

Sodom: The Disc



By Steven Collins

Visiting Biblical sites is exciting! I love taking people to the places where famous characters like Abraham, Moses and Jesus walked. And I really like going to sites that are the real deal. Some “Bible places” are questionable, while others are identified based on a reasonable level of evidence. As an archaeologist and Biblical scholar, I’m well aware of the difference. That’s what this story is all about—discovering the actual location of a famous city, long lost to history.

Before 1996 I never really paid much attention to the fact that Sodom and Gomorrah, Admah and Zeboiim almost never appear on Bible maps. These are the infamous Cities of the Plain of Genesis, destroyed by God for their wickedness. Why don’t mapmakers include them? Simple: scholars can’t agree on their location. That fact would soon come to haunt me.

In the spring of 1996 I was leading a study tour of Israel and

Jordan, and was one day away from taking my group to Bab edh-Dhra and Numeira near the southeastern shore of the Dead Sea. Not a few scholars, including many of my friends, had identified these sites as Sodom and Gomorrah. And who was I to disagree with them! What I’d read about these sites seemed to fit pretty well with the Biblical text. At least, that’s what I thought up to that point.

That evening, before our trek to the “popular” Sodom and Gomorrah, I decided to read through Genesis 13–19 just to brush up on the Sodom story. After I read it, I was puzzled. “I don’t see anything in this that would locate Sodom near the southeast shore of the Dead Sea,” I thought to myself. I read it again. Then again. After scouring through it for the fourth time, I concluded, “Not only is there nothing here to support a southern location, but everything seems to point to a location north of the Dead



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Bab edh-Dhra, traditional Sodom.



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Numeria, traditional Gomorrah.

Discovery of a Lost City



Michael Luddeni

Panoramic view of Tall el-Hammam on the eastern edge of the Jordan Disk (Heb. *kikkar*), showing the well-watered plain of the Jordan and the Jordan River. The mountains beyond are the present-day “Promised Land”—Israel.

Sea on the east side of the Jordan River.” Now my curiosity was on red alert! My group enjoyed Bab edh-Dhra and Numeira, but now I had big question marks drawn all over “Sodom and Gomorrah” on my itinerary.

I just had to solve this puzzle. It was really bothering me! But we’d just kicked off a new excavation about ten miles north of Jerusalem at the site Bryant Wood had theorized was the town of Ai destroyed by Joshua (Jos 7–8), another lost city. As it turned out, that would be my archaeological home for the next five years. Sodom would have to wait. But during the excavation at Khirbet el-Maqatir, directed by Dr. Wood, I learned some powerful lessons on using the Biblical text to locate a lost city. Those same geographical methods used to solve the mystery of Ai’s location would eventually lead me to the Cities of the Plain, and Sodom itself.

When the political situation between Israel and Palestine heated up at the turn of the New Millennium, the dig at Ai came to a halt after the summer 2000 season. Still energized by the search for, and discovery of, Joshua’s Ai, my mind went back to 1996 and the mystery I’d then left for another day. Now that day had come. Sodom had eluded explorers, geographers, Bible scholars, and archaeologists for centuries. “The game is afoot!” I said to myself with a bit of a smile, remembering the famous sleuth known to utter those words on appropriate occasions. After all, this was an enigma of historic proportions, accompanied by a string of clues befitting a good mystery novel. And so, on a spring day in 2001, I began my quest to find the Bible’s most elusive city.

Following that day, several years of intensive research into the location of Biblical Sodom led me to Tall el-Hammam, north of the Dead Sea and east of the Jordan River, in the Hashemite Kingdom of Jordan.¹ Today, after two seasons of excavating this

huge mound containing the ruins of a Bronze Age city, I’m more convinced than ever that this magnificent site is the only logical candidate for the infamous sin city.

Tracking through the Biblical clues to Sodom’s location was the most important part of the process. The key to the location of the Cities of the Plain, chief of which was Sodom, is a careful analysis of the Biblical text of Genesis 13. In a nutshell, the Biblical geography is this:

So Abram...and Lot...came to Bethel, to the place between Bethel and Ai where his tent had been earlier and where he had first built an altar...And quarreling arose between Abram’s herdsmen and the herdsmen of Lot...Lot looked up and saw that the whole plain (*kikkar* = disk, circle) of the Jordan was well watered, like the garden of the Lord, like the land of Egypt, toward Zoar...So Lot chose for himself the whole plain (*kikkar*) of the Jordan and set out toward the east...Abram lived in the land of Canaan, while Lot lived among the cities of the plain (*kikkar*) and pitched his tents near Sodom (Gn 13:1–12).

According to this passage, which is the only geographical description of Sodom’s location in an historical narrative, the area where Lot chose to live was entirely visible from the environs of Bethel/Ai, which is just above Jericho in Canaan’s central highlands, north of the Dead Sea. It also states that the *kikkar* was watered like Egypt. It’s no coincidence that the southern Jordan Valley was watered by means of annual inundations exactly like the Nile. It then clearly specifies that Lot traveled eastward from the area of Bethel/Ai in order to reach Sodom.

These comprise the Bible’s **geographical**² criteria for Sodom’s location. In a nutshell, these clues indicate that all the Cities of

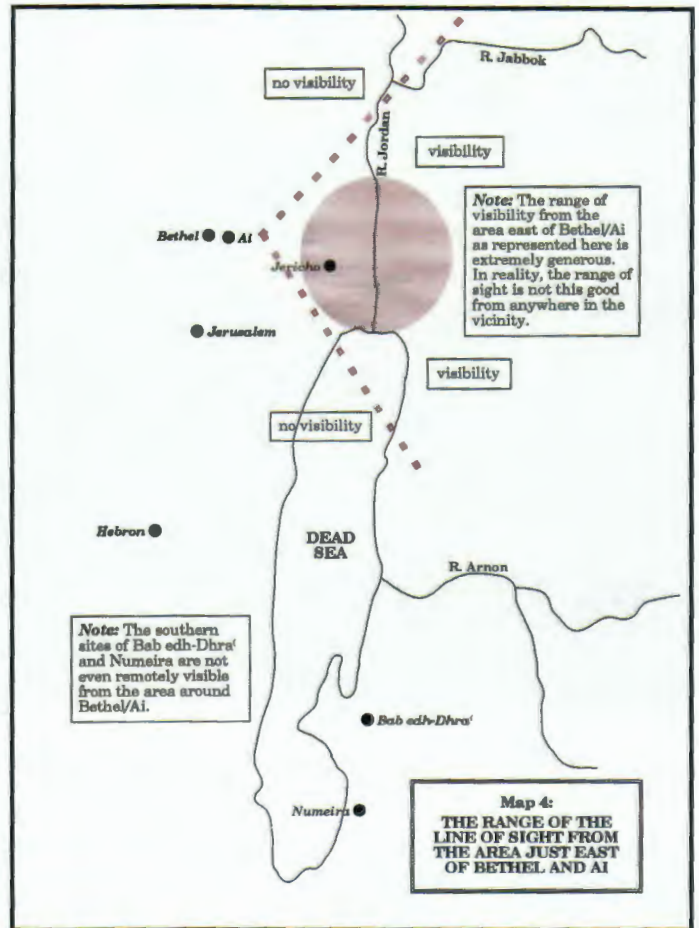
the Plain thrived on the eastern edge of the Jordan Disk, the well-watered circular plain of the southern Jordan Valley north of the Dead Sea. Additionally, a thorough study of “the Jordan” (Heb. *hayarden*) in the Old Testament confirms its southern limit at the Dead Sea’s northern edge where the “mouth of the Jordan” is located (Jos 15:5). Thus, attempts to extend *hayarden* south to include any part of the Dead Sea valley are beyond the scope of its usage throughout Scripture.

The second criterion for the identification of Sodom and the other Cities of the Plain is **chronology**³—Sodom and its sister cities must date from the Middle Bronze Age (2000–1600 BC), the only possible timeframe for Abraham and Lot, with underlying strata from a previous era such as the Early Bronze Age (because the cities are also mentioned in Genesis 10).

The third criterion is **stratigraphy**⁴—their Middle Bronze Age destruction must be followed by at least a few centuries of abandonment (centuries after Abraham, Moses found the area to be an uninhabited wasteland, as recorded in Numbers 21:20). A fourth criterion is **architecture**⁵—the Bible states clearly that Sodom was fortified, as indicated by the statement, “Lot sat in the gateway of Sodom” (Gn 19:1).

Tall el-Hammam meets all these criteria. Several of her smaller neighbors, stringing northward a few miles along the ancient north-south trade route, meet at least the first three (only Sodom need be fortified, according to the Biblical text).⁶

But finding the correct location of Biblical Sodom really wasn’t the toughest part of this quest. Both the Biblical text and the archaeology of the eastern Jordan Disk are pretty straightforward in this regard. What’s been difficult is dealing with quantum illogic in two areas: (1), the tenacity of what I call the Albrightian myth of a “southern” Sodom; and (2), the “minimalist” tendency to discredit and/or demean archaeological investigation based on the Bible.



TSU File photo

Line of sight from the area of Bethel/Ai toward the well-watered plain of the Jordan.



TSU file photo

Aerial view of Tall el-Hammam. Covering approximately 150 acres, the elongated area is the upper tall; the circular area is the lower tall; the overall footprint of the area goes “wadi to wadi,” making it about 0.4 mi² (1 km²) in area.



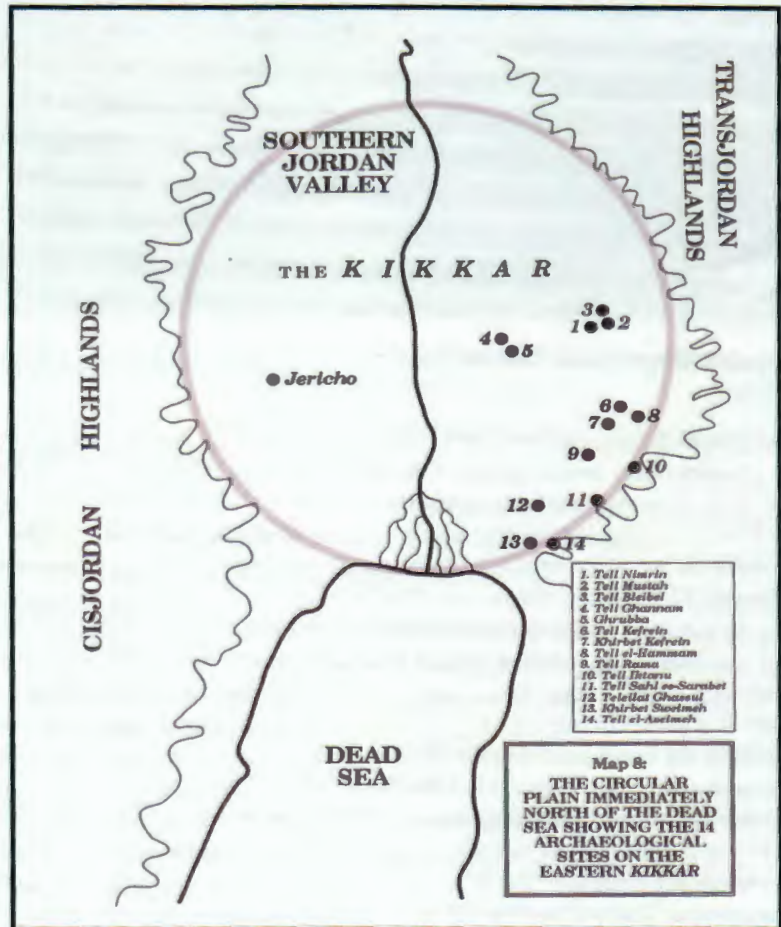
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Tall el-Hammam, showing the upper tall. The excavated section at right-center of the photo exposes the Middle Bronze Age mudbrick/earth rampart.

Locating Sodom in the southern Dead Sea area has a long history in some sectors, but the modern idea was championed by W.F. Albright⁷ (and his protégé, G.E. Wright) in the early to mid-20th century. The power of Albright to influence evangelical Bible scholars and students was huge, if not overwhelming. And it was singularly his influence that “forced” modern scholars to look to the southern Dead Sea region for Sodom and Gomorrah.

But Albright never bothered to do a detailed geographical analysis of the Biblical text. However, he knew enough to conclude that there weren’t any Middle Bronze Age cities in the Dead Sea valley that could qualify. Thus he—with Wright following suit—theorized that the “sin cities” had somehow been buried under the salty waters of the Dead Sea’s shallow southern end. And, of course, if you publish something enough times in enough places—like a myriad of Bible dictionaries, encyclopedias, commentaries, magazines and Sunday School lessons—it becomes “fact.” But, in fact, the southern Dead Sea theory for the location of Sodom has neither textual nor archaeological support.

And then there are the “minimalists” who dislike the thought of using the Biblical text as a basis for doing anything in the field of archaeology. For many, even the term “Biblical archaeology” has an illegitimate ring to it. Indeed, most scholars doubt the historical authenticity of the Genesis patriarchal narratives. The stories of Abraham, Lot, and the destruction of Sodom and Gomorrah are seen as legend, myth, or out-and-out fiction. The unknown location of these cities has reinforced this thinking. (As I’ve already mentioned, even conservative Bible maps don’t include them.) But the legitimate discovery of the Cities of the [Jordan] Disk would provide compelling evidence that at least



TSU file photo

Major archaeological sites of the eastern Jordan Disk. Note the clustering of sites 1/2/3 and 6/7/8, all with Early Bronze/Middle Bronze Age occupation, reminiscent of the clusters Sodom/Gomorrah and Admah/Zeboiim (the “-im” ending of the latter is plural, perhaps denoting at least two closely related villages). Tall el-Hammam is number 6.



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Square Supervisor Carl Morgan and volunteers excavate a Middle Bronze Age house below 10 feet (3 m) of Iron Age strata.

the historical/geographical fabric of Genesis is factual. Further, such a discovery would be one of the most important Biblically-related archaeological finds in history.

For my minimalist friends, here's one way to put it: Okay, so I woke up one morning and bothered to take the Biblical text of Genesis 13 seriously just to see where it might lead. And it led me to the same geographical location where many others who have followed the detailed textual data also wound up: on the east side of the Jordan River, north of the Dead Sea. So, can I help it if there just happens to be a string of Middle Bronze Age cities in the exact area specified by the Bible—and, I think, not coincidentally? All right, drive the point of my Marshalltown [trowel] underneath my fingernails and try to make me recant! But it won't change the fact that, in this case, there is apparently a one-to-one correspondence between the Biblical text and 3-D space-time.⁸ The text and the dirt match! What's an archaeologist to do?

I certainly agree that objective archaeology should take us where the evidence leads. But I also understand the importance of ancient texts like the Bible that often provide an historical framework for the identification of geographical locations. Interestingly, in a recent front page *Wall Street Journal* article⁹ about our dig at Tall el-Hammam, William Dever criticized

me by saying, "No responsible scholar goes out with a trowel in one hand and a Bible in the other." But such a statement is completely untrue, if not just plain silly.

The fact of the matter is that responsible archaeology uses every possible resource to gain a window into the past. Let's not forget that Jordanian sites like Heshbon, Aroer, Dibon, Nebo, and Bethany beyond the Jordan—not to mention dozens of sites in Israel—are principally identified because clues to their locations are written into Biblical narratives. You can't prove a theological point with archaeology, but you can certainly compare the archaeological record to the Bible in order to arrive at geographical, even historical conclusions. The case of Sodom is no exception.

Because there's more geographical data for the location of Sodom embedded in the Biblical text than there is data for the location of almost any other Old Testament city, it seems surprising that there's still controversy over its whereabouts. Certainly, there is no scholarly consensus.¹⁰ Several scholars link Sodom and Gomorrah with Bab edh-Dhra and Numeira, but they have to ignore the fact that they're too early and in the wrong place. The famous Madaba Map (sixth century AD) makes an attempt to locate one of the associated sites, Zoar, toward the southern end of the Dead Sea, but that placement

is Biblically unlikely.¹¹ Egeria, the fourth century AD Spanish pilgrim to the Holy Land, says that she could see the “land of the Sodomites” and Zoar from the church at Mount Nebo, looking north of the Dead Sea.¹² And as I’ve already mentioned, W.F. Albright—arguably the most influential Near Eastern scholar of the 20th century—suggested that the Cities of the Plain were perhaps underwater at the south end of the Dead Sea. But others, including W.M. Thomson in the late 19th century, make a textually-derived case for a location on the eastern *kikkar*, north of the Dead Sea.¹³

I think the controversy can be cleared up by the most recent archaeological discoveries at Tall el-Hammam. We now have growing archaeological confirmation that Tall el-Hammam was founded as a major urban center at least during the Early Bronze Age (ca. 3300 BC). An abundance of pottery from the Intermediate Bronze Age (2300–2000 BC) suggests a continuation during that period. Occupation at the site came to an abrupt halt—as it did just up the road at Tall Nimrin¹⁴—during the Middle Bronze Age, and it remained unoccupied for several centuries after that. As I stated above, this is the occupational profile for the Cities of the Plain predicted from the Biblical text.

During the 2006 season we discovered what I suspected was a Middle Bronze Age rampart system underneath the Iron Age II city wall (Field D). At over 10 ft (3 m) thick, the Iron Age city wall was impressive by itself. But it was dwarfed by a massive mudbrick and compacted-earth structure over which it was built. During the 2007 season we uncovered the earlier structure to a depth of about 20 ft (6 m), exposing 30 ft (9–10 m) of its 30-degree outer slope. Without a doubt, it was the Middle Bronze Age fortification system, classic in all its details. In Field B, underneath four or five Iron Age II phases, were the remains of a Middle Bronze Age house with a clay silo, two Middle Bronze Age storage jars, and a distinctive Middle Bronze Age piriform juglet, all buried under nearly 3 ft (1 m) of ash and destruction debris. In the light of the Biblical story of Sodom, this kind of evidence deserves more than a passing glance!

So what happened to the cities of the eastern Jordan Disk, like Tall el-Hammam and Tall Nimrin, during the Middle Bronze Age? Why are they all unoccupied during the Late Bronze Age and early Iron Age, when cities flourished during those periods further north in the Jordan Valley and on the highlands ringing the Jordan Disk? During the Late Bronze Age, why did Moses and the Israelites find no one home on the “Plains of Moab,” the very same piece of real estate called “the wasteland below Pishgah”? Why would the best-watered, most arable land in the region defy reoccupation for at least five centuries after its Middle Bronze Age destruction? Bible readers have the answers to these questions.

Perhaps it was fear and superstition that kept people away for so long. But eventually, the once verdant land of the eastern Jordan Disk recovered, and beckoned settlers once again. Maybe by the tenth century BC, ideas about Sodom’s location had shifted southward to the salty and desolate area of the Dead Sea’s southern shores and the standing ruins of Bab edh-Dhra and Numeira. During the age of Solomon and the subsequent Divided Monarchy, the cities of the eastern Jordan Disk thrived on its well-watered agricultural lands and played an important role in the regional politics.



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Middle Bronze Age piriform juglet body found at Tall el-Hammam.

Tall el-Hammam’s sheer size, abundant water resources, and commanding view of the southern Jordan Valley make her a strong candidate not only for Sodom, but also as an important site during other eras of history: Abel-shittim (Moses and Joshua); a Transjordan administrative center (Solomon); and Livias (as seen from Mount Nebo by Egeria,¹⁵ fourth century AD Spanish pilgrim, who claims also to have seen “all the land of the Sodomites” from the same location!).

Because I believe the textual evidence strongly supports Sodom’s northern location¹⁶ on the eastern Jordan Disk, it would have been completely irresponsible to ignore the possibility that Tall el-Hammam (as well as Tall Nimrin, with its Middle Bronze Age destruction and ensuing 500-year occupational hiatus¹⁷) may be Sodom or Admah (with Tall Nimrin being the other). Once aware of these connections, we couldn’t deny the level of interest that would likely be generated in the light of these possibilities. (And, certainly, the implications for Jordanian tourism are potentially enormous.)

If rigorous scholarship and responsible archaeology confirm a link between Tall el-Hammam and Sodom (or between Tall Nimrin and Admah, or other possible Biblical associations), then so be it. If the same approach suggests that such connections aren’t warranted, then so be it. But we must not hide from the possibilities because of bias one way or the other.

As A.J. Ayer’s verification principle¹⁸ requires of any assertion, we must state clearly the criteria whereby any hypothesis can be verified and/or falsified. This is the strict method of science. If it weren’t in the exact place specified in the Bible for the Cities of the Plain, then Tall el-Hammam couldn’t be Sodom. If there were no Early Bronze Age or Middle Bronze Age city at the site, it couldn’t be Sodom. If Tall el-Hammam weren’t a fortified city during the Middle Bronze Age, it couldn’t be Sodom. If there were no centuries-long occupational hiatus at Hammam after its Middle Bronze Age destruction, it couldn’t be Sodom. If there weren’t other sites with similar occupational profiles in the immediate area of the eastern Jordan Disk, then Tall el-Hammam couldn’t be Sodom. But Tall el-Hammam does meet all these criteria—so what else could this massive city possibly



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Remains of a clay-lined storage bin at Tall el-Hammam.

be? (In my estimation the southern sites, like Bab edh-Dhra and Numeira, do not appear to satisfy these criteria.)

As I understand the evidence, Sodom is the only major Bronze Age urban center on the eastern Jordan Disk mentioned in the Bible. Tall el-Hammam is, by far, the largest Bronze Age site on the eastern Jordan Disk. Coincidence? I'll be glad to review the evidence for other candidate sites possessing these qualifications. Presently, Tall el-Hammam is the only site that satisfies them all. If anyone has a better Sodom, then let's have a look at it.

During this past 2007 dig season, I got a chance to present my case "live and on-site" to quite a few visiting archaeological dignitaries. In those instances, Tall el-Hammam itself did most of the "talking," almost defying anyone to deny her preeminence as the dominant Bronze Age city in the region. After an on-site tour of Tall el-Hammam, with Genesis 13:1–12 firmly in mind, the general response, minimally, was always something like, "Well, it makes perfect sense, doesn't it?" To which I usually responded, "Welcome to Sodom!"

With the importance of empirical inquiry understood, we'd be irresponsible not to investigate all Biblical possibilities, especially since I believe the evidence continues to point in the direction that Tall el-Hammam is, far and away, the best candidate for Biblical Sodom. Her ugly sisters have all tried on the glass slipper, and without a fit. Tall el-Hammam, queen of the southern Jordan Valley, slides into it with custom-made precision—although her footprint is definitely not petite!¹⁹

If the shoe fits, Tall el-Hammam will wear it!

Notes

¹ I am privileged to serve as Director of The Tall el-Hammam Excavation Project, Jordan. See S. Collins, *The Search for Sodom and Gomorrah* (Albuquerque: TSU Press, 2003–07), for a detailed analysis of all aspects of the subject. See also the "Archaeology" section of the *Biblical Research Bulletin* (at www.BiblicalResearchBulletin.com) for several related articles by the author.

² Genesis 13:1–12 specifies the location of Sodom as the well-watered plain (circular disk, Heb. *kikkar*) of the Jordan River that was watered like the Garden of Yahweh (rivers and springs), watered like Egypt (an annual inundation like the Nile; in this regard, the Jordan is a Nile-in-miniature), with the whole *kikkar* (Jordan Disk) being visible from the area of Bethel/Ai from which Lot traveled eastward, pitching his tent "as far as Sodom." All this comprises a detailed and precise description of the circular disk of the southern Jordan Valley alluvial plain north of the Dead Sea, a location that's entirely visible from the edge of the highland plateau just east of Bethel/Ai. Indeed, there's about as much Biblical evidence for Sodom being in New York's Central Park as there is for a southern Dead Sea location.

³ See "A Chronology for the Cities of the Plain" and "Abraham and Tall Nimrin: Does the Chronology Work?" in Collins, *Sodom and Gomorrah*. The earliest possible birth date for Abraham working from the Masoretic Text is 2166 BC, but all the chronological evidence (apart from the Masoretic version of Exodus 12:40, which I regard as problematic), would put his birth about 215 years later, if the patriarchal life spans are taken literally. If they aren't literal, but are somehow "honorific attributions," then the time of Abraham is later still. But regardless of which "Biblical" date you assign for Abraham, he's a resident of the Middle Bronze Age (ca. 2000–1600 BC—the period from 2300–2000 BC is now included in the Intermediate Bronze Age). In this light, one must note that the oft-proposed Sodom and Gomorrah sites—Bab edh-Dhra and Numeira—were both destroyed about 2350 BC, long before the time of Abraham and Lot. Although there's a smaller Early Bronze Age village built after the 2350 BC destruction at Bab edh-Dhra, it's unfortified and short-lived. The Biblical description of Sodom requires that it be fortified ("Lot sat in the gateway of Sodom").

⁴ An occupational gap of several hundred years after the destruction of Middle Bronze Age Sodom makes sense logically and Biblically. But such a well-watered area would eventually recover from even a severe ecological disaster, so that, in time, cities would likely be built there once again—say, during the Iron Age. An absence of Late Bronze Age occupation seems to be pervasive at all sites on the eastern *kikkar*.

⁵ See "Architecture of Sodom" in Collins, *Sodom and Gomorrah* 35–44.

⁶ Collins, *Sodom and Gomorrah* 53–62; see also S. Collins, G.A. Byers, M. Luddeni, and J.W. Moore, "The Tall el-Hammam Excavation Project End of Season Activity Report Season Two: 2006/2007 Excavation and Exploration," as submitted to the Department of Antiquities of the Hashemite Kingdom of Jordan, 5 February 2007.

⁷ W.F. Albright, "The Archaeological Results of an Expedition to Moab and the Dead Sea," *Bulletin of the American Schools of Oriental Research* 14 (1924) 2–12; W.F. Albright, *The Archaeology of Palestine and the Bible* (New York: Revell, 1935); G.E. Wright, *Biblical Archaeology* (Philadelphia: Westminster, 1960) 30.

⁸ Collins, *Sodom and Gomorrah* 9–26; Collins, "Tall el-Hammam...Season Two."

⁹ A. Higgins, "Digging for Sin City, Christians Toil in Jordan Desert: Prof. Collins Seeks Sodom with Scripture as Guide and Volunteers as Muscle," in *The Wall Street Journal* CCXLIX No. 45 (February 24–25, 2007).

¹⁰ For scholarly approaches to the subject of Sodom and Gomorrah, the Cities of the Plain, and related subjects see such general works as the latest editions

Geotechnical Perspective," *Quarterly Journal of Engineering Geology* 28 (1995) 349–62; D. Neev and K.O. Emery, *The Destruction of Sodom and Gomorrah, and Jericho: Geological, Climatological, and Archaeological Background* (New York: Oxford University, 1995); and B.G. Wood, "The Discovery of the Sin Cities of Sodom and Gomorrah," *Bible and Spade* 12.3 (1999) 67–80.

¹¹ Collins, "Rethinking the Location of Zoar: An Exercise in Biblical Geography," in *Sodom and Gomorrah*.

¹² See the account "Mount Nebo" in *Diary of a Pilgrimage*, written by the pilgrim nun Egeria in the fourth century AD.

¹³ W.M. Thomson, *The Land and the Book: Southern Palestine and Jerusalem* (New York: Harper & Brothers, 1882) 371–76.

¹⁴ J.W. Flanagan, D.W. McCreery, and K.N. Yassine, "Tell Nimrin: Preliminary Report on the 1993 Season," *Annual of the Department of Antiquities of Jordan* 38 (1994) 205–44.

¹⁵ Egeria, *Diary*.

¹⁶ See "The Geography of the Cities of the Plain," "A Late Nineteenth-Century Missionary-Scholar's Take on the Location of Sodom and Gomorrah: W. M. Thomson Rides the Kikkar," "Where is Biblical Sodom: An Interview with Steven Collins," and "Ten Reasons Why Sodom and Gomorrah Are Not Located in the Southeast Dead Sea Region" in Collins, *Sodom and Gomorrah*.

¹⁷ Flanagan, "Tell Nimrin...1993" 219.

¹⁸ A.J. Ayer, *Language, Truth and Logic* (New York: Dover, 1936, rev. ed., 1946) 35. Ayer summarizes the verification principle like this: "The criterion which we use to test the genuineness of apparent statements of fact is the criterion of verifiability. We say that a sentence is factually significant to any given person, if, and only if, he knows how to verify the proposition which it purports to express—that is, if he knows what observations would lead him, under certain conditions, to accept the proposition as being true, or reject as being false."

¹⁹ Tall el-Hammam spreads over about 0.4 mi² (1 km²).



John Moore

Author and wife, Dannette, atop the Middle Bronze Age rampart at Tall el-Hammam. The author believes that this structure dates to the time of Abraham and Lot and the destruction of Sodom.

of *The Anchor Bible Dictionary*, *The Oxford Encyclopedia of Archaeology in the Near East*, and *The International Standard Bible Encyclopedia*. For detailed treatments of the subject see E. Power, "The Site of the Pentapolis," *Biblica* 11 (1930) 23–62, 149–82; F.G. Clapp, "The Site of Sodom and Gomorrah," *American Journal of Archaeology* 40 (1936) 323–44; J.P. Harland, "Sodom and Gomorrah," *Biblical Archaeologist* 5 (1942) 17–32; J.P. Harland, "Sodom and Gomorrah," *Biblical Archaeologist* 6 (1943) 41–54; B.G. Wood, "Have Sodom and Gomorrah Been Found?" *Bible and Spade* 3 (1974) 65–89; B.G. Wood, "Sodom and Gomorrah Update," *Bible and Spade* 6 (1977) 24–30; H. Shanks, "Have Sodom and Gomorrah Been Found?" *Biblical Archaeology Review* 6.5 (1980) 26–36; W.C. van Hattem, "Once Again: Sodom and Gomorrah," *Biblical Archaeologist* 44 (1981) 87–92; B.G. Wood, "Sodom and Gomorrah Update," *Bible and Spade* 12 (1983) 22–33; D.M. Howard, Jr., "Sodom and Gomorrah Revisited," *Journal of the Evangelical Theological Society* 27 (1984) 385–400; G.M. Harris and A.P. Beardow, "The Destruction of Sodom and Gomorrah: A

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Locating Sodom: A Critique of the Northern Proposal

By Bryant G. Wood

Steven Collins maintains that Tall el-Hammam, ca. 8 mi (13 km) northeast of the Dead Sea, should be identified as Sodom based on four criteria: geography, chronology, stratigraphy and architecture (2007). We will examine his arguments in each of those four areas.

Geographical Evidence for Locating Sodom

Biblical References

Collins begins by stating, “Sodom and Gomorrah, Admah and Zeboiim almost never appear on Bible maps” (2007: 70), and “even conservative Bible maps don’t include them [Sodom and Gomorrah]” (2007: 73). These statements are quite inaccurate. In reviewing eight Bible atlases published since 1997 that cover the period of the Patriarchs, seven locate the Cities of the Plain south of the Dead Sea.¹ The eighth (Team Media 1998) offers no suggestion as to their location.

An analysis of geographical indicators in Scripture places Sodom and the Cities of the Plain south of the Dead Sea. The southern border of Canaan is described in Genesis 10:19 as

passing from Gaza, on the Mediterranean coast, to Gerar, identified as Tel Haror 12.4 mi (20 km) southeast of Gaza (Klenck 2002: 29), to the Cities of the Plain. Tel Haror lies west of the southern end of the Dead Sea as it existed in Abraham’s time.² Tall el-Hammam, on the other hand, lies northeast of the Dead Sea. When the four kings of Mesopotamia fought against the kings of the Cities of the Plain, they “joined forces in the Valley of Siddim (the Salt Sea)” (Gn 14:3), a clear reference to the southern basin of the Dead Sea which had flooded in later times (Frumkin and Elitzur 2001: 49–50). When Ezekiel chastised Jerusalem for her wickedness, he said,

Your older sister was Samaria, who lived to the north of you with her daughters; and your younger sister, who lived to the south of you with her daughters, was Sodom (Ez 16: 46).

Samaria is 34 mi (55 km) north of Jerusalem and Bab edh-Dhra, the likely site of Sodom (Wood 1999: 68–69), is 40 mi (64 km) southeast of Jerusalem. Tall el-Hammam, however, is 26 mi (42 km) east-northeast of Jerusalem.

Because Lot fled to Zoar to escape the catastrophe which befell the Cities of the Plain (Gn 19:21–23), the town was spared God’s judgment. From Biblical and extrabiblical references we



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Segment of the Madaba mosaic map showing Zoar (“ZOOPA”) at the southeast edge of the Dead Sea and the sanctuary of St. Lot in the mountains to the east.

know that Zoar was occupied from the time of Abraham to the Middle Ages. Both Isaiah (15:5) and Jeremiah (48:34) mention it in their prophecies against Moab (Iron Age). It is further mentioned in various ancient references from the Roman period to the Middle Ages (Astour 1992; Howard 1988; Schaub 1997: 63). Both Josephus (*The Wars of the Jews* 4.8.4; first century) and Eusebius (2003: 58 [The Sea of Salt]; early fourth century) state that Zoar was south of the Dead Sea, and the famous Madaba Map (sixth century) places Zoar and the Sanctuary of St. Lot south of the Dead Sea (Donner 1992: 42). The Sanctuary of St. Lot, actually a monastery and church complex, has been located south of the Dead Sea and excavated (Politis 1999). It was built around a natural cave which early Christians believed was the cave Lot and his daughters took refuge in after the destruction of the Cities of the Plain (Gn 19:30).

Geological Considerations

The geology of the plain south of the Dead Sea also points to this area as being the location of the Cities of the Plain. Genesis 14:10 states, “now the Valley of Siddim was full of tar (*hēmār*) pits.” *Hēmār* is bitumen, a naturally occurring petroleum substance similar to asphalt. It was used extensively in antiquity for mortar, sealing and as a binding agent, and is commonly found in the area south of the Dead Sea (Bilkadi

1984; 1994; Clapp 1936a: 901–902; 1936b: 341–42; Neev and Emery 1995: 141–43). The material that fell on the plain causing the destruction of everything save Zoar was *goprūt*, sulfurous oil (black sulfur) (Wood 1999: 74–75). Petroleum and sulfur are also present south of the Dead Sea (Clapp 1936a: 906; 1936b: 40; Harris and Beardow 1995: 360; Neev and Emery 1995: 33, 140–42).

“Lot looked up and saw that the whole plain of Jordan was well watered...like the land of Egypt” (Gn 13:10). Collins interprets this as referring to the annual flooding of the Jordan River, similar to the Nile River (2007:71). The Hebrew words used, however, do not support this interpretation. The Hebrew words translated “well watered” are *kullāh*, meaning “all of it,” and *mašgeh*, a noun derived from the causative form of the verb meaning “to drink,” giving the meaning “completely irrigated.” Thus the allusion is to the irrigated land of Goshen in the northeast delta of Egypt where the Israelites lived during their sojourn in Egypt.

Paleobotanical studies have shown that there was a rich diversity of crops grown at Bab edh-Dhra and her nearby sister city Numeira, probably Gomorrah (Wood 1999: 68–69). Most common were barley, wheat, grape, figs, lentils and flax. Less common were chickpeas, peas, broad beans, dates and olives (McCreery 1980: 52). Several of these crops could only have been grown with the use of irrigation:



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“Then the Lord rained down burning sulfur on Sodom and Gomorrah—from the Lord out of the heavens. Thus He overthrew those cities” (Gn 19:24–25). All across the site of Bab edh-Dhra archaeologists found evidence of a fiery destruction, such as this layer of ash in the western temple. Tumbled walls attested to an earthquake as well.



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Charnel house A22 in the cemetery at Bab edh-Dhra. In the final phase of occupation at Bab edh-Dhra, the dead were interred in mud brick buildings called charnel houses. Five examples were excavated, and in each case they were destroyed by fire at the same time the city was destroyed. Careful stratigraphic excavation of charnel house A22 shown here, the largest of those excavated, revealed that the fire started in the roof and spread to the interior when the roof collapsed. This provides powerful evidence that “the Lord rained down burning sulfur on Sodom and Gomorrah—from the Lord out of the heavens” (Gn 19:24).

There is little doubt that agriculture was an important component of the economic base of the Early Bronze Age cities in the [southeast Dead Sea plain] region and that irrigation was a key element of the agricultural industry (McCreery 1981: 168; cf. p. 167; 1980: 52; Harlan 2003).

It appears that each of the Cities of the Plain controlled the water from perennial streams that flowed into the plain from the plateau to the east (McCreery 2003; Schaub 1997: 63).

Understanding Genesis 13

Collins’ main evidence for locating Sodom north of the Dead Sea is found in Genesis 13. There we have the account of Lot choosing the Cities of the Plain (*kikkar*) as the area where he would pasture his flocks. Collins interprets the location of the event as “the environs of Bethel/Ai” (2007: 71). Thus, when Lot “set out toward the east” (Gn 13:11), he would have traveled to the area of the southern Jordan Valley just north of the Dead Sea.

A careful analysis of the chapter, however, reveals that that is not necessarily the case. The separation passage, vss. 5–17, is bracketed by references to two important camping places which had religious significance for Abraham. After returning from Egypt, Abraham moved northward until he came to the place

between Bethel and Ai where he had previously built an altar. “There Abram called on the name of the Lord” (Gn 13:3–4). Following the separation, “Abram moved his tents and went to live near the great trees of Mamre at Hebron, where he built an altar to the Lord” (Gn 13:18). We are not given the details of the journey from Bethel/Ai to Hebron, except for the account of the separation of Lot. The straight-line distance from Bethel/Ai to Hebron is ca. 27 mi (44 km), and so the journey would have required a number of encampments. Since Abraham would have sought the best pasturage for his animals along the way, it is unlikely that he traveled in a straight line.

Genesis 13 does not specifically state where the separation took place. From the Bethel/Ai area to Tall el-Hammam is ca. 25 mi (40 km), a considerable distance for Lot to observe “that the whole plain of the Jordan was well watered” (Gn 13:10). Based on the evidence we have considered, it is more likely that the separation took place in southern Canaan just prior to Abraham settling at Hebron. If their wanderings took them southeast of Hebron, they could have come to a place ca. 15 mi (24 km) east of Bab edh-Dhra, where Lot would have been close enough to observe the vegetation of the *kikkar* of the Jordan (Cassuto 1984: 215, 368).

Regarding the use of Genesis 13 to locate Sodom, Walter Rast, one of the excavators of Bab edh-Dhra, summarized the situation well:

One can safely say that the directions and locations in Genesis 13 are the most general and obscure of all the texts about Sodom. It is surprising that some scholars could put so much weight on the indistinct locations given there [for a northern location], while rejecting the more compelling references in other texts [for a southern location] (2006: 21).

Collins understands the Hebrew word *kikkar*, translated plain, as meaning a circular disk, and the Jordan Valley north of the Dead Sea, according to Collins, matches that description (2007: 72). Any map or satellite photo of the area will show, however, that the plain is not circular, but rectangular in shape. Furthermore, Sodom and Gomorrah and the Cities of the Plain were associated with the *kikkar* of the Jordan (Gn 13:10, 11). The plain north of the Dead Sea was called the *kikkar* of the valley of Jericho (Dt 34:3, KJV), not the *kikkar* of the Jordan. A different *kikkar* of the Jordan from the one the Cities of the Plain were associated with was located between Zarethan, most likely Tell es-Saidiyeh (Tubb 1997: 452), and Succoth, probably Tell Deir Alla (Franken 1997: 138), (1 Kgs 7:46). It is squarish in shape. The Hebrew word *kikkar* was used of bread (Ex 29:23) or a specified weight of precious metal, a talent (Ex 25:39). It is evident that it was the flatness of these objects that caused the word to be applied to a plain, rather than roundness (Speiser 1964: 96–97).

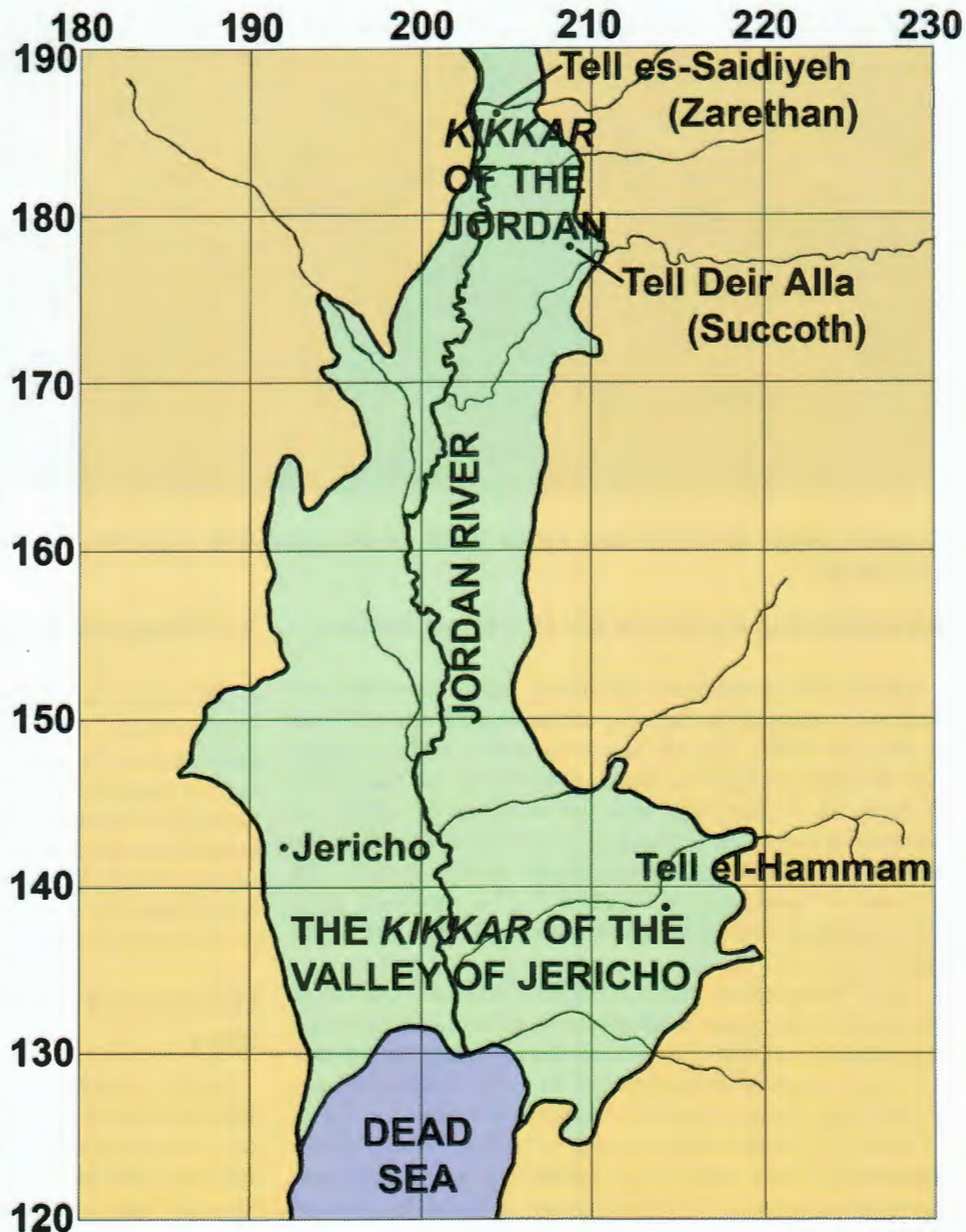
Chronological Evidence for Locating Sodom

Collins maintains that the Cities of the Plain “must date from the Middle Bronze Age” which is “the only possible timeframe for Abraham” (2007: 72). He reaches this conclusion by lowering the dates for Abraham 215 years by using a Sojourn of 215 years rather than 430 as stipulated in Exodus 12:40 (2007: 77, n. 3). Ray has carefully reviewed all of the pertinent evidence regarding the Sojourn and concludes:

the various lines of evidence would seem to indicate that the 430 years should be taken at face value for the Israelite sojourn in Egypt (2004: 42; 2007: 94).

Starting with the date of the Exodus at 1446 BC (Wood 2005)

and a Sojourn of 430 years, a straightforward reading of the chronological data in the Old Testament yields dates for Abraham of 2166–1991 BC, with the destruction of the Cities of the Plain occurring in 2067 BC (Walton 1978: 40),³ at the end of the Early Bronze (EB) period. Collins, however, lowers this date by 215 years to 1852 BC in the Middle Bronze I period.⁴ Since Middle Bronze Age pottery was found at Tall el-Hammam, Collins concludes that it must be Sodom (2007: 75) But he is vague about what phase of the Middle Bronze Age Tall el-Hammam was occupied. The Middle Bronze Age was very long, stretching from ca. 1920–1483 BC (Bietak 2002: 37–38, 41–42). More specific dating must be provided before a correlation can be made with Biblical Sodom.



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Jordan Valley north of the Dead Sea showing the Plain of the Valley of Jericho (Dt 34:3) and the Plain of the Jordan between Zarethan and Succoth (1 Kgs 7:46). The distance between lines is 6.2 mi (10 km). Traced from the 1973 Survey of Israel 1:250,000 map.



Rohr Productions, Nicosia, Cyprus

Satellite photo of the Jordan Valley north of the Dead Sea. Note that the shape of the plain is not circular, but rectangular.

Stratigraphic Evidence for Locating Sodom

Collins' third criterion for identifying Tall el-Hammam with Sodom is stratigraphy, i.e., the archaeological phases found at the site (2007: 72). He maintains that a Middle Bronze Age destruction should be found, followed by "at least a few centuries of abandonment" since Moses found the area to be uninhabited according to Numbers 21:20 (2007: 72). Since the evidence points to a southern location for Sodom, however, the reference to "wasteland" in Numbers 21:20 is irrelevant, given that it applies to the *kikkar* of the valley of Jericho and not to Sodom.

Since "occupation at the site [of Tall el-Hammam] came to an abrupt halt...during the Middle Bronze Age" and Middle Bronze Age remains were found in one area "buried under nearly 3 ft (1 m) of ash and destruction debris" (2007: 76), Collins assumes a match with the destruction of Sodom as described in Genesis 19 (2007: 76). But he fails to provide a date for this destruction, and there has been insufficient excavation to determine if it is site-wide or merely a local occurrence. In order for there to be a match with Sodom, it is necessary to have evidence for a massive site- and area-wide destruction by fire, accompanied by an enormous earthquake (Wood 1999: 72–78), in 2067 BC (or 1852 BC, according to Collins' chronology). This has not yet been demonstrated for Tall el-Hammam.

Architectural Evidence for Locating Sodom

The final criterion for identifying Sodom is architecture (Collins 2007: 72). By this, Collins means that the site must be fortified, since "Lot was sitting in the gateway of the city" when the two angels arrived (Gn 19:1). A typical Middle Bronze Age rampart fortification system has been found at Tall el-Hammam, but again we must ask, "What is the date of this system?" Simply saying that it is Middle Bronze Age in date is not sufficient. It must correlate to the exact time of the destruction of the Cities of the Plain as recorded in Scripture.

The Date of the Destruction of the Southern Sites

Collins' major criticism with the Early Bronze Age sites discovered south of the Dead Sea, in addition to the fact that they do not correlate with his understanding of Genesis 13, is that they were destroyed too early. He says Bab edh-Dhra and Numeira "were both destroyed about 2350 BC, long before the time of Abraham and Lot" (2007: 77 n. 3). The destruction of these sites occurred at the end of the EB III period. Rast gives the date as 2350 BC (2006: 24), while the co-director of the excavations, R. Thomas Schaub, places the date slightly later at 2300 BC (1997: 249).

In reality, the archaeological date for the end of the EB III period cannot be determined with any degree of certainty. Dating for the Bronze Age in Palestine is dependent upon synchronisms with Egyptian chronology. Unfortunately, no synchronisms have yet been found for the EB III period. There are a few correlations for the previous EB II period, suggesting that it was approximately contemporary with the Archaic Period (First and Second Dynasties) in Egypt, ca. 3100–2700 BC (Ben-Tor 1992: 122; Kitchen 1996: 11; Mazar 1990: 135). The dates for the Archaic Period are only known to within 200 years, according to Kenneth Kitchen, a recognized authority on Egyptian chronology (1991: 202).



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The author points to the burn layer at Numeira, testifying to the fiery destruction that overcame the city at the end of the EB III period. As at Bab edh-Dhra, there was evidence of a violent earthquake that occurred with the fire. The sites of Bab edh-Dhra and Numeira are located on the eastern fault line of the Jordan rift valley. Geologists theorize that an earthquake caused pressure on subterranean petroleum deposits which were forced out of the ground, ignited, and fell back down on the Cities of the Plain.

Manfred Bietak, based on his important work at Tell el-Daba (ancient Rameses), Egypt, places the beginning of the Middle Bronze Age at ca. 1920 BC (2002: 37, 41–42). How the intervening 800 years from the end of EB II to the beginning of the Middle Bronze Age should be divided between the EB III and EB IV periods is strictly an educated guess.⁵ The reason for the demise of the urban centers of EB III, with its concomitant destructions and site abandonments, is unknown (Ben-Tor 1992: 123–24; Mazar 1990: 141–43; Richard 1987: 34). It is thought that EB III was the longer of the two periods because of multiple phases of building and destruction found at a number of sites, including Bab edh-Dhra (Ben-Tor 1992: 123). It is entirely within the realm of possibility, therefore, that the destruction of Bab edh-Dhra and Numeira could have occurred at the Biblical date of 2067 BC. We shall have to wait further archaeological discoveries before an accurate archaeological date for the end of EB III can be ascertained.⁶

Conclusion

All of the relevant evidence points to the area south of the Dead Sea as the correct location for Sodom. Excavations at two sites in that region, Bab edh-Dhra and Numeira, have provided strong evidence that these two sites should be identified as Sodom and Gomorrah, respectively (Wood 1999).⁷ Even if one grants the possibility that the Cities of the Plain should be located north of the Dead Sea, the excavations at Tall el-Hammam to date have

not provided the necessary evidence to make a viable connection between the site and Biblical Sodom. Collins' statement, "Tall el-Hammam is, far and away, the best candidate for Biblical Sodom" (2007: 77), goes beyond the available evidence.



Notes

¹ Aharoni, Avi-Yonah, Rainey and Ze'ev 2002: 43; Curtis 2007: 72; Dowley 1997: 17; Farrington 2003: 16, 19; Lawrence 2006: 25; Rainey and Notley 2006: 113; Strange 1999: 28.

² The southern basin of the Dead Sea was dry during Abraham's time (Frumkin and Elitzur 2001: 49).

³ The birth of Isaac was announced by the Lord as being "about this time next year" (Gn 18:14). Since Isaac was born in 2066 BC (Walton 1978: 40), the destruction of the Cities of the Plain occurred one year earlier in 2067 BC.

⁴ The Middle Bronze Age I period extended from ca. 1920–1700 BC (Bietak 2002: 37, 41–42). Some prefer the older nomenclature of Middle Bronze Age IIA for this period.

⁵ The end of Early Bronze Age III is given as 2350 BC in the *Anchor Bible Dictionary* (Dever 1992: 110), 2300 BC in *The Oxford Encyclopedia of Archaeology in the Near East* (5: 413; 1997) and 2200 BC in the *New Encyclopedia of Archaeological Excavations in the Holy Land* (4: 1529; 1993).

⁶ One possibility is that the end of the Early Bronze Age III period was brought about by the double blow of the campaign of the four Mesopotamian kings described in Genesis 14 and the destruction of the Cities of the Plain described in Genesis 19. These two events occurred about 20 years apart (Shea 1988; Wood 1999: 70–74).

⁷ This article can also be found online in the Scholars' Corner section of the ABR website, at <http://www.biblearchaeology.org/scholars/patriarchs1.html>.

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