FIRST MEMORANDUM HISTORICAL SURVEY OF THE NUMBER AND DENSITY OF THE POPULATION OF ANCIENT PALESTINE

Method of Enquiry

1. Although census-taking was a well known practice in antiquity, the fragmentary data that have reached us do not contain sufficient information to enable us to draw definite conclusions regarding the numbers and fluctuations of the population of Palestine.

In the absence of a detailed census of inhabitants, the simplest way to arrive at an estimated number is to make a census of habitations. Had we had a complete list of the ancient localities of Palestine, we could probably arrive at a fairly reliable estimate.

Unfortunately, no such complete gazetteer for ancient Palestine exists. Lists of place names have been collected from various written sources. Some come under the category of geographical lists; but many of these are fragmentary and incomplete, while others mention only the most salient points of a geographical landscape, or the main localities of a given region. Finally, not all of them belong to the same period: by the time the later lists were drawn up, some localities had ceased to be inhabited, and new settlements had been founded in others. It must also be remembered that many places appear in these sources only incidentally in connection with some historical or literary narrative. Other, and possibly more important places, which have no relation to the story told, are not mentioned. Fresh archaeological discoveries constantly add to our toponymic lists, and demonstrate the unavoidable gaps in our knowledge. To quote but one well-known example: there are about 600 place names in the Old Testament, but only slightly over twenty in the New, although the latter deals with a period in which the country was much more densely inhabited. (See below, pp. 12 fol.)

2. These unavoidable deficiencies in our written sources are remedied to a great extent by the unwritten evidence of archaeology. Every scientific explorer of Palestine, from Edward Robinson in 1838 down to the latest archaeological surveys, has been struck with the great number and extent of ruined sites in the country as compared with present-day habitations. The following facts, taken from official sources, will show how far this impression is correct:

(a) In the Palestine Gazette No. 1375 of the 24th November 1944 (Supplement No. 2) the Director of Antiquities publishes a schedule of over 2800 historical sites and monuments. It should be noted that this lists only places whose importance entitles them to protection by law. The archives of the Department of Antiquities, which are open to the public, contain a total record of over 4000 sites. The number of inhabited sites in Palestine at the time of the 1931 census was 981, and at present cannot exceed 1200.

(b) For the kingdom of Transjordan schedules noting a total of 507 ancient sites have been published in the Official Gazette of the Emirate, Nos. 621 (1st January 1939) and 656 (2nd December 1939). The archives of the Transjordan Department of Antiquities record 607 sites. This is far from complete; in 1933-38 Prof. Nelson Glueck, Director of the American

School of Oriental Research, Jerusalem, made an archaeological survey of Transjordan, which covered ancient Edom, Moab, Ammon and about half of Gilead. In those parts alone he found about 716 ancient sites [1].

The total number of inhabited localities in Transjordan, as shown on the 1: 250,000 scale map published in 1937 by the Department of Lands and Surveys, Transjordan, is 311.

There exists, therefore, a strong **prima facie** case for the belief that the ancient population of Western Palestine exceeded the modern by four to one, and that Transjordan's inhabitants were once two and a half times their present number.

3. Two objections seem at first sight to present themselves to this method of rough computation:

(a) In each list, localities large and small are lumped together, appearing as single units. The ancient site might have been a single farm, and the modern village may number several thousands of inhabitants. This objection is not, however, as valid as it might appear. It will be shown below in detail that the size of the ruins does not differ much from that of an average Arab village of to-day, and the density of habitation has certainly not changed since ancient times. In addition, some of the units in the list of ancient sites represent cities, such as Caesarea and Ascalon, which had very large populations in antiquity. The comparison of the numbers of ancient and modern sites is therefore quite legitimate.

(b) A second, and more weighty objection, is that all the places listed in the schedules of ancient sites cannot have been inhabited at the same time, as obviously in the course of several thousand years the population centres must have shifted considerably. A mere counting of ruins does not therefore give an adequate idea of the density of population at any given time.

This objection is valid in itself, and the proper method is to take into account only such sites which can be proved to have been inhabited contemporaneously. The dating of sites becomes therefore a factor of prime importance for this enquiry.

4. There are two ways of determining the date of an ancient site, corresponding to the two kinds of sources we possess, written and unwritten. If a place is mentioned in the Egyptian or Assyrian inscriptions, in the Old or New Testaments, or in ancient topographical works, and if it can be identified with a modern locality, then its existence during the given period is assured. However, as explained above, written sources give only a fragmentary and disconnected account of ancient settlement in Palestine.

Far more fruitful is the dating of sites by archaeological evidence. This method has now been adopted by all competent scholars and has yielded new and most important results for the history of territorial settlement in antiquity.

Archaeological Dating.

5. Archaeological dating is based on the exact sequence of examples of ceramic ware [2].

Sir Flinders Petrie was the first archaeologist to recognize the value of potsherds for dating, his method having been brought to a high degree of perfection by W. F. Albright, A. Alt and their

pupils.

The value of pottery for the dating of sites is based on the following facts:

1) "Whole vases and broken sherds outnumber all other artifacts on ancient sites in the Near-East a hundred to one" (W.F. Albright) [3].

2) Pottery fashions in texture, shape and decoration varied from period to period. At present potsherds can be dated in Palestine within two centuries with absolute certainty, and often with great probability to with 100 or even 50 years.

3) Well-fired, oven-baked pottery is practically indestructible; potsherds have therefore come down to our time while wood, textiles, etc. have perished.

4) Vessels were easily broken and thus had to be renewed every few years. The single potsherds were valueless in themselves and were therefore left on the site, while more valuable material, such as building stones, metal, etc. was carried away. Thus the potsherds found on a site can be definitely connected with a given place and period.

6. The dating of unexcavated sites is based on surface exploration, that is, the collection and examination of the sherds found on the surface of a site. In theory one would expect that at a site where debris has accumulated only the latest sherds would lie on the surface. Experience has shown, however, that the action of wind and weather has usually churned up the soil to such an extent that sherds of practically all periods represented on the site can be found on the surface, provided the search is diligent enough.

The final confirmation of the reliability of surface exploration is furnished by excavation. To quote one example out of many:

"A number of years ago, while undertaking an archaeological survey expedition through southern Palestine, William F. Albright came across an ancient mound...called Tell Beit Mirsim. Climbing up and down the slopes of the mound, he collected hundreds of fragments of pottery which belonged to all the layers of ruined villages contained within it, and on the basis of those surface finds alone came to the conclusion that the site had been inhabited from about 2000 to about 600 B. C. Thereafter, commencing in 1928, four successive years of excavations were carried out there under his direction. On the basis of the great quantity of archaeological materials of all kinds obtained in the long and wearisome and most carefully conducted excavations, Albright came to the conclusion that his first estimate of the total history of the occupation of the site was mistaken. No, Tell Beit Mirsim had not been inhabited from 2000 to 600 B.C. It had been inhabited from 2200 to 586 B.C. In other words, the conclusions he had arrived at on the basis of mere surface pottery finds were in general completely corroborated by the results of the actual excavations. They were merely made more exact". [4]

Archaeological Surveys.

7. The application of archaeological dating to the problem under consideration requires an examination of every site in a given area, and the more complete and thorough such an examination, the more exact will be the results achieved. The Survey of Western Palestine, undertaken by the Palestine Exploration Fund in 1874-8, was made before the discovery of

modern methods of dating sites, and a projected up-to-date survey by the British School of Archaeology, Jerusalem, has not so far materialized. The only parts of Western Palestine, therefore, which have been thoroughly surveyed are Western Galilee, two areas in Eastern Galilee and Judaea (all explored by Aapeli Saarisalo, a Finnish scholar and pupil of W.F. Albright) and part of the Northern Jordan Valley (explored by Dr. A. Bergman and Mrs. Kallner). In Transjordan a much more complete survey has been made by Prof. N. Glueck, as mentioned above. He has found more than 400 dateable sites in Moab and Edom and over 300 in Ammon and Gilead; he admits however, that "the possibilities of discovery of still additional ancient sites have definitely not been exhausted" [5].

The following notes are based mainly on the work of the above scholars.

8. The Results of the Surveys.

A. Western Galilee.

In 1928-29 A. Saarisalo examined 64 sites in the plain of Acre and the mountains of Western Galilee [6].

His results can be tabulated as follows:

The peak occupation of sites was therefore in the Roman-Byzantine period; it survived into the early Arab period, after which on most sites occupation ceased.

Part of the area examined in W. Galilee is represented on Map 1 to a scale of 1:20,000 (based on the Topocadastral Map of the Survey of Palestine, sheets 17/24 and 18/24). It will be seen from the map that the fertile area of the Sahel Battauf (the ancient Plain of Asochis) to-day supports 5 villages with a total population of 2,180 inhabitants (the number of inhabitants is taken from the official Gazetteer of Place- Names of Palestine and Transjordan, 1940, based on the Census of 1931). In the Roman-Byzantine period the same area supported 19 settlements. It is also evident from the map that the extent of the ancient sites is on the average equal to that of the modern villages. In addition it should be noted that this area, at least during the early Roman Period, contained two cities, Asochis and the famous fortress of Iotapata.

B. Eastern Galilee

In 1926 Saarisalo explored the Valley of the Wadi Fejjas, a confluent of the Jordan [7] (see map 2, based on sheet 5 of the 1:100,000 map of the Survey of Palestine).

His results in this area were:

BA	IA	R-B
14	12	36

The area contains six Arab villages (all built on ancient ruins), with a total population of 3.764. There were six times as many settlements in the same area at the peak Roman-Byzantine period.

C. The Northern Jordan Valley.

This area (see map 3, based on sheet 5 of the 1:100,000 map of the Survey of Palestine), was

explored in 1941 by Dr. A. Bergman, then District Officer, Affule, and Mrs. R. Kallner [8]) They visited 33 sites.

Their results were:

At present the area contains the Arab town of Beisan (very much shrunken since ancient times, when Scythopolis was the capital of Northern Palestine) and two Arab villages (total population 4,527).

Note: In both the last two examples the Jewish settlements have been omitted. Our aim is to compare the present state of Palestine in general with conditions in antiquity; the Jewish colonies introduce an element of intensive settlement and modernization foreign to both the ancient and the present-day Arab economy.

D. The Judaean Mountains.

A glance at this area as shown on any Map shows that the number of ruined settlements far exceeds that of the sites occupied at present. A. E. Mader, a German Catholic priest, who explored part of the area in 1911-1914, noted that the proportion of ruins to villages in 960 sq. kms of Southern Judaea was 18:1- that is 90 ruins to 5 villages [8a].

Only a small part of this area (shown on map 4, 1:20,000) has been properly surveyed. A. Saarisalo visited 34 sites in 1930 [9] and noticed:

The map shows only the Byzantine-Arab sites; the comparative area of the sites and of the three modern villages-total population 4,400-should also be noted

E. The Negeb (See General Map 6).

It has been known since 1838 that the desert country south of Beersheba contains the ruins of six towns, as well as traces of extensive areas of agricultural settlement. In some of the ruined cities of the Negeb the houses are still partially standing; in others the area built over is clearly discernible. The maximum and minimum estimates of the population of these towns were given in 1938 as follows: [10]

	Maximum	Minimum
Elusa-Khalasa	20,000	15,000
Rehoboth-Ruheibe	15,000	3,000
Nessana-Auja	10,000	10,000
Subeita-Isbeita	10,000	8,000
Eboda-Abda	8,000	8,000
Kurnub	8,000	8,000
	71,000	52,000

It should be noted that in the case of Subeita subsequent excavations have confirmed the maximum estimate given above [11].

As regards the agricultural areas, the population of the Birein-Auja area has been estimated at 8,000 [12]. If we assume for the whole Negeb an agricultural population of four times that size, this, added to the total number of urban inhabitants, gives us, at the peak period, a settled population of not less than 80,000-100,000.

Archaeological research has shown that the cities of the Negeb were founded in the Hellenistic age, reached the zenith of their prosperity in Byzantine times and survived into the early Arab period, after which they slowly declined [13].

F. Moab.

As a sample area of Transjordan, ancient Moab, situated between the rivers Arnon (Wadi Mojib) and Zered (Wadi Hesa) and corresponding exactly to the present-day district of Kerak, will serve our purpose well. The area was explored by Prof. N. Glueck in 1933, and in 1936-8 [14]. Map 7 shows the results of his work. It has 165 ancient sites as compared with 50 existing settlements. The detailed results for the various periods are:

	BA	IA	Nabataean	R	B	A
1933	7	8	33	11	12	21
1936-8	14	22	70	56	27	15
	21	30	103	67	39	36

Note: The Nabataeans were Hellenized Semites who had their capital at Petra. At first caravan merchants, they developed a flourishing agricultural civilisation in south-eastern Transjordan in the first centuries B.C.E. and C.E.

9. The following calculation sums up the results of the archaeological surveys for the peak period:

In Western Palestine four areas were examined, three of them in the hill country. All four are rural areas, only one of them containing any large town of ancient times Beth Shean, once Scythopolis.

In these districts there are at present 18 villages with a total population of approximately 15,000. In the Late Roman and Byzantine periods 113 villages or townlets existed in the same area. Assuming, as we are entitled to, a similar rate of density, the 638 sq. km. examined, at that time supported a population of about 94,000.

The whole area of Palestine is 27,000 sq. km. Deducting the Negeb (i.e. the Beersheba Sub-District, 12,000 sq.km.) the rest of the country amounts to 15,000 sq. km., two thirds of it hills and one third plain. Comparing the population of the area examined with the total area we arrive at the following estimate:

The hilly area examined as above amounts to 638 sq. km. while the total hilly region covers 10,000 sq. km. - that is, 15.6 times as much. The population of the area examined is estimated at 94,000. If a similar proportion - 15.6 to 1 - is assumed between the two areas, the estimated population for the whole of the hilly region is 1,466,400.

Comparing the area of the ruined cities with that of existing towns, we come to the conclusion that Scythopolis - Beisan, which was as big as Jerusalem is today, must have had at least 100,000 inhabitants. Christian Aelia Capitolina about 80,000 and the four towns of Sebaste (Samaria), Neapolis (Nablus), Tiberias and Sepphoris at least 50,000 each.

Thus the urban population of the area must have been 380,000, which, together with the 1,500,000 rural inhabitants, makes a total of 1,880,000.

In the coastal plain the cities of Caesarea, Gaza (and satellite towns) and Ascalon had at least 100,000 inhabitants each. This 300,000, plus 50,000 each from Jaffa, Lydda, Azotus-Ashdod (inland and coastal) and Acre, plus 20,000 each from Raphia, Iamnia, Antipatris, and Dor, makes the total urban population of the plains equal to 580,000. If a rural population for half the area of the hill country at the same rate - 750,000 - is added, the inhabitants of the whole coastal plain are seen to number 1,330,000. Taken together with 100,000 from the Negeb, this makes a total of 1,430,000.

As we have seen (p. 15) the peak period in Transjordan was somewhat earlier than that in Palestine, falling in the Early Roman period. At that time the population must have been roughly three times the present one (the Kerak district, where the ratio of ancient to modern is 2:1, is one of the most densely inhabited at the present time, contains no large ancient cities, and is therefore not quite representative). The present population of Transjordan is about 330,000, and therefore at the peak period must have been about a million [14a]. Assuming a certain decline in the Later Roman and Byzantine period, we calculate the population to have then been 750,000.

On purely archaeological grounds we arrive, therefore, at a total maximum for ancient Palestine of 4,060,000.

Historical Data.

10. The first reliable calculation of the population of ancient Palestine is mentioned in Numbers i, 46, where the Israelites are reckoned at 603,550 [15].

W.F. Albright has plausibly demonstrated that this is the remains of the census made by David. Starting from this premise he calculates the whole population of Palestine in the time of David at 750,000. Counting backwards from this, he puts the population at the El-Amarna age (XIVth century B.C.E.) at half-a-million; working forwards, he estimates that in the VIIIth Century B.C.E. the same area contained one million inhabitants. The latter calculation appears to him to be confirmed by Assyrian sources.

As regards the later period Albright remarks (ibid):
"One of the clearest indices (aside from actual contemporary figures given by reliable authorities) is furnished by the relative number of occupied villages. More than three times as many ruins in the hill country were inhabited during the Roman period as in the Early Iron age".

In pursuit, however, of his problematical hypothesis that the census recorded in Numbers i is based on that of David. Albright disregarded the data obtained, according to Biblical sources, in the latter. Nor does he accept as reliable the statement in Chronicles, supported by weighty historical evidence, that the Levites and Benjaminites were not included in the census, although he has since on several occasions stressed the reliability of the Book of Chronicles as an historical source. It appears, therefore, that the Biblical details of the census should be taken at their face value. Even accepting Samuel's lower figure (1,300,000) and allowing for some 200,000 Benjaminites and Levites, (cf. I Chron. vii, 1) one arrives at a figure of 1,500,000 in the time of David. Taking into consideration the fact that, although by the VIIIth Century the population per geographical unit had increased, the total area of the two kingdoms was slightly less, an estimate of about 1,300,000 would not be out of place, and could not be contradicted on the basis of Assyrian sources.

11. There has been much controversy about the population of Palestine at the beginning of the Christian era. The evidence of our principal source, Josephus Flavius, must be sifted very carefully. His statement that Galilee contained 204 villages, the smallest of which possessed 15,000 inhabitants, (i.e. a total of 3,060,000 [16]), must be rejected outright. Much more reliable is the fact that in Galilee he recruited an army of 60,000 [17]. On the usual calculation that the proportion of population to mobilizable forces is 10 to 1, the population of Galilee in the time of Josephus should have been about 600,000.

Josephus also states that the number of pilgrims to Jerusalem at Passover, ascertained by counting the sacrificial lambs, was 2,700,000. [18] Although this number must be rejected as fantastic, it has a foundation in fact, as we shall see later.

Of the modern scholars A. Harnack [10] gives the lowest estimate (700,000) and J. Juster [20] the highest (5 millions). Harnack simply assumed a number equal to the population of Palestine at the time he wrote (1902). Juster accepted the statement of Josephus and arrived at his figure by assuming that half the population of Palestine attended the Passover at Jerusalem, and that some 200,000 came from abroad.

The majority of scholars - Beloch [21], Ed. Meyer [22], U. Kahrstedt [23], Albright [24] and S. W. Baron [25] accept two millions as the correct figure. Beloch, who in general is inclined to accept the lowest possible figure, puts the population of Syria, Palestine and Transjordan in the early years of the Roman Empire at 5-6 millions, Palestine's share being 2 millions. Albright assumes 1.5 millions for W. Palestine and 500,000 for Transjordan (in view of recent research the latter estimate is thought to be too low).

This figure is supported by two further data. The Syrian historian Bar-Hebraeus mentions that the total number of Jews in the Roman Empire under Claudius (Ist Century C. E.) was 6,944,000 [26] As we know that the Jews of Egypt numbered one million [27] and those of the Roman diaspora cannot have exceeded four, we are left with two millions for Palestine.

The apparently fantastic figure of Josephus supports this view. In the absence of a census of pilgrims, which could not have yielded such a result, Josephus apparently assumed that, as every Jew was supposed to visit Jerusalem at Passover, every Jew in Palestine actually did so. Knowing the approximate number of his compatriots and allowing half a million Jews from abroad for good measure, he arrived at his figure.

12. There remains to consider the relative proportions of the population in the Roman and Byzantine periods. We have shown that the Byzantine period was the peak for Palestine so far as population was concerned. Taking the Bronze Age figure as 1, the archaeological data stated above give us for each successive period the following ratio:

	Bronze Age	Iron Age	Byzantine
W. Galilee	1	1.4	2.1
E. Galilee	1	0.85	2.6
Jordan Valley	1	1.8	2.6
Judaean Mts.	1	1.25	7.2
Total Average	1	1.32	3.62

Accepting our estimate of 1,300,000 as the population of Palestine in the Iron Age, and multiplying it by the above ratio, we arrive at a conclusion very near that obtained from the archaeological data, that is, nearly four million.

There is still another factor to be considered. We know from ancient literature [28] that in the Vth century C.E. the Syrian diocese of Cyrrhus (which included a good deal of steppe country) covered a territory of 2,220 sq. km. with about 200,000 inhabitants of the Orthodox faith, and many more, if those of other communities are included. Assuming the average population to the square kilometre of Syria and Palestine to be equal and reckoning the whole territory at 116,000 sq. km., we arrive, in Dr. Heichelheim's opinion, [20] at an estimate of 10 millions for the whole area. Beloch's ratio of Syria: Palestine as 6:4 gives us the same conclusion as above. Dr. Heichelheim has tried to apply the Cyrrhus statistics to the Roman period, but this is mistaken; the figures are given expressly for the fifth century, i.e. the Byzantine era, and they agree with what we have already observed in Palestine.

On both the archaeological and the historical evidence, we arrive, therefore, at the conclusion that the maximum number of inhabitants of ancient Palestine was about four millions, and that it was reached in the Byzantine period [30].

13 The historical causes of this phenomenon are the following:

(a) In Galilee the rise of population is attributable to the concentration there of the greater part of the Jewish population of the whole country after the defeat of Bar Kokhba in 135 C.E.

(b) In the rest of the country the effect of several centuries of peace was probably noticeable. Apart from a few short periods of war between the rival emperors, Palestine enjoyed one of the longest spells of quiet in its history between the year 135 C.E. and the Persian and Arab invasions in the VIIth century.

(c) The policy of the Byzantine Government favoured settlement in the Negeb. The Byzantines were cut off by their Persian enemies from the Eastern trade with India on all routes except that through the Red Sea, and to strengthen their hold on the Negeb was one way of assuring that route.

(d) At that period, capital was flowing into Palestine freely, both from the Imperial Treasury and from refugees fleeing eastwards from Italy and the Western Empire before the onslaught of the Barbarians.

14. That the population of Palestine reached such high numbers in antiquity would be astonishing were it not for the fact that all countries of the Middle East, Egypt excepted, show a similar trend. To use the latest estimates, in Prof. Tenney Frank's *Economic Survey of Ancient Rome***,** Vols. II, IV, Baltimore, 1336-38, we find the following data:

	Ancient	Modern
Vol. II p. 245 Egypt	7 millions	17 millions
Vol. IV pp. 158 foll. Syria	6 "	3.2 "
Vol. IV pp. 815 foll. Turkey	13-16 "	17 "
Vol. IV p. 159 Mesopotamia	6-8 "	3-3.5 "
Vol. IV p. 159 Palestine & Transjordan.	4 "	2 "

With the exception of Turkey, where population figures have remained more or less constant, Egypt is, therefore, the only country which has risen above the ancient level, although the same phenomenon can be observed in all the more developed countries of Europe, where the Roman figure was left behind a century ago or more. We may assume that the ancient maximum represents the greatest number of people that can subsist on the soil under conservative Arab methods of cultivation, which do not differ much from the ancient ones. Unaided by modern science, the ancient results were obtained by stable government and attention to the conservation of soil and water. It is safe to prophesy that the application of modern methods of irrigation and conservation, quite apart from questions of industrialisation, may yet bring about a rise in the population far above the maximum of ancient times.

1. Cf. the list of sites in the *Annual of the American Schools of Oriental Research* XIV (1934). pp. 85-6; XV (1935), pp. 144-7 and XVIII-XIX (1939). pp. 270-274. The total number of sites listed is 781, but allowance has been made for those visited twice.

2. W. F. Albright, *From the Stone Age to Christianity*, Baltimore, 1940, p. 20.

3. *Ibid*., p. 20.

4. N. Glueck. *The Other Side of the Jordan*. p. 20.

5. *Annual of the American Schools of Oriental Research* XVIII-XIX (1939) p. xxii.

6. *Journal of the Palestine Oriental Society* IX (1929), p. 27; X (1930), pp. 5 foll.

7. *The Boundary of Issachar and Naphtali*, Helsinki, 1927, pp. 85-87.

8. *Bulletin of the Jewish Palestine Exploration Society* VIII (1941), pp. 85-90.

8a. *Altchristliche Basiliken und Lokaltraditionen in Südjudäa*, Paderborn, 1918.

9. *Journal of the Palestine Oriental Society*, XI (1931). pp. 98 foll.

10. M. Avi-Yonah, *Palestine and Middle East Economic Magazine*, No. 9 (1937), p. 439.

11. Baly, *Palestine Exploration Quarterly*, LXVIII (1935), p. 178.

12. Avi-Yonah, *loc. cit*.

13. G. E. Kirk, *Palestine Exploration Quarterly*, 1941, LXXII (1933), pp. 61-67 foll.

14. *Annuals of the American Schools*. XIV (1934), and XVIII-XIX (1939).

14a. N. Glueck (*Annual* XVIII-XIX, pp. 79-80) notes that the pressure of population in the Nabataean period was far greater than in the preceding Edomite era, and caused the area of settlement to expand greatly towards the East. The excavations at Gerasa (Kraeling, *Gerasa*) have also shown that, notwitstanding very extensive church-building activities during the Byzantine period the greatest prosperity of the city was reached in Roman times.

15. *Journal of the Palestine Oriental Society*, V (1925), pp, 24 foll.

16. *Vita*, 45.

17. *Jewish War* II, 20, 8.

18. *Jewish War*, VI, 9, 3.

19. *Mission and Ausbreitung des Christentums* I, Leipzig, 1902. p. 3 foll.

20. *Les Juifs dans l'Empire Romain* I, Paris, 1914, pp. 209. foll.

21. *Die Bevölkerung der griechish-romischen Welt*, Leipzig. 1886, pp. 242 foll.

22. *Handwörterbuch der Staatswissenschaften*, s. v. Bevölkerung.

23. *Ibid*, 4th ed.

24. Journal of the Palestine Oriental Society, V (1925), p. 24, note.

25. *Social and Religious History of the Jews*, New York, 1937, Vol. I, p. 132; Vol. III, pp. 33; 39.

26. ed. Pocock, Oxford, 1653, p. 73. (quoted by Juster *loc. cit.*).

27. Philo, *In Flaccum*, 6.

28. F. Cumont, *Journal of Roman Studies* XXIV (1934). p. 189, based on Theodoretus, Epist. 42 *Patr. Graeca* 82, c. 1220 & 113; *ibid* c. 1316.

29. ap. Frank, *Economic Survey of Ancient Rome* IV, Baltimore, 1938, pp. 158 foll.

30. The resultant density of population, 86 per sq. km., is considerably in excess of the modern one, 60.