictetus, Works
79307	1	0.126	1	0.126	Diodorus Siculus, Bibliotheca Historica, Books XVIII-XX
79293	18	2.27	4	0.504	Xenophon, Cyropaedia
78707	2	0.254	2	0.254	Arrian, Anabasis
78666	4	0.508	0	0	Hippocrates, Oeuvres Completes D'Hippocrate.
78103	3	0.384	1	0.128	Plato, Cratylus, Theaetetus, Sophist, Statesman
75633	21	2.777	19	2.512	Plutarch, Quaestiones Convivales
70422	4	0.568	4	0.568	Demosthenes, Speeches 11-20
68518	9	1.314	7	1.022	Plato, Parmenides, Philebus, Symposium, Phaedrus

You can click on any of the titles to go directly to the work, or on the statistic in the **Max** column to display the list of lines in which the word appears in that work.