

SODOM AND GOMORRAH REVISITED

David M. Howard, Jr.*

The so-called cities of the plain, Sodom and Gomorrah in particular, are among the best known of the Biblical cities but, unlike places such as Jerusalem or Bethlehem, their fame is notorious. Sodom has lent its name to a form of behavior condemned in Scripture and as such has been the subject of a vast literature. It has also stood as a symbol of wickedness in general and of divine judgment.¹ This fame has come neither on the basis of geographical, military, political or cultural importance, nor of chronological longevity, nor of archaeological significance. Rather, it is based on a few passages in Genesis—whose historical value has often been questioned—that chronicle events from a specific time.

Aside from the literary or moral use of the stories, one of their more interesting facets is the stage on which they unfolded. Perhaps because of their notoriety, perhaps because of the way in which they have resisted discovery, perhaps because of the bearing they have on the patriarchal narratives, and perhaps even because of the strangeness of the Dead Sea area, in which they were once located, the site of these cities of the plain (or the pentapolis, to use the term of Wis 10:6) has been a focus of interest for centuries. In the last hundred years, with the advent of geological and archaeological exploration, interest in the problem has been kindled afresh.

In spite of increasingly sophisticated activity, however, the fact remains that the locations of these cities are today still unidentified. This is not for lack of site proposals (there have been many) but for lack of hard, unambiguous evidence. The purpose here is to review and evaluate the evidence anew for the location of these cities and to point to a probability. The primary emphasis is geographic: Where was the pentapolis? The stimulus for this research has been the interest generated recently in a new site proposal by Walter Rast and Thomas Schaub on the basis of survey and excavation southeast of the Dead Sea.²

A bias consciously adopted here is that written records (Biblical or otherwise) speak more clearly than unwritten ones. They provide a starting point and must be given priority. Moreover, since the Bible is the primary source for the location of the cities it will figure most prominently here. Thus this essay will review all the Biblical references to these cities that shed light on their location. The conclusion here is that the Biblical data point to their location somewhere in the southern environs of the Dead Sea. The evidence from tradition will be surveyed

*David Howard is instructor of Old Testament at Bethel Theological Seminary in St. Paul, Minnesota.

¹On the sins of Sodom, and on Sodom as symbolic of judgment, see D. M. Howard, Jr., "Sodom," in *The International Standard Bible Encyclopedia* (rev. ed.), 4 (forthcoming).

²See *infra*, Section III.2.

and a similar conclusion reached. Then the archaeological evidence will be reviewed. The conclusion here is that Rast and Schaub are likely right in locating these cities southeast of the Dead Sea (although at the time of this writing, their promised defense of the hypothesis has not yet appeared).

The site of the pentapolis is somewhere near the Dead Sea, of course. The theoretical possibilities range from the eight points of the compass to a point in the Sea itself. The main possibilities, however, are northeast, southwest, south (submerged) and southeast.

I. LITERARY EVIDENCE: BIBLICAL

1. *Gen 10:19*. The first reference to any of the cities of the plain is in the so-called Table of Nations, which purports to be a map of sorts. This map is of the outlines of the Canaanite territory and appears to be roughly triangularly-shaped. The reference point is the northern border of Canaan near Sidon (the lack of a fourth point is explained by the narrowness of the Canaanite territory in that area³). The land extends southwest to the Gerar-Gaza area and southeast to the area of Lasha and the pentapolis, four cities of which are mentioned (the four that were destroyed, according to Genesis 19; their common fate is likely why they are grouped together here). Lasha and the four cities are unidentified, but Gerar and Gaza are known, Gaza being west and north of Gerar. There is an evident parallelism between these two and the other grouping, shown by the repeated pattern of the prepositions: *b'kh . . . 'd . . .*⁴ If so, one could expect a similar geographic relationship within the two groupings—i.e., just as Gaza is north and west of (or “near”) Gerar, Lasha would be north and east of (or “near”) the four cities. (Then “Gerar” need not be taken as a gloss, as Schatz postulates.⁵) Furthermore one could expect the distances between Sidon and the parallel groupings to be roughly equivalent. This would place the cities roughly halfway down the Dead Sea in a north-south bearing and could fit either a northern or a southern hypothesis. However, since Canaan occupied most of the region west of the Sea (including that down to its southern end) and since there is an evident parallelism here, the likelihood is that the southeast limits of this map were nearer the southern reaches of the Dead Sea area than the northern. It might be objected that the parallelism is not exact: Four cities correspond to one (Gerar). This is likely, however, because the four cities were not important independent of each other but were usually mentioned as a group (or at least in pairs).⁶ But what can be asserted is that Lasha and the pentapolis were perceived

³See e.g. H. L. Ginsberg, “A Preposition of Interest to Historical Geographers,” *BASOR* 122 (1951) 12-14, esp. p. 13.

⁴“In the direction of X, as far as Y.” X consists of Gerar or the group comprising Sodom, Gomorrah, Admah and Zeboim, and Y consists of Gaza or Lasha. Ginsberg (“Preposition”) notes that *'ad* can sometimes mean “near” or “at,” including here. (See also Ginsberg, “Postscript to Bulletin, No. 122, pp. 12-14,” *BASOR* 124 [1951] 29-30; S. Speier, “On Hebrew *'ad* Meaning ‘At, By, Near,’” *BASOR* 126 [1952] 27.) Whichever understanding of *'ad* is correct, the salient point here is the parallelism.

⁵W. Schatz, *Genesis 14: Eine Untersuchung* (Europäische Hochschulschriften 23/2; Bern: Herbert Lang; Frankfurt: Peter Lang, 1972) 176 and n. 120.

⁶See Ginsberg, “Preposition” 13.

as being near each other in a way similar to that of Gaza and Gerar.

Lasha is unknown elsewhere in the Bible. "Bela" is sometimes proposed as an alternate reading on the basis of Gen 14:2, where it is the fifth city of the pentapolis. A less drastic emendation proposes reading לָשׁ for לָב , yielding Laish, the city later known as Dan (Judg 18:29) and whose location is known. On this basis the map could be seen as delimited by four points (Sidon, Gerar-Gaza, the four cities, and Laish/Dan). This is dubious, however, as it breaks up the parallelism of the verse based on the prepositions. The alternative would be to place the four cities near Laish/Dan (a northern hypothesis in the extreme), but this is untenable in view of what is known about the pentapolis: that it was somewhere near the Dead Sea. The fact is that there is no textual evidence for either of these emendations, and so "Lasha" is best retained despite the fact that this does not help with the geographic identification.

Regardless of the location of Lasha, however, Harland well notes that if the north end of the Dead Sea were meant here, there were certainly more prominent cities that could have been cited (e.g. Jerusalem, or Hebron, or both).⁷ On balance, then, if this passage favors one hypothesis it is the southern.

2. *Gen 13:10-12*. The next relevant passage is part of the Abraham cycle and involves the question of the location of the "Jordan valley" or the "plain of Jordan," including the meaning of the term *kikkār*, which is usually rendered "valley" or "plain." Lot is pictured at a location near Bethel, looking toward (*b'kh*) Zoar, the fifth city of the pentapolis. Within his view he saw "all the *kikkār* of the Jordan" (v 10). The same phrase is used again in v 11. Lot then traveled east and settled (v 12) in the "cities of the *kikkār*." These cities are outside of Canaan proper, where Abram settles (v 12), so the *kikkār* is thus located east of the Jordan river. If Lot only traveled eastward (instead of east and then south), then this passage places the pentapolis at the northern end of the Dead Sea. Arguing in favor of this is the fact that the southern end is not visible from near Bethel, whereas the northern end is.

Further support for this northern location comes from the only other occurrences of *kikkār hayyardēn* (which is the phrase in vv 10 and 11): in 1 Kgs 7:46 = 2 Chr 4:17, where it is placed between Succoth and Zarethan. These are located in the Jordan valley near the Jabbok river, east of the Jordan river. In addition 2 Sam 18:23 places the "way of the *kikkār*" also in the vicinity of these two cities.

Finally, there is a different usage in Nehemiah's time, the term (*hakkikkār*) referring to a district surrounding Jerusalem (Neh 3:22; 12:28). In the latter passage there is even a connection with the presumed etymology of the root (arising from a term meaning "round"⁸), since it is accompanied by *sbybwṭ* ("surrounding"). The emphasis is clearly on the *kikkār*'s roundness here. This should not be pressed, however, since even on a limited view of the extent of the *kikkār*

⁷J. P. Harland, "Sodom and Gomorrah: The Location of the Cities of the Plain," *BA* 5 (1942) 17-32, esp. p. 20. My colleague Carl Rasmussen suggests that Jericho would be a more likely city to have been mentioned since it, like the other cities, is in the lowlands (and not in the hills, as are the two Harland cities). See also *infra*, n. 40.

⁸E.g. BDB *s.v.* It is not only a geographical term but can also refer to a round loaf of bread and a round unit of weight (the talent).

*hayyardēn*⁹ it must be seen as oval in shape, extending up the Jordan valley from the Dead Sea at least to Zarethan and Succoth.

The clearest picture from these usages is of an area north of the Dead Sea. All other occurrences of *kikkār* are connected with the cities of the pentapolis and do not aid in geographic location (except for Gen 19:28; Deut 34:3, on which see below). Proponents of a northern hypothesis derive much of the weight of their argument from this passage and the accompanying study of *kikkār* and from Deut 34:1-3.

Most proponents of a southern hypothesis here postulate that the "*kikkār* of the Jordan" included not only the Jordan valley proper but also the Dead Sea itself and the area south of it. It is not a "circle" per se, then, but a region. This poses no serious problem, given the flexibility in the term noted above—namely, that it can be oval-shaped. The fact that the southern end of the Dead Sea is not visible from the vicinity of Bethel (and thus must be excluded from "all the *kikkār hayyardēn*" [v 10]) likewise is no great problem. The "all" can easily be figurative—especially since, as Driver notes, not even the entire valley north of the Dead Sea is visible from near Bethel.¹⁰ Furthermore, since the phrase in v 10 can mean simply "toward Zoar" and does not therefore imply that Zoar was included in Lot's visual sweep, this argument is weakened even further. If this view of the nature of the *kikkār hayyardēn* is correct, then there is a variety in the use of the term similar to that in the use of the Arabic *ǧōr* or Hebrew *ʾarābā*, which variously refer to the Jordan valley north of the Dead Sea or to the rift valley between the Sea and the Gulf of Aqaba, or which encompass both, including the Dead Sea, and this passage can easily accommodate the southern hypothesis.

An alternative view of the *kikkār* of v 12 is taken by Har-El, who sees the plain here as more limited in scope but entirely south of the Dead Sea. It is a different one than those mentioned in Deut 34:3 or 1 Kgs 7:46 = 2 Chr 4:17. He does not mention the *kikkār hayyardēn* of v 10, but it appears that either he sees this as the name of the southern plain (which name later attached to the one mentioned in Kings and Chronicles) or (more likely) that he sees the *kikkārs* of vv 10 and 12 as two different ones—the one in v 10, which Lot saw and chose, as north, and the one in v 12, where Lot finally settled, as south.¹¹

3. *Gen 14:1-12*. Genesis 14 is one of the most enigmatic chapters in the Bible. It is not generally assigned to any of the standard sources (J, E, D, P, etc.), and interpretations of its genre range from analyses of it as an historical document, to ones that see it as partly historical and partly legendary, to ones that see it as purely midrashic. It is variously seen as one of the earliest sources to one of the latest.¹²

⁹Such as in J. J. Simons, *The Geographical and Topographical Texts of the Old Testament* (Leiden: Brill, 1959) §407. The book is an excellent compendium, it might be noted here, even if somewhat idiosyncratic at points.

¹⁰S. R. Driver, "Zoar," in *Hastings' Dictionary of the Bible* (Edinburgh: T. & T. Clark, 1899), 4. 986.

¹¹M. Har-El, "The Pride of the Jordan—The Jungle of the Jordan," *BA* 41 (1978) 64-75, esp. pp. 66-67.

¹²The most complete treatment is Schatz, *Genesis 14*, a thorough and important work. His discussion on

In this chapter, for the first time, the five cities are listed together and in the standard order: Sodom, Gomorrah, Admah, Zeboiim and Bela/Zoar. Each is named with its own king except for Bela/Zoar.¹³ Verse 3 shows the coalition of the pentapolis kings meeting the eastern coalition of Mesopotamian kings in the "valley of Siddim," which is explained in a gloss as being the Salt Sea. The likelihood is that the valley was in what is today the shallow end of the Dead Sea, south of the Lisān peninsula. The Sea's water level has varied dramatically over the centuries: It was c. 130 feet higher in the early 1970s than it was in Biblical times. Since the average depth today of the southern basin is no more than twenty feet, it is a most likely candidate for this valley.¹⁴

The term "Siddim" occurs only three times in the Bible, all in this chapter. Most scholars derive it from Hebrew *šdd*, Ugaritic *šd(d)*, Akkadian *šadādu*, "to draw, drag, or plow (a furrow),"¹⁵ and see a meaning designating an open space or field, which would be well suited for battle. The etymology may also signify that it was an unusually fertile area.¹⁶ Regardless of etymology the implication in v 3 (and also in v 8) is that the kings (or at least some of them) did not live in the place where they joined forces and prepared for war but rather that this was a rendezvous point and that they lived nearby.

In vv 5-7 a list occurs of peoples and sites subdued by the northern coalition. There has been much discussion of both the peoples and the sites mentioned here, including the route they took.¹⁷ These problems will not be treated here, however, because several of these sites are unidentified, and particularly because on any theory of the pentapolis location (northeast, east, southeast, south or southwest of the Dead Sea) the problem remains as to why the kings bypassed it on the way south and only engaged it in battle on the way back. Depending on the site of Hazazon Tamar (whether En Gedi, on the west shore of the Sea, after 2 Chr 20:2, or Tamar, southwest of the Sea, mentioned in 1 Kgs 9:18; Ezek 48:28, after the second element of its name), a northern or a southern site might be favored. But the question is far from clear, especially since the list may not be in an exact geographic or chronological order in any case.¹⁸

In v 10 the valley of Siddim is characterized as full of pits of bitumen (*ḥmr*).

pp. 175-182 and notes on pp. 196-201 treat the problems of the location of the pentapolis. He has no particular brief for either hypothesis but slightly favors the southern one, based solely on Biblical evidence. He makes a considerable contribution to bibliography.

¹³On the problems with these latter two names and the reading here see D. M. Howard, Jr., "Zoar," in *The International Standard Bible Encyclopedia* (rev. ed.), 4 (forthcoming), and the commentaries; they do not affect the geography.

¹⁴S. B. Cohen and P. J. Sanlaville, "Dead Sea," in *Encyclopaedia Britannica: Macropaedia* (15th ed.; Chicago: Encyclopaedia Britannica, 1979), 5. 524-525.

¹⁵See e.g. KB², BDB s.v.; Schatz, *Genesis* 14 181.

¹⁶Schatz suggests (*ibid.*) that it might even be called the "valley of the shoreland(s)," based on Ugaritic usage of *šd(d)*.

¹⁷E.g. Schatz, *Genesis* 14 85-125, 169-175.

¹⁸See e.g. Schatz, *Genesis* 14 174-175; Simons, *Texts* §413.

This gives impetus to the southern hypothesis because of the manifestations of such phenomena found in the southern reaches of the Dead Sea region.¹⁹

4. *Gen 19:24-28*.²⁰ This section returns us to the Abraham cycle and is preceded in vv 15-23 by an episode that includes an etiology for the name of Zoar and also indicates that Zoar was not to be destroyed, as well as the fact that it was not in the hills. The famed destruction is described in vv 24-25, and in vv 27-28 there is another geographic clue. Abraham is described as seeing the smoke of the destruction from Hebron. As Harland points out,²¹ and as even a northern proponent such as Simons admits,²² smoke is more easily seen at a southern site than at a northern one from Hebron.²³

5. *Deut 29:23*. This passage does not preserve any geographic information, but it does link Admah and Zeboiim with Sodom and Gomorrah (as do *Gen 10:19; 14:2, 8*). The references to brimstone, salt and a wasteland figure in favoring a southern location for these.²⁴

6. *Deut 34:1-3*. As noted above, this passage is one of the principal ones in the arguments for a northern site. Moses is described as ascending Mount Nebo (the exact nature and location of *hpsgh* need not detain us here) opposite (*ʿl pny*) or east of Jericho.²⁵

Simons represents the northern hypothesis here, arguing that the view here is a progression: First, there is a wide circle of lands on the horizon in a half-circle from Naphtali in the north to the Negev in the south. Then the scene moves immediately to the front of and the foot of the mountain, to the *kikkār*—i.e., the plain of Jericho, the city of palms (cf. *Judg 3:13; 2 Chr 28:15*)—as far as Zoar. Since this scene begins with the most remote part of the *kikkār* it must end at the nearest, which places Zoar near the foot of Mount Nebo.²⁶ Furthermore, the point is often made that the Byzantine-Arabic site of Zoar and the southern end of the Dead Sea are not visible from the Mount Nebo vicinity, the view being obstructed by the mountains of Moab.

This passage, along with *Gen 13:10-12*, is the most difficult for proponents of

¹⁹On which see *infra*, Section III.1.

²⁰Ostensibly *Gen 18:16* or v 22 could be said to have geographical significance. All either verse says, however, is that the men looked down toward (*šqp ʿl-pny*) Sodom (v 16; the phrase is the same as in *19:28*) or set out toward it (*hē locale*) (v 22).

²¹Harland, "Sodom" 22.

²²Simons, *Texts* §409.

²³On the "smoke of a furnace" see *infra*, Section III.1.

²⁴See *infra*, Section III.1.

²⁵See J. Drinkard, "Al Pēnē as 'East of,'" *JBL* 98 (1979) 285-286, for a recent treatment of *ʿl pny*.

²⁶Simons, *Texts* §406.

the southern hypothesis, and some do not even mention it.²⁷ Others extend the limits of the *kikkār* to include the Dead Sea and areas south of it, as noted above.²⁸ Much hinges on the understanding of the phrase in apposition to *hakkikkār* ("the plain"), which is *biqat yērēhō . . . ʿad šōʿar*. Simons claims that it should be read as "from the plain of Jericho . . . unto Zoar," understanding the entire apposition as defining the limits of the plain. This reading assumes an understood *min* ("from").²⁹ However, this in no way precludes the plain from extending merely toward a southern Zoar (and not necessarily reaching it).³⁰ Alternatively (and more likely) the *kikkār* can be seen as defined by only the first part of the opposition, *biqat yērēhō ʿir hattēmārīm*, "the plain (or valley) of Jericho, the city of palm trees."³¹ If this be the case, then it was not the *kikkār* that stretched as far as Zoar but rather the extent of Moses' vision. Zoar can still easily be placed in a southern location, as will be seen.

The argument that Zoar is not visible from Nebo is not as compelling as it might seem. As Driver points out, there are many other points (e.g. northern Gilead, Dan and the Mediterranean) described here that are not visible from Nebo either.³² The fact that "Dan" is anachronistic³³ need not indicate that "Gilead as far as Dan" is a late addition³⁴ but rather that the entire account was written sometime after the name change.

A further argument against the northern hypothesis can be seen by considering the pattern of the passage as a whole. It can be naturally read chiasmally, and this reading argues strongly in favor of a southern location. In a patterned text such as a geographic map, the chiasm is a natural device by which to lay it out. In v 1 the Lord shows Moses "all the land." This can be seen as the heading to the section. Then, first (A), the view is northward, of "Gilead as far as Dan." Gilead includes Mount Nebo but does not extend as far as Dan (Bashan intervenes). Second (B), the view is north/northwest, of Naphtali. Third (C) is the "land of Ephraim and Manasseh," which is northwest of Nebo. That these two are considered as one is shown by the reversal of the expected geographic order in a linear north-to-south progression. Fourth (C') is "all the land of Judah, as far as the western sea," which is southwest of Nebo. The parallelism here is not exact since there is no *ʿad* phrase in C, but the linking factors are (1) the pattern

²⁷E.g. Harland, "Sodom."

²⁸Section I.2. See also S. R. Driver, *Deuteronomy* (ICC; New York: Scribner's, 1895) 421; "Zoar" 986; P. C. Craigie, *The Book of Deuteronomy* (NICOT; Grand Rapids: Eerdmans, 1976) 405.

²⁹Simons, *Texts* §406 n. 198 (so also *NIV*); cf. §137 n. 25. This same view of the extent of the plain can be had even without understanding this *min* here, it should be noted.

³⁰See Schatz, *Genesis 14* 176 and n. 118.

³¹This would seem to support Simons' position better, and it is the position he in fact takes in §137 and n. 25; but he contradicts this point in §406 n. 198.

³²Driver, *Deuteronomy* 419-421; "Zoar" 986.

³³Cf. Judg 18:29; Josh 19:47; *supra*, Section I.1.

³⁴As e.g. Simons, *Texts* §406 and n. 197 holds.

of the chiasm as a whole and (2) that there are two elements in both C and C'. Fifth (B'), the view is to the south-southwest, to the Negev. Continuing the pattern, the sixth element (A') would be parallel to the first (A), and "the *kikkār*, the valley of Jericho . . . as far as Zoar" is directly south, similar to "Gilead as far as Dan." Zoar is then in a mirror relationship with Dan—i.e., far south, just as Dan is far north—and it is not at the foot of Nebo. Furthermore the *kikkār* need not be seen extending all the way to Zoar, since Gilead did not reach all the way to Dan. The fact that the *kikkār* is qualified by "the valley of Jericho, the city of palms," whereas Gilead is not, can be explained by noting that, given the differing uses assigned to the term seen above,³⁵ this may have been necessary to clarify it for the reader.

This passage, then, does not require a northern site, as usually thought, but rather should be seen as favoring a southern one.

7. *Isa 15:5; Jer 48:4, 34*. These passages are in the oracles against Moab and are significant in that they include reference to Zoar (in *Jer 48:4*, "Zoar" is from the LXX; it is not in the MT). Power argues vigorously for a northern site from these,³⁶ but the point is not as clear as he makes it out to be,³⁷ and they cannot be leaned on too heavily in support of either hypothesis.

8. *Ezek 16:46*. This is the one clear description of where Sodom was: It is pictured, along with its satellite villages ("daughters"), as south of Jerusalem and opposed to Samaria, which was north of it. Power's description of this as not a literal "left-hand vs. right-hand" depiction is spurious and forced.³⁸ Simons' explanation of this as figurative, since it is part of a poetic and highly dramatic passage, has more merit,³⁹ but the fact remains that nowhere else—figuratively or literally—is there a passage marking Sodom or the pentapolis in such an unambiguous way. The evidence here favors the southern hypothesis.

II. LITERARY EVIDENCE: LATER TRADITION

Along with the Biblical accounts there is considerable testimony from tradition, beginning with Philo and Strabo near the time of Christ and continuing into the twentieth century.⁴⁰ Here too the weight of the evidence is for the southern

³⁵Section I.2. Cf. in particular 1 Kgs 7:46 = 2 Chr 4:17 and 2 Sam 18:23 with Neh 3:22 and 12:28 for varying uses; see also Har-El's discussion.

³⁶E. Power, "The Site of the Pentapolis," *Bib* 11 (1930) 23-62, 149-182, esp. pp. 30-38.

³⁷As Schatz notes (*Genesis 14* 176-177) and even Simons admits (*Texts* §1254). (See also S. R. Driver, *The Book of Genesis* [11th ed.; London: Methuen, 1920] 170.)

³⁸Power, "Site" 48-49.

³⁹Simons, *Texts* §410.

⁴⁰The best surveys of the traditions are those of Power, "Site," 49-62, 149-182; F.-M. Abel, "Le panorama du Nébo," *RB* 40 (1931) 380-388; "Histoire d'une controverse," *RB* 40 (1931) 388-400; "Lot et la nouvelle Ségor," *RB* 41 (1932) 255-257; *Géographie de la Palestine* (3d ed.; Paris: J. Gabalda, 1933), 2.

location. Early Jewish sources several times mention the destruction of the cities in general terms. The *Midrash Rabbah* on Genesis (42.5)⁴¹ states that Zoar was not destroyed, and the Talmud (*m. Yebam.* 16.7) calls it "the city of palm trees."

Much of the discussion of the traditions revolves around their mention of Zoar. Josephus places "Zoara" at the south end of the Dead Sea (*J. W.* 4.8.4), stating that it was still called "Zoör" in his own day (*Ant.* 1.11.4). Ptolemy (second century A.D.) places it as part of Arabia Petraea (*Geog.* 5.17.5). Eusebius (late third to early fourth centuries) places it south of the Dead Sea (*Onom.* 261, *s.v. thalassa hē halykē*) and also states that it had a garrison of Roman soldiers and was known for its balsam and its date palms.

Since Byzantine times Zoar has been identified with es-Safi, a site c. five to six miles south of the Dead Sea on the Wadi Hesa (the Biblical brook Zered), one of the most abundant perennial streams in the entire area. It figures prominently on the sixth-century mosaic map from Madeba, pictured as a fortress surrounded by palm trees southeast of the Dead Sea.⁴² It is often mentioned by medieval Arabic geographers as "Zuġar," an important commercial center south of the Dead Sea, a two-days' journey from Jericho on the main trade route between Jericho and the Gulf of Aqaba. It was known for its dates, indigo and sugar. At the site of es-Safi, remains of a flourishing medieval town still exist, including ruins of old sugar mills and slag from old smelting operations.⁴³

There is evidence of an early "Segor" (*Sēgōr* is the LXX rendering of Zoar in 8 of its 11 Biblical occurrences) that was northeast of the Dead Sea, and Power makes much of this fact, seeing this as the Biblical Zoar and not the later city to the south.⁴⁴ As Abel argues, however, it is very plausible that the northern site was designated as such c. the sixth century A.D. by monks at Mount Nebo. Mount Nebo was visited by pilgrims tracing Moses' last steps, and a local "Segor" would have been an added attraction, saving the pilgrims a long trip down to the south end of the Dead Sea.⁴⁵

466. Abel's reports are in the context of surveys of the southeastern Jordan valley (northeast of the Dead Sea), and these three treatments are vigorous, detailed and rather convincing rebuttals of the northern hypothesis in general and Power's arguments in particular. M.-J. Lagrange ("Le site de Sodome d'après les textes," *RB* 41 [1932] 489-514) likewise rebuts the northern hypothesis in detail, treating the traditions in depth as well as the Biblical texts and scientific evidence. (See also Driver, "Zoar" 985; Harland, "Sodom" 22-23; "Sodom and Gomorrah: The Destruction of the Cities of the Plain," *BA* 6 [1943] 41-54; Schatz, *Genesis 14* 177-178, for briefer but likewise helpful treatments of the traditions.) Simons (*Texts* §271) mentions some traditions associating Lasha with later Callirhoe along the northeast shore of the Dead Sea. According to Gen 10:19 this would place the pentapolis directly south along the eastern shore, or farther south (and west) at the south of the Sea. The connection is questionable, however, given the lack of any other evidence and given the lateness of the traditions.

⁴¹As reproduced in Power, "Site" 157.

⁴²M. Avi-Yonah, *The Madeba Mosaic Map* (Jerusalem: Israel Exploration Society, 1954).

⁴³E. G. Kraeling, *Rand McNally Bible Atlas* (New York: Rand McNally, 1956) 71; W. F. Albright, "The Archaeological Results of an Expedition to Moab and the Dead Sea," *BASOR* 14 (1924) 2-12, esp. pp. 4-5.

⁴⁴Power, "Site" 49-52.

⁴⁵Abel, "Lot."

An earlier pilgrim to Mount Nebo, Etheria (c. 394 A.D.), reports having seen "all the land of the Sodomites and Segor, which alone of the five cities survives today." She learns of the pillar of Lot's wife, about six miles from Segor, from the bishop of Segor. Jerome, around the same time, clearly equates Bela with Zoara with Segor,⁴⁶ and thus the later distinction between a northern "Segor" and a southern "Zoara" is not legitimate at this time. If therefore (as seems likely) the early "Segor" was south of the Dead Sea, then all Etheria's statement needs to be interpreted as saying is that she looked over the land in the general direction of Sodom and Segor (in the same way that Deut 34:3 should be read).⁴⁷

III. ARCHAEOLOGICAL AND RELATED EVIDENCE

With some tentative conclusions from the written sources we may turn to the archaeological and other evidence for testing of the hypothesis. To date, this has been silent evidence: No inscribed statues, walls or tablets have been found identifying any site as a pentapolis city. In the last century the search for these cities has been given a fresh boost by the burgeoning sciences of archaeology, geology and hydrology, and most of the treatments in this period have attempted to locate the sites on the basis of these.

1. *The submersion theory.* The Biblical text providing the basis for this theory is Gen 14:3, where the valley of Siddim is identified with the Dead Sea. The assumptions are (1) that at the time of writing, the Dead Sea covered the area where the events originally took place, and (2) that the cities were in this valley. The use of the verb *hpk* ("to turn, overturn") in Gen 19:21, 25, 29 has been taken by some as a literal overturning—i.e., an earthquake—and the once-dry cities are seen as having been catastrophically covered by the Dead Sea.⁴⁸

Since the time of Blanckenhorn at the turn of the century the Dead Sea has been known to have existed from prehistoric times,⁴⁹ its origin now placed between 7 and 26 million years ago.⁵⁰ Any submersion theory has since then placed the pentapolis in the shallow southern end of the Sea. The rise in the water level since the early nineteenth century has been well documented by Albright,⁵¹ Albright and Kyle,⁵² Clapp,⁵³ Harland⁵⁴ and others, and so such a theory was deemed

⁴⁶Power, "Site" 168; Abel, "Le panorama" 387.

⁴⁷Abel, "Le panorama" 384-385.

⁴⁸See e.g. Power, "Site" 154-160. The tradition goes back as early as Strabo and is also evidenced in the Talmud.

⁴⁹Schatz, *Genesis 14* 179 and n. 179.

⁵⁰See e.g. Cohen and Sanlaville, "Dead Sea" 524-525, and references there.

⁵¹Albright, "Expedition" 7-8.

⁵²W. F. Albright and M. G. Kyle, "Results of the Archaeological Survey of the Ghor in Search for the Cities of the Plain," *BSac* 81 (1924) 276-291, esp. pp. 283-284. See also M. G. Kyle, *Explorations at Sodom* (New York: Revell, 1928), a popular account of their travels.

a certainty. Indeed Clapp even cites reports of air pilots who claimed having seen submerged ruins.⁵⁵

The references to bitumen pits in Gen 14:10 and to the "smoke of a furnace" in 19:28 have given impetus to geological studies. Clapp⁵⁶ and Harland⁵⁷ have discussed in detail the bitumen, petroleum and natural gas seepages known especially in the south and southwest of the Dead Sea, which, if burned (ignited by lightning or spontaneous combustion or earthquake disturbances), would give off a smoke like that of a furnace.

Passages referring to salt in connection with the cities (e.g. the story of Lot's wife in Gen 19:26 and the picture of desolation in Deut 29:23) have been taken as placing them in the area of the great salt mountain at the southwest end of the Sea, Jebel Usdum ("Mount Sodom"), where various salt pillars have been called "Lot's wife" over the years.⁵⁸

To my knowledge it was Albright who first proposed the submerged-cities theory based on archaeological investigation, in a number of articles beginning in 1924.⁵⁹ During the survey of early 1924, the principal objective of which was the discovery of the site of Zoar, soundings were made there that confirmed the existence of the Byzantine and Arabic cities but nothing earlier. By chance, the site of Bab edh-Dhra and its cemetery was discovered. Pottery was found there and dated to c. 2000 B.C., but no evidence of permanent habitation surfaced. Because of this, and because the rest of the survey produced no early evidence anywhere for habitation, the cities were postulated as now being submerged and Bab edh-Dhra was seen as a cultic center serving them. This was made especially plausible by the discovery of the several freshwater streams flowing into the Ghor at the southeast corner of the Dead Sea. Postulating one town site per stream Albright placed the pentapolis cities on each, but now submerged (since no early evidence could be found).

This view has influenced scholarship ever since and has been the prevailing one almost until the present day. There are a number of problems with it, however, that must be mentioned. First, as seen above, there is nothing in the Bibli-

⁵⁵F. G. Clapp, "The Site of Sodom and Gomorrah," *AJA* 40 (1936) 323-344, esp. pp. 337-338.

⁵⁶Harland, "Sodom and Gomorrah: The Location" 28-30.

⁵⁷Clapp, "Site" 343. Note may also be taken here of the description of an underwater expedition to the Dead Sea by R. E. Baney, *Search for Sodom and Gomorrah* (Kansas City: CAM Press, 1963). The book is a popular account, mainly chronicling the adventures of the trip. Nothing of consequence was found in the southern Dead Sea except for traces of what may have been an old road (p. 311). Baney, neither a scientist nor a Biblical scholar, was a layman interested in finding the cities.

⁵⁸*Ibid.*; see also his "Geology and Bitumens of the Dead Sea Area," *Bulletin of the American Association of Petroleum Geologists* (1936) 881-909 (unavailable to me).

⁵⁹Harland, "Sodom and Gomorrah: The Destruction" 44-49, 53-54.

⁵⁸See e.g. Clapp, "Site" 331-332; Harland, "Sodom and Gomorrah: The Location" 23-26.

⁵⁹In addition to the two noted *supra* (nn. 43 and 52) see W. F. Albright, "The Jordan Valley in the Bronze Age," *AASOR* 6 (1924-1925) 13-74; "The Historical Background of Genesis XIV," *Journal of the Society of Oriental Research* (1926) 231-269. (This latter article was unavailable to me.)

cal texts that requires the pentapolis to be found in the valley of Siddim, which itself may have been only near the Dead Sea in any case. As noted above, this lends plausibility to the view below,⁶⁰ whereby the pentapolis was somewhat removed from the strictly southern end of the Dead Sea. Second, despite the early pilots' reports mentioned by Clapp (perhaps comparable to the various Noah's ark "sightings"), repeated reports since then have revealed no traces of ruins at all in the Sea. Glueck attributed this to deposition of salt and minerals over the years,⁶¹ which is possible. Rast and Schaub, however, have reported as recently as 1980 that the south end of the Sea could not have contained any cities after 3000 B.C.⁶² The water level has dropped during this century from a high at the turn of the century,⁶³ and a large part of the south end was exposed in 1979 due to drainage of the Jordan river. Rast's and Schaub's conclusion was that it would have been "an impossible area in which to establish a city."⁶⁴ Third, it has been pointed out that the sites were probably not directly in the most fertile area but back from the Sea a distance, since agricultural land was at a premium and would have been reserved for that purpose.⁶⁵ Partly because of these objections to the submersion theory and partly because of its own plausibility, the theory of Rast and Schaub has gained popularity in the last decade. To it we now turn.

2. *The southeastern theory.* Those who have recognized the problems with the submersion theory but who have still thought the evidence pointed to a southern location have been forced to look elsewhere. The southwest corner has been ruled out because the brooks entering the Dead Sea near Jebel Usdum are salty.⁶⁶ The southeast corner, on the other hand, has much to commend it.

Today this area is not especially fertile, but Kraeling cites nineteenth-century reports of its luxuriant nature at that time.⁶⁷ Since climatological change is known to have occurred over the millennia,⁶⁸ this poses no special problem. In addition, the presence of the several perennial freshwater streams mentioned above offers support for this view.

⁶⁰*Supra*, Section I.3; *infra*, Section III.2.

⁶¹N. Glueck, "An Aerial Reconnaissance in Southern Transjordan," *BASOR* 67 (1937) 19-26, esp. p. 21.

⁶²W. E. Rast and R. T. Schaub, "Expedition to the Southeastern Dead Sea Plain, 1979," *ASOR Newsletter* 8 (June 1980) 12-17, esp. pp. 16-17.

⁶³Cohen and Sanlaville, "Dead Sea" 524.

⁶⁴Rast and Schaub, "Expedition, 1979" 17.

⁶⁵Kraeling, *Rand McNally* 71; B. G. Wood, "Have Sodom and Gomorrah Been Found?," *Bible and Spade* 3 (1974) 65-89, esp. p. 79.

⁶⁶Kraeling, *ibid.*

⁶⁷*Ibid.*

⁶⁸Simply by comparing the Biblical and cuneiform descriptions of luxuriant lands throughout the ancient Near East with the vast arid areas in many of the same regions today. See also C. E. P. Brooks, *Climate Through the Ages* (2d ed.; New York: McGraw-Hill, 1949); T. Jacobsen and R. M. Adams, "Salt and Silt

It appears that the interest in the problem of the pentapolis in the early part of this century subsided somewhat after World War II, as the question was evidently regarded as settled. Rast's and Schaub's surface survey of 1973 dramatically changed that situation, however.⁶⁹ Whereas earlier the only early material in the area had been found at Bab edh-Dhra, they now found Early Bronze evidence at four other settlements south of it, each on one of the perennial streams. There are many similarities between the five sites, including town layout and location, walls, pottery, destruction by burning (at three sites)—all exhibiting no effective occupation after the destructions of the late EB III or early EB IV periods. The cities are seen as part of a unified system of EB towns or bastions in the southern Ghor. Building on Lapp's theory,⁷⁰ Rast and Schaub postulate that the exceptionally large cemetery at Bab edh-Dhra was not a ceremonial burial ground for pilgrims but merely served that town. Its size is due to the large size of the town, its satellites, and the length of occupation of the site, especially since cemeteries or traces of burials were found at each site.⁷¹

Especially interesting is the fact that only five major EB sites have been found in the region. Rast and Schaub report having explored "every wadi and every hillock with any possible signs of occupation" but only finding these five.⁷²

The work has prompted numerous popular articles, two of the same title, the latter of which has dismayed the excavators somewhat.⁷³ They are mindful, however, of the possible connections of their work with the pentapolis,⁷⁴ and they have announced their intentions to deal with them in a series of articles at some time in the future.⁷⁵

There has also recently been evidence from Ebla used to support the south-eastern hypothesis. Van Hattem, on the basis of unpublished reports and popular accounts, tried to build a case tying Rast's and Schaub's evidence to the famous

in Mesopotamian Agriculture," *Science* 128 (1958) 1251-1258; A. D. Crown, "Toward a Reconstruction of the Climate of Palestine 8000 B.C.-0 B.C.," *JNES* 31 (1972) 312-330; J. Neumann and R. M. Sigrist, "Harvest Dates in Ancient Mesopotamia as Possible Indicators of Climatic Variations," *Climatic Change* 1 (1978) 230-232. Crown notes (pp. 321-322, 329) that c. 2350-2300 B.C. there was a sudden rise in temperature in the entire area with an accompanying drought, and that at this time the well-known salt pillars formed in the Dead Sea area and the Fertile Crescent.

⁶⁹W. E. Rast and R. T. Schaub, "New Discoveries in the Environs of Bab edh-Dhra^c," *ASOR Newsletter* 8 (April 1974) 1-7; "Survey of the Southeastern Plain of the Dead Sea, 1973," *ADAJ* 19 (1974) 5-54, 175-185.

⁷⁰See P. Lapp, "Bab edh-Dhra, Perizzites and Emim," in *Jerusalem through the Ages* (ed. Y. Aviram; Jerusalem: Israel Exploration Society, 1968) 1-25.

⁷¹Rast and Schaub, "Survey, 1973" 19.

⁷²Rast and Schaub, "New Discoveries" 6. The situation has not changed in the decade since this first report.

⁷³Wood, "Have Sodom and Gomorrah Been Found?"; [H. Shanks,] "Have Sodom and Gomorrah Been Found?," *Biblical Archaeology Review* 6/5 (1980) 26-36. See the response to Shanks by the excavators in 7/1 (1981) 18.

⁷⁴Rast and Schaub, "Survey, 1973" 19; "New Discoveries" 7.

⁷⁵Rast and Schaub, "Expedition, 1979" 16-17.

but elusive tablet that purported to list the five cities of the pentapolis, in the same order as the Genesis 14 list.⁷⁶ The case is not clear, however, as this has since been denied by Ebla scholars.⁷⁷

A more substantial link to Ebla is in the geographical list of purportedly West Semitic sites from Ebla published by Pettinato, in which a *sa-dam*^{ki} (= Sodom?) occurs, as well as an *ad-mu-ud*^{ki} (= Admah?).⁷⁸ Shea has ventured a groundbreaking treatment of this, seeing these cities as southeast of the Dead Sea on the basis of the layout of the Eblaite atlas,⁷⁹ and his is a judicious study that merits careful attention.

3. *The northern theory.* The arguments for a northern site have rested mainly on the literary traditions, and there were no serious proposals for site identification based on archaeology until the discoveries at Teleilat Ghassul in 1929. This site was linked immediately with the pentapolis on the basis of its location and the supposed date of its destruction (c. 2000 B.C.), and the find generated a good deal of attention, both popular and scholarly.⁸⁰ The dating and separation of the levels at Ghassul posed extremely thorny problems, however, which could not begin to be unraveled until further excavations in the 1960s.⁸¹ The pottery dating, however, was soon established by Albright, and his scheme has prevailed.⁸² The latest occupation of the site is now placed at c. 3000 B.C., far too early to be

⁷⁶W. C. van Hatttem, "Once Again: Sodom and Gomorrah," *BA* 44 (1981) 87-92. See also D. N. Freedman, "The Real Story of the Ebla Tablets," *BA* 41 (1978) 143-164. (Although it appeared later, van Hatttem's article was written before and without reference to Freedman's article.)

⁷⁷The controversy can be traced in the pages of *BA* and *Biblical Archaeology Review* in recent years. See *inter alia* the box on p. 143 of Freedman, "The Real Story"; R. D. Biggs, "The Ebla Tablets: An Interim Perspective," *BA* 43 (1980) 76-87; the interview with Pettinato (*Biblical Archaeology Review* 6/5 [1980] 46-52); and A. Archi's comments in 7/6 (1981) 54-55.

⁷⁸G. Pettinato, "L'Atlante Geografico nel Vicino Oriente Antico attestato ad Ebla ed ad Abū Salābikh (I)," *Orientalia* 47 (1978) 50-73. W. H. Shea, "Two Palestinian Segments from the Eblaite Geographical Atlas," in *The Word of the Lord Shall Go Forth* (ed. C. L. Meyers and M. O'Connor; Winona Lake: Eisenbrauns/ASOR, 1983) 605, proposes reading *ad-mu-ud*^{ki} here, which makes easier the transition to Hebrew *'admā* ("Admah").

⁷⁹Shea, "Palestinian" 589-612. (He documents some of the above-mentioned Ebla controversy on pp. 608-609.)

⁸⁰See e.g. A. Mallon, R. Köppel and R. Neuville, *Teleilat Ghassul I: 1929-1932* (Rome: Pontifical Biblical Institute, 1934) vii-xii; R. Köppel, "Uferstudien am Toten Meer. Naturwissenschaftliches zur Pentapolis und zur Deutung von Tell Ghassul," *Bib* 13 (1932) 6-27; Power, "Site." (See also R. Köppel, "Uferstudien am Toten Meer," *Stimmen der Zeit* 131 [1932] 6-27, which was unavailable to me. That Köppel had a pre-1929 interest in the subject is seen by his "Auf der Suche nach Sodom und Gomorrha," *Stimmen der Zeit* 122 [1923] 187-194, also unavailable to me.)

⁸¹R. North, *Ghassul 1960 Excavation Report* (AnBib 14; Rome: Pontifical Biblical Institute, 1961); J. B. Hennessy, "Preliminary Report on a First Season of Excavations at Teleilat Ghassul," *Levant* 1 (1969) 1-24.

⁸²W. F. Albright, "Recent Progress in the Late Prehistory of Palestine," *BASOR* 42 (1931) 13-15; "The Chalcolithic Age in Palestine," *BASOR* 48 (1932) 10-13; R. North, "'Ghassulian' in Palestinian Chronological Nomenclature," *Bib* 40 (1959) 541-555 (= pp. 407-421 in AnBib 10).

seriously considered in connection with Abraham or Lot.

As for other sites northeast of the Dead Sea, there are a number dating to the EB IV-MB I periods, which would fit well chronologically.⁸³ But most of these already have good identifications with other ancient sites. In fact Abel in 1931, before Ghassul had been ruled out chronologically, in the context of explorations of the southeastern Jordan valley nevertheless argued vigorously for a southern site and against any identification with the sites he was exploring.⁸⁴ I am not aware of any other serious site proposals in the north, and I doubt that any will be forthcoming soon.

IV. CONCLUSION

The evidence, taken together, points most persuasively to a location south-east of the Dead Sea for these cities. The Biblical evidence has been seen in the past as favoring both northern and southern locations. The conviction here, however, is that this evidence taken by itself speaks most clearly in favor of the southern hypothesis. The weight of tradition also supports this hypothesis. The contribution of the archaeological evidence is in pinpointing where in the south these cities likely were.

To be sure, there are still numerous problems associated with their identification with the sites Rast and Schaub are working with. One is that only two of the five sites have been excavated. Little is known of the other three. The intention is to excavate at least two of these three, but that will be years in the doing.⁸⁵ Another is the identification of each of the sites being excavated with the correct Biblical city, if these are indeed the ancient cities of the pentapolis.⁸⁶ (It hardly needs mentioning here that Rast and Schaub did not set out to find these Biblical cities—as some have done—but rather are interested in a vast range of questions, only one set of which involves the possible connections with the Biblical sites.)

Still another problem is that of the dating of the cities. The occupation of Bab edh-Dhra extended into the EB IV period (c. 2400 or 2350 B.C. through 2200 or 2100, on Rast's and Schaub's most recent reckoning⁸⁷), but the evidence for occu-

⁸³N. Glueck, *Explorations in Eastern Palestine, III* (AASOR 18-19; New Haven: ASOR, 1939) 268 and *passim*; *Explorations in Eastern Palestine, IV* (2 vols.; AASOR 25-28; New Haven: ASOR, 1951) *passim*; J. A. Sauer, "Syro-Palestinian Archaeology, History, and Biblical Studies," *BA* 45 (1982) 201-209, esp. p. 207.

⁸⁴Abel, "Histoire."

⁸⁵See W. E. Rast and R. T. Schaub, "The Dead Sea Expedition: Bab edh-Dhra^c and Numeira, May 24-July 10, 1981," *ASOR Newsletter* 4 (January 1982) 4-12, esp. p. 5; R. T. Schaub and W. E. Rast, "Preliminary Report of the 1981 Expedition to the Dead Sea Plain, Jordan," *BASOR* 254 (1984) 35-60, esp. p. 35.

⁸⁶Wood ("Have Sodom" 82-83) made a judicious attempt based on the early evidence, as has Shea ("Palestinian" 610), but they do not agree on any of the five. Further guesses are best left unattempted until after the excavations are complete.

⁸⁷Schaub and Rast, "Preliminary Report of the 1981 Expedition" 36. W. G. Dever dates EB IV later: 2300-2000 B.C. ("New Vistas on the EB IV ['MB I'] Horizon in Syria-Palestine," *BASOR* 237 [1980] 35-64).

pation of Numeira after EB III is minimal at best.⁸⁸ The major occupation of both sites was in EB III, and both were destroyed around 2350 B.C.⁸⁹ Since the earliest proposed date for Abraham's birth by any reckoning to date is 2166 B.C.,⁹⁰ there is at least a two-to-three-century gap between the flourish of these cities and Abraham's adulthood. Chronology is a notoriously difficult endeavor, however. The Biblical schemes have repeatedly been revised upward or downward as new knowledge about external events or about internal genealogical reckoning has been advanced. Furthermore, the science of radiocarbon dating (on which many of the Near Eastern chronologies are built) is also a relatively imprecise one, and the accepted dating for EB III and IV may be subject to change.⁹¹ Lastly, there are other new sciences for dating, such as neutron-activation analysis, electron spin resonance spectroscopy, and thermoluminescence dating, which have not been used at Bab edh-Dhra or Numeira but which may shed further light on the entire matter in years to come.

Biblical faith will continue to flourish regardless of where these cities were and whether they are ever found. If the pentapolis is finally shown to have been located at these southeastern sites, however, then the archaeological work would contribute greatly to the understanding of the backgrounds to the patriarchal narratives. This would be most helpful, given the uncertainties and even subjectivities involved in the recent debate over these. It would also contribute to the knowledge of the early history of the area, its culture, and its institutions, both where these intersect the Bible and where they do not.⁹²

⁸⁸W. E. Rast and R. T. Schaub, *The Southeastern Dead Sea Plain Expedition: An Interim Report of the 1977 Season* (AASOR 46; Cambridge: ASOR, 1981) 35-44; M. D. Coogan, "Numeira 1981," *BASOR* 255 (1984) 75-81; J. Donahue, "Geologic Reconstruction of Numeira," *BASOR* 255 (1984) 83-88.

⁸⁹Rast and Schaub, "Dead Sea Expedition" 7.

⁹⁰See e.g. G.L. Archer, *A Survey of Old Testament Introduction* (rev. ed.; Chicago: Moody, 1974) 495.

⁹¹Note the discussion in W. E. Rast and R. T. Schaub, "Preliminary Report of the 1979 Expedition to the Dead Sea Plain, Jordan," *BASOR* 240 (1980) 21-61, esp. pp. 45-47. They have tested samples from Bab edh-Dhra and Numeira that yield dates as late as 1930 and 2200 B.C. respectively. It should be noted, however, that radiocarbon dating itself is undergoing reevaluation, since it often results in lower dates than should obtain; see e.g. R. J. Braidwood, "A Note on the Present Status of Radioactive Carbon Age Determination," *Sumer* 23 (1967) 39-44; H. N. Michael and J. Klein, "An International Calibration for Radiocarbon Dates," *Museum Applied Science Center for Archaeology Journal* 1 (1979) 56-57; R. Berger and H. E. Seuss, eds., *Radiocarbon Dating* (Berkeley: University of California, 1979). The debate in Near Eastern circles over chronology for this period can be entered by means of J. A. Callaway and J. M. Weinstein, "Radiocarbon Dating of Palestine in the Early Bronze Age," *BASOR* 225 (1977) 1-16; J. Mellaart, "James Mellaart Replies to His Critics," *Antiquity* 54 (1980) 225-227, and references there.

⁹²I would like to thank my colleague Carl G. Rasmussen for reading a draft of this paper and making several valuable suggestions. Any faulty arguments and conclusions herein are of course to be charged solely to me.