listed by Spaul only five do not appear in Cichorius' list, excluding two of the early units (*MEFRA* 104, 1992, 178), which probably should be identified with later units.

The epigraphic evidence is the most important source of information for the study of the individual units, but Spaul does not exploit sufficiently the literary sources in his analysis of the ratio and connection between legions and *alae*. He posits that in the earlier periods each legion should have had two *alae*, which is partly incongruous with the available evidence. According to Velleius (2.113) Tiberius had 10 legions and 14 *alae* under his command for the suppression of the Pannonian revolt in 6 C.E. In 69 the Danubian provinces had 16 *alae* (Tac. *Hist.* 3.2) to 6 legions (E. Ritterling, *RE*, XII, col.1363; H.M.D. Parker, *The Roman Legions*, Oxford, 1928, 140-1). True, Vespasian commanded 3 legions and 6 *alae* in Judaea in 67 (Joseph. *BJ* 3.65-6) and Titus had 4 legions, in effect, and 8 *alae* for the siege of Jerusalem in 70 (Tac. *Hist.* 5.1), but none of these cases is discussed by Spaul. In point of fact, the literary evidence and Spaul's own findings show that there was no fixed ratio even in the earlier periods: in some cases it was indeed 1:2, but there were cases of 6:7, 5:8, 2:3, 1:3, etc. Presumably local conditions, tactical considerations and manpower constraints determined the ratio to a large extent in each and every case.

This is a valuable addition to the literature on the Roman army, an indispensable work of reference for all those who deal with the cavalry units of the Roman army; its usefulness is enhanced by various, detailed indexes and lists. It suffers from a number of misprints and inaccuracies, but these should not cause confusion.

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M. Fischer, B. Isaac and I. Roll, *Roman Roads in Judaea 2. The Jaffa-Jerusalem Roads*, Tempus Reparatum BAR International Series 628, Oxford, 1996, 434 pp.

This volume is the second in a series, the purpose of which is to describe travel routes during the Roman period in the province of Judaea. The first volume, which appeared in 1982, also published in this series, dealt with the Roman road from Legio to Scythopolis. The difference between the first and this second work is a very real one and it represents the great progress in research on ancient travel routes in the land of Israel which has taken place in less than twenty years.

The book before us is not only a technical description of the ancient roads from the coast and the coastal plain to Jerusalem in the Roman era. It is a broad analysis of road planning to Jerusalem going from the Bronze Age to later periods. This is done by a combination of methods: the systematic collection of evidence from written historical sources describing road planning between Jaffa and Jerusalem; a survey of more than 130 sites along the course of the roads; the analysis of a number of exploratory archaeological digs at interesting military sites; and an historical-archaeological analysis of written sources vis-à-vis the broad archaeological findings along the path of the roads connecting the civilian and military settlements which were established along the way.

In this important volume will also be found appendices on the roads to Jerusalem during the Hellenistic and Hasmonean eras and descriptions of a number of subterranean hideouts which were prepared for rebellion against Rome in settlements along the road to Jerusalem. Another appendix describes the Seleucid general Bacchides in Judaea who

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attempted to repress the uprising of the Hasmoneans in the time of Judah the Maccabee and his brother Jonathan and to this end fortified the roads leading to the heights of Jerusalem.

The writers note that the routes of the roads to Jerusalem are local and this is in opposition to the Legio-Scythopolis route which was part of the imperial, international route, close to which there were more than a few military encounters which determined the fate of Israel and the neighboring countries.

However, from the days of King David and King Solomon when Jerusalem became the capital and the religious center of the Israelite nation, the importance of the roads to the city grew immensely, continuing over a period of 3000 years through the periods of Christian and Muslim rule and into modern times.

After the destruction of the Second Temple and the military conquest of Israel by Rome, the road to Jerusalem became a truly military route because of the location of the 10th Legion, Fretensis, in the city. Along the route army veterans were settled in Motza-Colonia. In the days of Hadrian a Roman colony was settled in Jerusalem and the city required good roads, both military and civilian.

Over a distance of 115 Roman miles (approximately 170 kilometers) only 7 milestones have been found; this can be compared to the shorter route between Legio and Scythopolis which was 24 Roman miles (about 35 kilometers), and along its length as many as 22 milestones were found. However, due to the importance and centrality of Jerusalem in the consciousness of Jews and of the believers in other faiths alike, we have many descriptions in writing of the path to the city, and these are of assistance in reconstructing the primary and secondary routes which led from the coast and the coastal plain to the city.

The location of Jerusalem on the mountain crest at a height of 800 meters above sea level and the great difference in altitudes between the coast and the city caused people to choose a large number of routes to Jerusalem. This is a descriptive and professionally done volume on the routes to Jerusalem, including a number of specific examples, i.e., the Lower Beit Horon Ascent, close to H. Mazad. Each route had its advantages and disadvantages and they were not all in use at the same time.

The importance of the research with which we are dealing lies in the attempt by the authors to identify the routes according to archaeological-historical periods and to determine the relation of the settlements to the routes.

Detailed maps of the settlements and their relation to the routes form an important and original picture, which is not complete because of the dearth of excavated sites and because research does not always produce firm conclusions. Nonetheless the results here are most fascinating.

A study of maps of the routes and of the layouts of the settlements in different periods shows that from the beginning of the second millennium B.C.E. the routes led out of Lydda through the area of Modi'in (Midiya), Beit Horon, and Gibeon to Jerusalem, with a more southern route going from Lydda, via Emmaus and Abu Ghosh, to Jerusalem. Between these two major routes there were many additional, auxiliary routes.

The book begins with an interesting collection of written sources which describe the routes and incidents which took place along them, starting with the second millennium B.C.E. and continuing to World War I when a transport unit of the British army and its allies had to renovate and pave ancient routes in order to allow the passage of heavily

loaded ammunition vehicles and other supplies to the battle areas prior to the taking of Jerusalem in the fall of 1917.

Yuval Shahar and Yigal Tepper write about the auxiliary routes which led beyond Jerusalem in the Hellenistic era and during the Hasmonean period, e.g., Ma'aleh Gifna. These writers also describe a number of underground hideouts which were discovered beneath settlements along the routes, and in their judgment these should be associated with the Bar Kochba uprising during the time of Hadrian. These subterranean hideouts are noted at Kafr Rut, Tel er-Ras and H. Kurikur.

In this framework it is interesting to note a written source from the Crusader period (1100 C.E.) which tells of the Muslim population in the country who hid themselves, their property and their livestock in caves and fox-holes in fear of the Crusaders. Only by setting fires at the entrances to these tunnels were the Crusaders able to drive them out of their hiding places, where they proceeded to kill a good number of them. It seems that the Romans, centuries before, used similar methods to put down the revolts in Judaea.

The chapter on the sites is made up of both material and archaeological findings in addition to written records on the sites identified along the routes to Jerusalem. The archaeological findings in the sites are in part kept at the Antiquities Authority and are a primary source of information for historians and archaeologists. In addition, we have tables showing the differences between the distances mentioned in written records and the actual distances measured.

The writers, Fischer, Isaac and Roll, are to be praised for including many enlightening maps, plans of sites and a large number of photographs including aerial photographs from the period just prior to World War I.

The book includes a detailed index which makes for easier reading and reference. There is no question that this volume establishes a new standard in the study of ancient routes in historical Israel and it is to be hoped that future work by these writers will be published in the near future.

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