

intergenerational conflict. It was once thought that there were no iconographic representations of the Titanomachy, but this was challenged by J. Dörig's reexamination of some representations of the Gigantomachy. Dörig argues that originally iconographic representations of the Gigantomachy and the Titanomachy were sharply distinguished, but that the two battles began to be confused in the fifth century.<sup>7</sup> There is literary evidence that fourth- and fifth-century Athenians could fail to distinguish certain artistic representations of these battles. In two different plays, Euripides refers to the battle represented on the Panathenaic πέπλος as a Titanomachy (*Hec.* 468–73, *IT* 224), but Plato refers to it as a Gigantomachy (*Resp.* 378C).<sup>8</sup> Furthermore, Plato appears to interpret the πέπλος Gigantomachy specifically as an intergenerational struggle in the *Euthyphro* (6B). Shortly after Euthyphro has attempted to justify his prosecution of his father by appealing to the conflict between Zeus and Kronos, Socrates expresses his distaste for such corrupting depictions of intergenerational strife and cites the πέπλος Gigantomachy as a particularly prominent example. So Plato, an authority much closer to Aeschylus' time than Apollodorus, could also interpret the Gigantomachy as an intergenerational struggle. Thus, Aeschylus' reference to the Gigantomachy and to Athena's role in it is surely a foreshadowing of her generational allegiance as Orestes invokes her help against the Erinyes, who complain of the transgressions of younger gods on the divine plane and claim the right to punish transgressions against generational order in the human realm.

I believe that this interpretation of the invocation of Athena shows that it has a meaning for the play as a whole which goes beyond that of ritual invocation of the goddess to foreshadow the two major conflicts in the play. This interpretation retains the symmetry of signification that the form of the invocation (εἴτε . . . εἴτε) surely insists upon, a symmetry that a direct reference to political events could not maintain.<sup>9</sup>

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7. J. Dörig and O. Gigon, *Der Kampf der Götter und Titanen* (Olton and Lausanne, 1961), p. 15.

8. I owe this observation about Euripides' and Plato's interpretations of the πέπλος to T. H. Carpenter, *Dionysian Imagery in Archaic Greek Art* (Oxford, 1986), pp. 60–61.

9. The author wishes to thank E. Cook, B. Goff, T. Hubbard, D. Martinez, M. Gagarin, H. Fredricksmeyer, and the two anonymous referees for useful suggestions on improving this note.

### MACROCOLLUM

In a recent issue of this journal, I argued that the frequency of joins in a roll of papyrus was important in the determination of a roll's quality.<sup>1</sup> The higher grades had wider sheets, hence fewer joins and fewer disruptions to the writing surface. Thus it is that Pliny in his account of the grades of papyrus (*HN* 13.74–78) gives details of sheet width but says nothing of the roll height. Here I rely on this argument

1. "Pliny the Elder and Standardized Roll Heights in the Manufacture of Papyrus," *CP* 88 (1993): 46–50.

to clarify the meaning of the rare Latin word *macrocollum*, used by Pliny later in the same account.

The word *macrocollum* occurs three times in extant Latin, twice in Cicero's letters (*Att.* 13.25.3, 16.3.1) and once in Pliny (*HN* 13.80). In both writers, the context makes clear what the author intends by the word. Cicero asks Atticus to have his marked-up final draft (ἀρχέτυπον . . . *crebris locis inculcatum et reffectum*) copied onto a *macrocollum* (16.3.1), from which we might infer the meaning "a roll of high-quality paper" even without Cicero's mention in another letter of the expense of having copied a (multivolume) work onto *macrocolla* (13.25.3). In Pliny, on the other hand, the word occurs in a passage where he is discussing variations among the best grades of paper. "Among the *macrocolla* there used also to be a type having cubit-wide sheets, but this proved unviable, since a horizontal strip torn from one sheet would ruin several columns of writing" (13.80 "erat et cubitalis [sc. mensura] macrocollis, sed ratio deprehendit vitium, unius schidae revulsione plures infestante paginas"). This type of *macrocollum* had extra-wide sheets, which, it will be noticed, is said to be in addition to (*et*) the usual *macrocolla*, that is, the usual wide-sheeted rolls, which were, as previously shown, also the rolls of the highest grade. The equivalence here between *macrocolla* and "rolls with wide sheets" could not be clearer.

So much is not in dispute. The confusion lies in how we are to relate the use of *macrocollum* as "a book roll of deluxe paper" to the use of the word as "a book roll with wide sheets." Commentators almost uniformly see in *macrocollum* an analogue to our term "folio," by which is meant a sheet that is not only wide, but also tall.<sup>2</sup> Once the sheets are glued together into a book roll, the tallness will be the more noticeable feature. Against this it must be insisted that Pliny says nothing of the tallness of such a roll, and that his focus on the width is emphatic: for, in the ancient world, rolls with wide sheets and high grade paper were one and the same. My recent work strongly suggests that our notion of a "tall, imposing roll" is no more than an anachronistic projection onto the ancient world. If the Oxyrhynchus data can be taken as a guide, deluxe rolls seem typically to have been of middling height.<sup>3</sup>

Cicero, like Pliny, says nothing of the roll's height. Writing to his bibliophile friend Atticus, he uses the technical term for a wide-sheeted, that is, high-grade, roll. In the same way we might today impress a friend in the book trade by mentioning "ems" or "leading." It is not entirely accidental that *macrocollum* survives only in Cicero's letters to Atticus and in Pliny. By using this highly technical word,

2. Thus D. R. Shackleton Bailey translates *macrocollum* as "folio paper" (*Cicero's Letters to Atticus*, vol. 5 [Cambridge, 1966], p. 227; vol. 6 [1967], p. 167); J. Beaujeu as "papier grand format" (*Cicéron. Correspondance*, vol. 8 [Paris, 1983], p. 213; vol. 9 [1988], p. 254). *TLL* writes of *charta maioris formae*; Forcellini of *charta regia, quae magnitudine Augustam, Livianam, Fannianam, ceterasque chartae species exsuperabat*; Lewis and Short of "large-sized paper." F. H. Sandbach (Shackleton Bailey, *Cicero's Letters*, 5:414) has tentatively put forward a more precise definition, namely, a roll "with a long pasted side." Since the sheets are glued side by side to form a roll, the "long pasted side" will mean that the roll is tall. Only *OLD*, rather cryptically, sets side by side the definitions, "a broad sheet of papyrus; (used for books of good quality)." But the definition is strictly wrong in any case, since a roll is clearly implied in Cicero and Pliny; the same criticism applies to the definition in Lewis and Short.

3. W. A. Johnson, *The Literary Papyrus Roll: Formats and Conventions. An Analysis of the Evidence from Oxyrhynchus* (Diss. Yale, 1992), pp. 200, 232–33, 296–98.

Cicero lets it be known that he, too, is a serious aficionado of books and knowledgeable about the technicalities of their production.

A final point. That *macrocollum* is the equivalent of Greek μακρόκολλον should not be doubted.<sup>4</sup> The word μακρόκολλον has not (yet) surfaced, but we know of several related technical terms having to do with the book roll: πρωτόκολλον, ἔσχατοκόλλιον (the first and last sheets of a papyrus roll); συγκολλήσιμον (a composite roll, that is, one glued together from a number of documents or from more than one manufactured roll); (χάρτης) πεντηκοντάκολλος, ἑβδομηκοντάκολλος (extraordinary rolls containing fifty or seventy sheets, as opposed to the usual twenty).<sup>5</sup> Properly, -κόλλος will signify the glue join between the sheets, and only by extension the sheet or the roll. Thus μακρόκολλον refers, I suppose, to a roll with a long extent between joins, that is to say, a roll with wide—not tall—sheets.

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4. There have been attempts to relate the word to μακρόκωλος (whence the spelling *macrocolum*). Thus Forcellini, Lewis and Short, Bilabel, "Macrocollum," *RE* 14.1 (1930): 199; so also Shackleton Bailey initially (*Cicero's Letters*, 5:380), corrected in an addendum (5:414) on the advice of Sandbach. That μακρόκολλον is the correct derivation has been seen by several scholars, including J. B. Hofmann (*TLL* s.v.; cf. Forcellini s.v.).

5. πρωτόκολλον (*protocollum*): Just. Nov. 44.2, Julian *Epit. nov.* 40.2. ἔσχατοκόλλιον: Martial 2.6.3. συγκολλήσιμον: e.g., *P. Hamb.* I 18.ii recto. 6, 11, *al.*; *P. Oxy.* I 34.1.13; *SB XIV* 11959.17, 27, *al.*; *XVI* 12764.11. πεντηκοντάκολλος: *P. Cair. Zen.* I 59054. ἑβδομηκοντάκολλος: *P. Oxy. inedit.*, mentioned in E. G. Turner, *The Typology of the Early Codex* (Philadelphia, 1977), p. 54, n. 4. On these two last, see the helpful discussion in T. C. Skeat, "The Length of the Standard Papyrus Roll and the Cost-advantages of the Codex," *ZPE* 45 (1982): 169–70.

#### LUCAN *BELLUM CIVILE* 1.444–46: A RECONSIDERATION

A brief catalogue of Gallic deities is set within the larger, so-called "Gallic" catalogue in the first book of Lucan's *Bellum Civile* (1.396–465). This miniature catalogue closes his direct address to the Treviri and Liguri, two of the tribes who are rejoicing that Caesar has withdrawn the Roman armies from their land (1.441–46):

tu quoque laetatus converti proelia, Trevir,  
et nunc tonse Ligur, quondam per colla decore  
crinibus effusis toti praelate Comatae,  
et quibus immitis placatur sanguine diro  
Teutates horrensque feris altaribus Esus  
et Taranis Scythicae non mitior ara Dianae.<sup>1</sup>

1. "You, Trevir, also rejoiced that battles were turned away; and you, Ligurian, with hair now cropped, though once you excelled all the long-haired land in the locks that fell in beauty over your neck; and you also who propitiate with horrid victims the ruthless Teutates, and Esus whose savage shrines make men shudder, and Taranis, whose altar is not more benign than that of Scythian Diana." The translation is much indebted to Duff (J. D. Duff, *Lucan: The "Civil War"* [London, 1928; reprinted, 1988] *ad loc.*); adaptations have been made to bring out the relationship between the crucial words in lines 444–46.