

# Two Papyri of Appian from Dura-Europus

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IT IS THE PURPOSE of this article to correct a misidentification of *P.Dura* 2 fr.A and to establish the identity of the hitherto unplaced 2 fr.B.

*P.Dura* 2 fr.A

Discovery of this piece (and of others found during the 1932–33 excavation season) was reported in 1936;<sup>1</sup> no identification was offered then. Three years later C. Bradford Welles argued that the fragment matched Appian *Mith.* 101, reading the piece as follows:<sup>2</sup>

[— — — — — — — — — — ἐλαύνων διῆλ]-  
θ[εν ἐπὶ τὸν Ἄψαρον ποταμόν. Ἰβηρας]  
δὲ τ[οὺς ἐν Ἀσίᾳ οἱ μὲν προγόνους οἱ δ' ἄ]-  
ποι[κοὺς ἡγούνται τῶν Εὐρωπαϊῶν]  
Ἰβή[ρων — — — — — — — — — —]

Welles used IBH (with diaeresis over the *iota*) as the starting point for a search through Greek authors mentioning the Iberus, Iberia, etc. After consultation of Strabo, Polybius, and other writers who “out of hundreds of instances yielded no context which remotely fitted,” he found that the *Mith.* passage seemed to fall into place: “the lines are respectively 28, 30, and 27 characters in length, and the traces fit exactly.”

Welles surely consulted word-indexes in his effort to identify the fragment. It seems to have been the index to the Loeb edition of Appian<sup>3</sup> that guided him to *Mith.* 101, as this is the first reference there given under “Iberians of Asia.” The apparent match no doubt seemed to Welles to be confirmed by his reasonable assumption that “the history of the eastern Mediterranean area should have bulked large” in the minds “of the officers of the Roman garrison” at Dura.<sup>4</sup>

<sup>1</sup> *The Excavations at Dura-Europus, Preliminary Report of the Sixth Season* (New Haven 1936) 417.

<sup>2</sup> “Fragments of Herodotus and Appian from Dura,” *TAPA* 70 (1939) 203–12.

<sup>3</sup> This index is far from complete, giving four references to the “Iberians of Asia” and five to the “Iberus, river of Spain.” In fact Appian’s writings contain 208 references to Iberia or things Iberian, including 76 in the *Iberica* and 72 in the *Bellum Civile*.

<sup>4</sup> Cf. *P.Dura* p.70: “One can imagine that the ‘Mithridatic War’ was of special interest to a Roman officer stationed in the East.”



of *eta*. Welles' doubtful *mu* in line 6 was later correctly revised to *alpha*, but of the *rho* only the left hasta is preserved, which could equally well belong to eight other letters, including *nu*.

The proper match for the fragment is Appian *Iber.* 16:

ἔδο[σαν ποι]-  
 νῆν ᾧ[ν ἐς]  
 [τ]οὺς ἐμ[πό]-  
 [ρ]ους αὐ[τῶν]  
 ἡμαρ[τήκε]-  
 [σ]α[ν] ἐν [τῶι]-  
 [δε τ]ῶι [Λιβυ]-

The correctness of this identification is confirmed by the broken traces of letters in lines 1 and 7 which can now be read with some confidence. Respectively, the lines are 7, 8, 9, 8, and 8 letters in length. Since this presents us with a column width much narrower than that of the *Bell.Civ.* fragment, it is clear that fr.B derives from a different roll from that which yielded fr.A. Among the Dura papyri we therefore have evidence of two separate rolls of Appian, doubling the number reported in Pack's catalogue.<sup>6</sup>

### Procedures

The two Dura papyri discussed here were matched with the appropriate Appian passages through use of the Thesaurus Linguae Graecae's computer facilities. In essence, a search program was employed to match letter combinations found on the papyri with letter combinations in the TLG's machine-readable texts. If a given search generated more than one potentially pertinent passage, a process of elimination (including close scrutiny of letter traces visible on various reproductions of the papyri) was used to arrive at the final conclusions offered. Choice of Welles' 1939 article for this study was the result of pure chance.<sup>7</sup> I originally intended merely to ascertain whether certain findings obtained by research methodologies available in 1939 could be equally well obtained by the computer-assisted methodologies available now. The surprising ease with which an affirmative answer emerged led to an expansion of the

<sup>6</sup> R. A. Pack, *The Greek and Latin Literary Texts from Greco-Roman Egypt*<sup>2</sup> (Ann Arbor 1965): under no. 113 are listed both fr.A and B of *P.Dura* 2 together as App. *Mith.* 101, by error cited as deriving from a III-cent. papyrus codex rather than a roll.

<sup>7</sup> I happened upon an offprint of the article among others that form part of the Heichelheim Collection, acquired, after Professor Heichelheim's death, by the University of California, Irvine.

experiment's focus, *i.e.* computer assisted analysis of the two Dura fragments.<sup>8</sup>

First, *P.Dura* 2 fr.A was treated as *adespoton*, and a LEX<sup>9</sup> search for the combination IBH preceded by a blank was conducted through the TLG data bank.<sup>10</sup> This search located the combination in 37 authors (or collections, such as the *Anth.Gr.*), two of whom could be disregarded on chronological grounds (the Dura fragments were found beneath an embankment erected in A.D. 256).

The remaining 35 authors (*ca* 9,800,000 words) were searched for the combinations ΔΕ, ΠΟΙ, and IBH<sup>11</sup> occurring in sequence and within a reasonable distance from each other (a context of about five to six lines of printed text). This search generated 39 passages from nine authors; brief examination eliminated all but two passages.<sup>12</sup> One was Welles' match for *P.Dura* 2 fr.A, Appian *Mith.* 101. The other seemed equally pertinent, warranting further attention. Scrutiny of the published photographs<sup>13</sup> led to the conclusion that various traces visible on the papyrus justified reassignment to *Bell.Civ.* 2.8.

Appian's writings now seemed to me, as they did to Welles, the logical starting point for an attack upon *P.Dura* 2 fr.B. A LEX search through Appian's quarter million words for ΗΝ, ΟΥΣΕ, and ΣΑ (read with certainty) in sequence and proximity produced overwhelming results, hundreds of possible passages. Further examination of the photograph published in 1939 led to a redefinition of the search: an

<sup>8</sup> Much of Welles' article is devoted to *P.Dura* 83, identified by him, with help from L. A. Post, as Herodotus 5.113.2–114.2. Welles' comments show that the match was not easily arrived at, and extant correspondence between him and Post (located in the Duke University archives and made available to me) indicate that considerable time and effort were invested. Using the computer, I matched *P.Dura* 83 with the Herodotus passage in less than ten minutes. Given the comparatively extensive fragments, I used procedures somewhat different than for the Appian papyri; they will be described in another article.

<sup>9</sup> The LEX program was developed by David Packard; William Johnson, the TLG programmer, added enhancements designed to address phenomena unique to papyrological texts.

<sup>10</sup> The data bank contains at present *ca* 52 million words reflecting some 2000 authors extant from Homer to A.D. 600. About half of this material has been verified and corrected, and the search addressed only that half. This fact does not diminish the validity of the results, for most of the materials still awaiting verification date from the period after A.D. 300.

<sup>11</sup> The program locates combinations even if broken by word division, *e.g.* [ὐ]πὸ Ἰ[λιον] (*Il.* 2.216).

<sup>12</sup> For example, because of obviously inappropriate spacing between the combinations; and the traces visible above *delta* clearly excluded many letters from consideration, thus further reducing the number of relevant passages.

<sup>13</sup> In Welles (*supra* n.2) pl. II; H. Roberts, *Greek Literary Hands* (Oxford 1955) pl. 16b; *P.Dura* pl. 2.2.

*alpha* followed by *rho* (though dotted by Welles) was clear, as was an *omega* after HN. Furthermore, *upsilon* before ΣA (also dotted) was legible. A search for HNΩ, OYΣE, OYΣA, and AP generated only two passages, *Pun.* 81 and *Iber.* 16. Comparison of both with the fragment left no doubt that only *Iber.* 16 could be the proper match. In fact, the evidence in favor of this match was so convincing as to render a further LEX search (through other authors) unwarranted.

The basic information essential to the development of this article was obtained in approximately two minutes at a computer terminal. Subsequent analysis of this information yielded findings which until quite recently were beyond the scholar's reach.<sup>14</sup> In the process, it became clear that TLG data bank texts are about to exert a major impact upon research methodologies (and research results) in disciplines such as papyrology. Speedy collation by computer of hitherto unidentified literary papyri with TLG texts promises to yield a rich harvest of attributions—even occasional correction of erroneous but hitherto unquestioned attributions which may be lurking in our scholarly literature.<sup>15</sup>

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<sup>14</sup> The LEX program scans and analyzes some 10,000 Greek words per second. For example, to search Thucydides (*ca* 150,000 words) for words beginning in IBH consumes a total of fifteen seconds.

<sup>15</sup> Professor William H. Willis provided suggestions and materials helpful in the development of this article. His advice is gratefully acknowledged.