

**XIII.—The Cohors XX Palmyrenorum, a Cohors Equitata Miliaria**

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This article is summarized in the last paragraph.

In spite of the studies of able scholars for many years, both before and since the time of Mommsen, in the field of Roman military history, our knowledge of a great part of that field is either quite uncertain or fails altogether for sheer lack of data. From time to time, however, new material is found; and it is the purpose of this article to make generally available some of the results derived from study of several texts which are not quite ready for publication. These documents are a group of papyri from the military archives of Dura-Europos which were discovered in the temple of Artemis Azzanathkona by the joint expedition of Yale University and the French Academy during the excavations of 1931–32. The group numbers five;<sup>1</sup> but of these one is so much more extensive and detailed than the rest that it necessarily forms the basis from which the elucidation of the others must proceed. This is *DP 12*, which alone will be described here in detail.

The sheer bulk of the texts, moreover, which would amount to 80 columns for *DP 12* alone, precludes any attempt to publish here the entire evidence on which the conclusions in this paper are based. For the accuracy of the readings and the statistics reported from these papyri it is accordingly necessary for the time being to bespeak the reader's faith. Nevertheless, the excerpt printed below (p. 161), which has been taken from a part of *DP 12* where damage is limited to a few scattered letters, offers a very fair idea of the sort of data which these papyri furnish. All of the accompanying results must naturally be regarded as somewhat tentative so long as the study

<sup>1</sup> *Dura Papyri* nos. 11a, 11b, 12, 16, and 29. For brief descriptions see E. T. Silk and C. B. Welles, "Descriptive List of Papyri from the Temple of Azzanathkona," *Excavations at Dura-Europos, Fifth Season, 1931–32* (New Haven, Connecticut, 1934) 295–303. See also M. I. Rostovtzeff, "Les archives militaires de Doura," *Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres* (1933) 311–315; idem, "Das Militärarchiv von Dura," *Münchener Beiträge zur Papyrusforschung*, 19 (1934) 361–372; R. O. Fink, A. S. Hoey, and W. F. Snyder, "The *Feriale Duranum*," *YCLS* 7 (1940) 11–12.

of the documents has not been completed; and some of them will remain tentative because the material does not make final decisions possible; but in so far as the topic of this paper is concerned — the internal organization of a *cohors equitata miliaria* — every effort has been made to state completely the evidence on each point which can be got from these papyri; and it seems unlikely at present that further study will extract much more from them which has a bearing on the structure of such a cohort. There is much more in the papyri, as is indicated by the annotations which accompany the names in *DP* 12 and by the mixture of Roman, Greco-Macedonian, Iranian, and Semitic elements in the names themselves; but discussion of these features, fascinating as they are, does not come within the scope of this paper. For that reason no comment on them has been included.

In its present state *DP* 12 consists of the remains of a large roll, of which the right end, which was evidently on the inside, is quite well preserved for a distance of about 210 cm., with seventeen columns of text. Of these, the three columns on the extreme right are worse damaged, through being exposed in the hollow interior of the roll, than those adjacent to them; and with the sixteenth and seventeenth columns from the right the condition of the papyrus begins to grow progressively worse all the way to the left end, so that more than half of it — about twenty-three columns — consists of a network of fragments of diminishing size. Their present substantially accurate mounting is a monument to the patience and skill of Ibscher of Berlin. The upper edge of the papyrus is intact on the topmost fragment of each group; but the lower edge has been lost. The text shows, however, that at several points little more than the margin has been destroyed; so that the original height of the roll must have been about 25 cm., with margins of one cm. at the top and bottom. Remains of about forty columns are preserved on each side; but it may be that the complete roll was originally much longer. On the recto the first twenty-five or twenty-six columns are occupied with the rosters of five centuries of infantry, which probably constituted just half of the infantry force of the unit.<sup>2</sup> If therefore the entire strength of the unit was recorded in this one roll, it must once have consisted of sixty-five or sixty-six columns; and its total length can be estimated at approximately 8 m. or twenty-five feet.

<sup>2</sup> See below, 162–163.

The script throughout on both sides is cursive. The hand of the recto differs slightly from that of the verso, as likewise the two scribes differ in certain spellings; but apparently each side of the papyrus is the work of one scribe only.

The text, as was just indicated, is evidently a roster of an auxiliary *cohors equitata*, for it consists essentially of a list of names arranged according to centuries and *turmae*, with the names of the centurions and decurions and their lieutenants at the beginning of each company, followed by the names of the common soldiers under their command listed in order of seniority. It cannot belong to the archives of a legion because it mentions *sesquiplicarii* and *vexillarii*, rankings not found among legionary troops. At the left of each name is a mark or an annotation indicating the particular soldier's current position or duties. On the recto, but not on the verso, the roster of each company ends with a numeral which is evidently a total of some sort. The following transcription of the first twenty lines of col. 33, recto, provides a typical specimen of the whole text to illustrate the preceding description.

- d]ispos aurel(ius) addaeus ierhaei  
 A.D. 206 albino et emiliano c[o(n)s(ulibus)  
 • • singul(aris) co(n)s(ularis) aurel(ius) aelius ma[r]cellus  
 ʔecchuf aurel(ius) bar[n]aeus themarsa  
 A.D. 207 apro et maximo co(n)s(ulibus)  
 • • ——— aurel(ius) iulius belacabus  
 A.D. 208 duobus imp(eratoribus) co(n)s(ulibus)  
 singul(aris) a[urel(ius)] abed[n]am[a]e[us] marona[  
 cxx[ ] i[n] dupl(icarii) iii  
 (one line blank)  
 A.D. 201 t(urma) octau[i] muciano co(n)s(ule)  
 • • • dec(urio) aurel(ius) lucius octau[ius]  
 • dupl(icarius) aurel(ius) sal[m]anes zebida  
 A.D. 192 com[o]do vii co(n)s(ule)  
 • • [sesq(uiplicarius) aurel(ius) admanus a. . ei]  
 A.D. 193 erucio cl(aro) co(n)s(ule)  
 • ——— aurel(ius) amaeus iadibeli  
 ad equ[m] prob(andum) aurel(ius) medus magdaei  
 • . . . cauma aurel(ius) ma[llc]hus nisamsi  
 A.D. 194 diuo [s]euero ii co(n)s(ule)  
 ʔecchuf aurel(ius) iuli[us] iulianus

The means of dating the texts is furnished by the dates of the common soldiers' enlistments. In *DP* 12 the earliest on the recto is A.D. 192 (col. 16.7, and 36.9) and the latest is 219 (col. 26.14).

On the verso the earliest is 196 (col. 28.5; 34.29; and 37.9), while the latest is 222 (col. 22.10, and 27.20). Since the theoretical length of service in the auxiliary units was twenty-five years, men who had enlisted in 192 and 196 should have received their discharges in 217 and 221 respectively. One may therefore tentatively accept the latest dates on each side of the papyrus, A.D. 219 and 222, as the years in which the two lists were made up, though it is possible that each should be set a year later. At all events, the datings by a consulship of Elagabal in col. 26 recto, 14, and by consulships of Severus Alexander in col. 12 verso, 5; 22 verso, 10; and 27 verso, 20, make it certain that the recto was composed before March 13–14, 222, the date of Alexander's accession,<sup>3</sup> and the verso after that date.

The cohort whose rosters are represented by *DP* 12 and the other papyri of this group may confidently be identified as the *cohors xx palmyrenorum* because no other unit is named in the archives in which these texts were found. The total of the personnel, moreover, in *DP* 12 points to a *cohors miliaria*; and the totals in the *acta diurna*, *DP* 3 and 9, show that the *xx palmyrenorum* was such a cohort.<sup>4</sup> Finally, identical series of names in the different lists show that all of the papyri of this group deal with the same unit.

Because of the damaged state of the papyrus, the total number of names in *DP* 12 can only be estimated, and probably not very closely. Among the columns of the recto in which no loss seems to have occurred, or where the amount of loss can be determined rather closely, the number of lines varies from thirty-two in col. 37 to forty in col. 26. The average of seven columns is thirty-seven lines. On the verso the number of lines varies from 26 to 31, with an average of 29 for seven columns. In order to find the number of men, however, it is necessary to deduct the lines containing the consulships which date the enlistments and to allow for a varying amount of space left blank between the end of the roster of one company and the beginning of the next. The most careful estimate I have been able to make, by a combination of counting existing names and calculating the number lost, produces a total of 1148 for the extant portion of the recto — 795 infantry, 333 cavalry, and 20 *dromedarii*. Since only five centuries of the cohort are included

<sup>3</sup> W. F. Snyder and A. S. Hoey, "The *Feriale Duranum*," 85–94.

<sup>4</sup> *DP* 3 and 9 are unpublished; but see J. F. Gilliam, "Milites Caligati," *TAPhA* 77 (1946) 189.

on either side, while it certainly had at least nine<sup>5</sup> and probably had ten centuries, the preceding figures suggest that the strength of the entire cohort in 219 was greater by another five centuries, making a total of about 1950 men. Similar calculations for the verso of *DP* 12 produce a total of 901 extant names — 616 infantry, 249 cavalry, and 36 dromedarii. The entire personnel would consequently have numbered about 1500 in A.D. 222. On the other hand, an index of the possible error in these figures may be seen in the fact that on the recto the *centuria Mariani* must, by the method applied above, be estimated at 169 men, whereas the roster of this century ends in col. 21 with the figure [xlvi] — presumably 146-149 men. This difference of twenty in a space of five columns may perhaps be explained in one of several ways. It may be that as the scribe approached the end of the papyrus he tended to crowd more lines into each column, so that the averages which have been used, and which are based on counts made in well-preserved columns near the end of the roll, are too high for the earlier parts of the list, where the *centuria Mariani* is found (cols. 16-21). Or it may be that the numbers which conclude the roster of each century are not meant to be actual totals of the men in each unit. This is certainly the case with the *turmae*, for the numbers there are apparently double the actual strength in men. (See below, p. 168.) At any rate, the discrepancy between the numeral in the text and the estimated strength is sufficient warning that all other estimates may be subject to a considerable degree of error.

The number of *turmae* in a *cohors equitata miliaria*, however, appears to be settled by *DP* 12. Since the number is lacking from the manuscripts of Hyginus, it has been variously conjectured to have been 10, 8, or 6.<sup>6</sup> Now *DP* 12 shows that, about A.D. 220 at least, the actual number was five, for this number of *turmae*, in the same order, with the same *decurions*, appears on both the recto and, three years later, on the verso. For the centuries we have Hyginus' statement that there were ten in a cohort of this type; and this is supported, though not confirmed exactly, by the entries

<sup>5</sup> Gilliam, *ibid.*, and see below, 164.

<sup>6</sup> Hyginus, *Liber de munitionibus castrorum*, ch. 27 (ed. Domaszewski, Leipzig, 1887) and Domaszewski's comments on p. 50; Mommsen, *Eph. Epigr.* 5 (1884), p. 31, no. 59; Cichorius in *RE*, s.v. "Cohors," col. 235; Kromayer-Veith, *Heerwesen u. Kriegsführung d. Griechen u. Römer*, 495 and note 8. See also R. O. Fink, "Mommsen's *Pridianum*: B.G.U. 696," *AJPh* 63 (1942) 68-69.

in *DP* 3 showing a total of nine centurions<sup>7</sup> and by the mention of either seven or eight different centurions by name on the two sides of *DP* 12.

The number of centuries in the cohort is of particular importance in connection with the present group of papyri because the largest papyrus, aside from *DP* 12, contains only five columns and for that reason they can be used in discussion of the strength of the cohort only for what they show of the strength of the individual centuries. Hyginus sets the theoretical strength of a *cohors equitata miliaria* at 760 infantry and 240 cavalry; while *DP* 3 (time of Severus Alexander) and *DP* 9 (May 31–June 1, A.D. 239) show totals of 914 infantry, 223 cavalry, and 34 dromedarii (not mentioned by Hyginus in connection with cohorts), and 781 infantry, 238 cavalry, and 36 dromedarii respectively. On the basis of Hyginus' figures, the theoretical strength of a century would be 76; and a turma would number 48. The numbers in the two papyri just mentioned, however, would give centuries of 91 and 78, and turmae of 45 and 48. The totals in the extant parts of *DP* 12, on the other hand, as nearly as they can be determined, show on the recto centuries ranging from 147 to 169 men, and turmae of 61 to 73. On the verso the centuries have shrunk to 116–129 and the turmae to 45–54. There are twenty dromedarii on the recto and 36 on the verso.

These fluctuations prepare one for the results from the other papyri of this group. *DP* 11a recto is proved to belong to the same cohort as *DP* 12 by the occurrence in each of the *centuria Antonini* with a large number of the same personnel; but in *DP* 11a the total given for one century is 52, where 43 names can still be counted; and for another the total is 55+, with traces of 47 still visible. *DP* 11b recto similarly shows its kinship with *DP* 12 by coincidences in the personnel of two centuries in each; but in 11b the one remaining total for a century is 59, where 40 names can be counted and 20 can reasonably be estimated as lost. Both 11a and 11b belong to the years immediately before 12 recto, possibly 218.<sup>8</sup>

<sup>7</sup> Above, note 4.

<sup>8</sup> The earliest dates in both are about A.D. 193, and the latest 217, as in *DP* 12 recto; and in *DP* 11b recto, 3.10, Caracalla is already a *divus*. Hence the *terminus post quem* is April 8, 217, the date of Caracalla's death, or rather, some time later, following his deification (Dio 79.6.5; 9.2; 11.4–6; 17.2). On the other hand, both 11a and 11b must be earlier than 12 verso, because it contains no soldiers who had enlisted earlier than 196. Finally, there is a *centuria Seleuci* in 11b with which no *ordinarius* is listed; and this century is the *centuria Castrici* in 12 recto with an *ordinarius* whose

Such tremendous variations, with the strength of the unit at one point only about two-thirds of the theoretical norm, then trebling within a year or two, then falling off by about one-fourth of the new total, emphasize the need for caution in formulating general statements in regard to the Roman army. They also call for explanation; but it is not easy to offer one because the lists differ somewhat in form and the exact purpose of each is not certain. It is possible, for example, though unlikely, that *DP* 11a and 11b are really excerpts from a longer list and contain only the names of men chosen for some particular duty. More probably, in view of the date, the low strength indicated by 11a and 11b reflects the losses suffered during Macrinus' battles with Artabanus in 217, battles which according to Herodian were stubbornly fought, with heavy losses to both sides, even though they led to no decisive result.<sup>9</sup> Macrinus made efforts, too, as is well known, toward economy in military expenditures; and some effect of this may perhaps be seen in the fact that no enlistments for 218 are found anywhere in *DP* 12. On the other hand, Elagabal and his family, as Syrians and Semites, might have felt that it was sound policy to build up the Oriental element among their military forces. In that case, however, the ranks of the *xx palmyrenorum* must have been replenished by transfers from other units, for enlistments in 219 and 221 are few and there are none for 220, while the numbers for 214, 215, and 216 are much greater than for those same years in *DP* 11a and 11b.

*DP* 12 also proves that the dromedarii were not organized as a distinct unit like a *turma*, but were attached individually to various centuries, though they were listed separately both here and in *DP* 3 and 9. In the latter two papyri, the totals are regularly stated according to the formula: *milites caligati* —, in his *ordinarii* —, *duplicarii* —, *sesquiplicarii* —; *dromedarii* —, in his *duplicarii* —, *sesquiplicarii* —; *equites* —, in his *decuriones* —, *duplicarii* —, *sesquiplicarii* —. Here the dromedarii follow immediately after the infantry, and are not said to include any centuries or decurions. The reason for this is apparent from *DP* 12, where, although the dromedarii are listed at the end, they are

date of enlistment is ten years later than Seleucus'. Moreover, the correspondences in the identities of the personnel show that 11a and 11b probably do not belong between 12 recto and 12 verso, but are earlier than 12 recto.

<sup>9</sup> Herodian 4.15.1-9. Dio does not give Macrinus so much credit (79.26.2-27.4); but his account shows a fairly consistent hostility to Macrinus.

all specifically described as belonging to one or another century. The pattern of the entries is:

(centuria) antonini pr(ioris), tertullo co(n)s(ule)  
 ————gaius barhadadus  
 ————malchus salman  
           duobus asp(ris) co(n)s(ulibus)  
 ————macrinus maximi

Dromedarii might, however, also be attached to *turmae*. An instance at least of this arrangement is found in the *pridianum* of the *coh. i augusta praetoria lusitanorum equitata* (A.D. 156), col. 2.10-12:

in turma salviani, eode[m consule,]  
 dro(medarius) cronius barbasatis ex xvi[  
           kal(endas) maias.<sup>10</sup>

The order in which the centuries and *turmae* are listed probably has a bearing on the relative status of their commanders, if one may argue by analogy with the practice in the legions, where the centurions ranked in order from the first century of the first cohort down to the last century of the tenth cohort. The series of *turmae* in *DP* 12 is the same on both recto and verso, and hence affords no evidence on this point; but the centuries are not in the same order. On the recto, the last century is the *centuria* Mal[.]chi, preceded in order by the centuries of Marianus, Castricius, Antoninus *posterior*, and a century the name of whose commander is lost. The situation on the verso is less clear, because the only centurion whose name is preserved is Marianus, whose century is now third from the end instead of next to last. The century of Mal[.]chus has disappeared; the century commanded on the recto by Antoninus *posterior* is now last; and that which appeared under Castricius' name is now next to last. Preceding the *centuria Mariani* are the rosters of three other centuries which are not, so far as one can judge, identical with any century on the recto or any of those in the other papyri of this group. The situation seems to be that Mal[.]chus had received his discharge or died before the date of *DP* 12 recto, but that a new centurion had not yet been appointed. Then when his successor was named, a rearrangement of the centuries took place which is revealed in *DP* 12 verso. The evidence for this view is that both in 11b.2.27, *centuria Seleuci*, and 12 recto, 21.14, *centuria*

<sup>10</sup> R. O. Fink, *op. cit.* (above, note 6) 63.



*Mal[.]chi*, the name of the century is not followed in the next line, as ordinarily, by the title and name of the centurion, but by the name of another member of the century. The century of Seleucus, moreover, is preceded in 11b by the century which bears *Mal[.]chus*' name in 12 recto; but this same century of Seleucus appears in 12 recto under the command of *Castricius*, two grades higher than the century of *Mal[.]chus*. But since the century of *Mal[.]chus* is not found on the verso, it seems probable that the new centurion of *Mal[.]chus*' company was given a rank which placed him above the centuries still found on 12 verso, and that *Marianus* was promoted at about the same time ahead of *Castricius*, while *Antoninus posterior* was demoted. The extraordinary thing about these changes is that the entire century seems to have followed the fortunes of its centurion. So far as I know, such a possibility had never previously been considered.

*DP* 12 recto and verso likewise contain the titles of a number of minor officers other than centurions and decurions, though not by any means a complete series. Those which are present are set off by a special mark from the other annotations which accompany the names in the roster; but lack of certainty regarding the exact purpose of these lists makes it difficult to reach any conclusions about the various ranks mentioned, or the reasons for including or omitting them. *Cichorius* mentions twenty titles of *principales* and *immunes* in addition to centurion and decurion;<sup>11</sup> and *Domaszewski* lists the same ranks with the omission of *duplicarius*, *singularis*, and *strator*, but with the addition of *eques*<sup>12</sup> — the last on the ground that the equites had a *schola*.<sup>13</sup> That the *xx palmyrenorum* had these petty officers too is proved by *DP* 3 and 9, which list *signifer*, *bucinator*, *tesserarius*, and even a *sacerdos*, and perhaps by two painted tiles from *Dura* which name a *tesserarius* and an *actuarius*, though without mention of the unit to which they belong.<sup>14</sup> Of all these, nevertheless, only the *duplicarius*, *vexil-*

<sup>11</sup> *Cichorius* in *RE*, s.v. "Cohors," col. 236: *signifer*, *imaginifer*, *vexillarius*, *bucinator*, *cornicen*, *tubicen*, *optio*, *tesserarius*, *cornicularius*, *beneficiarius*, *princeps*, *duplicarius*, *actuarius*, *librarius*, *ensor*, *medicus*, *singularis*, and *strator*.

<sup>12</sup> *Domaszewski*, "Die Rangordnung d. röm. Heeres," *Bonner Jahrbücher*, 117 (1908) 56–59.

<sup>13</sup> *Domaszewski*, "Die Religion d. röm. Heeres," *Westdeutsche Zeitschrift für Geschichte und Kunst*, 14 (1895) 90.

<sup>14</sup> *Excavations at Dura-Europos, Sixth Season, 1932–33* (New Haven, Connecticut, 1936) nos. 782 and 783, p. 292.

larius, signifer, cornicularius, and possibly im]ag(inifer) (12r.23.21) are found in *DP* 12, with the addition of sesquiplicarius. The other papyri in this group name no rank except that of centurion. So far as I know, the beneficiarii so common elsewhere are nowhere mentioned in the Dura papyri. The term duplicarius appears to have been used in two different senses in *DP* 12. At the beginning of a roster of a century or turma, a duplicarius (or sometimes two) follows immediately after the centurion or decurion and is evidently his second in command, for the date of the duplicarius' enlistment, like that of the company commander, violates the chronological order observed in the remainder of each company roster. It is evident, then, that these officers are listed in order of rank. In the totals which follow each company roster on the recto of *DP* 12, however (for the *turma Antonini*, for example, *cxviii, in duplicarii i[ii]i*),<sup>15</sup> the numeral with *dupl(icarii)* has no relation that I have been able to discover to the annotations in the preceding list. The *centuria Mal[.]chi*, with two duplicarii, an imaginifer, and a signifer, the *turma Zebida*, with a decurion, two duplicarii, a cornicularius, a signifer, and a vexillarius, and the *turma Octavi*, with a decurion, a duplicarius, a sesquiplicarius, four vexillarii, and a signifer, all conclude with *dupl(icarii) v*. The "total" for a turma, unlike the figure with each century roster, is always approximately double the actual number of names, as nearly as it can be determined. (65 to 68 names is a fair estimate for the *turma Antonini*.) Hence these numerals probably have to do with rations or pay; and "duplicarius" is used with them to mean an individual drawing a double amount because he had been decorated for distinguished service.<sup>16</sup> As a title of rank, duplicarius is found in Domaszewski only for alae, the equites singulares, and numeri.<sup>17</sup> For the cohortes equitatae he lists an optio as second in command not only of centuries but also

<sup>15</sup> The usual form of entries similar to this one in Latin military documents is to state the total first, then to introduce details with the phrase *in his*. So e.g. in Mommsen's *pridianum* (above, note 6), col. 1, 14-17 read "summa mil(itum) . . . . DV, in is (centuriones) vi, decuriones iii, eq(uites) cxiv, dromedarii xviii, pedites ccclxiii" and 31-33 "tirones probati . . . . viiii, in is eq(ues) i, dromedarius i." See also *DP* 3 and 9 (above, note 4). But in the totals on the recto of *DP* 12 the scribe never writes *is* or *his*. The word *in* in the 20 lines from *DP* 12 printed above happens to be damaged; but enough certain instances remain to prove that the formula in *DP* 12 was always "total, *in dupl(icarii)*, numeral." Perhaps it was meant to be read *in, duplicarii*.

<sup>16</sup> Domaszewski, "Rangordnung," 69-70.

<sup>17</sup> "Rangordnung," 4, 51, 53, 60, 62, 71-72.

of *turmae*.<sup>18</sup> His evidence for the latter, however, *CIL* 3, 11213, is not conclusive. The person commemorated served first as an *eques*, then as *optio*, then as decurion of a cohort, then as centurion of a legion. His term as *optio* may therefore have been with the infantry, just as his centurionship was. The use of "duplicarius" in *DP* 12 instead of "optio" even in the centuries, is at any rate unexpected and unusual. It may perhaps be explained either as an extension of the terminology used by the *equites*, who were a higher branch of the service, or as a survival from a time when the *xx palmyrenorum* was organized merely as a *numerus*; but the really important question, whether the change from "optio" to "duplicarius" was only a change in terminology, like the use of *ordinarius*/*ordinatus* instead of *centurio*, or reflects a real innovation in the internal structure of the cohort, cannot be answered with this material. The absence of *beneficiarii* suggests that the latter was the case.

*Sesquiplicarii* are likewise recorded by Domaszewski only for cavalry units.<sup>19</sup> In *DP* 12 they are found regularly in the *turmae*; but there is no certain instance of a *sesquiplicarius* in a century. One is, however, found among the *dromedarii* attached to the *centuria Marci*.

The distribution of the various ranks among the centuries and *turmae* is also of some interest. There is never more than one *sesquiplicarius*, but often there are two *duplicarii* and occasionally two *duplicarii* and a *sesquiplicarius* as well in one of the smaller units. There was only one *cornicularius* for the entire cohort; but he too was carried in the rolls as a member of one of the *turmae* — that of *Zebidas*.<sup>20</sup> In col. 23 recto, line 21, the soldier has a title which may be read as *im|ag(inifer)* and which is certainly not *s|ig(nifer)*. If *imaginifer* is correct, then this officer was carried as a member of the *centuria Mal|.jchi*; and Domaszewski's statement that in the *cohortes equitatae* the *imaginifer* belonged to the *equites*<sup>21</sup> is shown not to be invariably true. There are too few *signiferi* for any conclusions about them; but the *vexillarii* present

<sup>18</sup> "Rangordnung," 57–59.

<sup>19</sup> "Rangordnung," 4, 51, 60, 62, 72. Similarly, in P. Mich. 164 (*Michigan Papyri*, 3, pp. 145–147) the *duplicarii* and *sesquiplicarii* are all promoted to the post of decurion, not the centurionate.

<sup>20</sup> Cf. R. O. Fink, "A Fragment of a Roman Military Papyrus at Princeton," *TAPhA* 76 (1945) 274–75.

<sup>21</sup> "Rangordnung," 58.

an unexpected situation. There are at least seven of them named on the recto of *DP* 12; and six of these are registered among the equites, although there are only five *turmae*. Even more surprising is the fact that four of these six are members of the *turma Octavi*. On the verso the names of two of these four have been dropped; and the two remaining are no longer vexillarii; but two other members of the same *turma* now hold that rank. Evidently each century as well as each *turma* had a vexillarius; but for the purposes of the records, and perhaps because they served as vexillarii for only a short time, they seem always to have been listed with the companies to which they belonged at the time of their appointment, although they actually served with a different company.

The contributions of this group of papyri to our knowledge of the organization of a *cohors equitata miliaria* may now be summarized. First of all, the strength of the entire unit was subject to extreme variations, from about two-thirds of the theoretical norm to double the theoretical norm. Second, it is now possible to say definitely that in the second and third decades of the third century, a *cohors equitata miliaria* had but five *turmae*, and that consequently the theoretical strength of a *turma* was 48 men. Third, when the cohort included dromedarii, these were not organized as a separate force, though they were accounted for separately in the records, but were attached individually to various centuries, possibly also to *turmae*. Fourth, when a centurion was promoted or demoted in his standing within the cohort, his entire century went with him. Fifth, in the *coh. xx palmyrenorum*, and possibly in other units as well, at the end of the second decade of the third century duplicarii had replaced optiones as the lieutenants of centurions. Finally, not only cornicularii and imaginiferi who served the whole cohort, but also the vexillarii were carried in the records as members of particular centuries or *turmae* without regard to the companies with which they actually served.