

Washed in the Water: Dating Callimachus' *Lock of Berenice*

In his *Institutes*, Quintilian asserts the importance of a thorough understanding of poetry in rhetorical education, stressing that one must understand the poets' references to the physical sciences, and to astronomy in particular: "so often do [the poets]...use the rising and the setting of the constellations for demonstrating the times" (*totiens* [sc. *poetae*] *ortu occasuque signorum in declarandis temporibus utuntur*, *Inst.* 1.4.4.5). The temporal significance of astronomical phenomena in epic extends not only to certain times of the year (cf. *Od.* 5.272-6), but even to specific dates in the past. *Lock of Berenice*, Callimachus' imaginative account of the catasterism of Berenice II Euergetis' (267/6–221 BCE) votive offering of hair, has attracted scholars in the past several decades to employ its astronomical references to date the poem to various points between 246 and 245 BCE. This paper first provides an overview of the historical material providing the chronology for the lock's dedication, then reassesses the astronomical references in the poem for indications of its date. Using a hitherto unpublished set of dates for Coma Berenices' heliacal rise in 245 BCE, based on up-to-date computer modeling, combined with a new proposal for the significance of the planet Venus in the poem (modifying Stephanie West's 1985 thesis), I argue that the heavens depicted in Callimachus' poem are that of late September–early October 245 BCE.

Shortly after Ptolemy III's accession and marriage to Berenice II in January 246, he was called upon by his sister to defend her son's claim to the Seleucid throne, after Laodice I, the former consort of her late husband Antiochus II, made a rival claim. Based on dates provided by the Babylonian chronicle, we may roughly date Ptolemy's absence from Egypt in the Third Syrian War between September 246 and July 245. When Ptolemy returned safely from his

campaign, Berenice sacrificed a lock of her hair, which was then apparently found to be missing. The astronomer Conon subsequently announced his discovery of the lock in a previously unidentified region between Boötes and Leo, and likely collaborated with Callimachus in the material presented in the poem.

In 1984, Marinone suggested that the heliacal rise of Coma Berenices from 2–8 September 245 would have been an opportune time for the alleged catasterism, since for the first time in the year the constellation would “appear” in the twilight sky before sunrise. The next year, West supported this heliacal rise theory by identifying the lock’s description as ὕδασι] λουόμενον at line 64 as a reference to the heliacal rise of Sirius at *Iliad* 5.6, λελουμένος Ὀκεανοῖο; she also argued that the references to Aphrodite in the poem suggested the position of the planet Venus in September 246. *Contra* West, however, the textual evidence surrounding *Lock of Berenice* suggests that Berenice II first promised the lock when her husband had left for Seleucia, then sacrificed the lock *after* his safe return in 245 (cf. Cat. 66.9-12, 33-9; Harder testimonia 110a and b).

My analysis uses new calculations for the heliacal rise of Coma Berenices in 245 BCE provided by Teije de Jong, produced by computer modeling which accounts for variables such as visual extinction, atmospheric refraction, and the sensitivity of the eye in twilight, as outlined in his 2006 article, “The Helical Rising of Venus.” The data indicate that the first seven stars of Coma Berenices by visual magnitude (the number of stars counted in antiquity) first appeared in the Alexandrian sky from 23 September to 13 October 245, a few hours before sunrise. I then modify West’s thesis by simply moving her chronology forward one year, arguing that the poem more strongly suggests the position of Venus in 245. Whereas in 246 Venus disappeared only a few days after the appearance of Coma, in 245 Venus shared the morning sky for more than a

month, its presence protracted by a coincidental retrograde motion. An Alexandrian observer would therefore see Venus first in the early AM, and then as the stars of Coma would emerge above the sea, Venus would move upward toward the zenith with the Lock. It is to this morning sky, I suggest, that Callimachus refers when the Lock states, “Cypris brought me, washed in the water, to the immortals and placed me as a new constellation among the old ones” (ὔδασι] λουόμενόν με παρ’ ἄθα[νάτους ἀνάγουσα / Κύπρι]ς ἐν ἀρχαίοις ἄστρον [ἔθηκε νέον, fr. 110.63-4).

Bibliography

- De Jong, Teije. “The Heliacal Rising of Venus.” in *Ancient Egyptian Chronology*. ed. Hornung, Erik, et al. Leiden: Brill, 2006, pp. 432-8.
- Harder, Annette. *Callimachus: Aetia*. Oxford: Oxford University Press, 2012.
- Marinone, Nino. *Berenice da Callimaco a Catullo*. Rome: Edizioni dell’ Ateneo, 1984.
- West, Stephanie. “Venus Observed? A Note on Callimachus, Fr. 110.” *CQ* 35 (1985): pp. 61-6.