

Historical earthquakes in Jerusalem – A methodological discussion

N. Ambraseys

Department of Environmental Engineering, Imperial College, London SW7 2BU, UK,

E-mail: n.ambraseys@imperial.ac.uk

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Abstract

This article is of an inter-disciplinary nature, relevant to the fields of both earth sciences and historiography, which come together in the investigation of long-term earthquake hazard. The paper emphasises the need for systematic and consistent analysis of historical earthquake data and sets out an example for such a task. The results from the historical study of earthquakes will be of value to earth scientists and engineers only when historical information is converted into “numbers” representing epicentral location and magnitude of the events, accompanied by an estimate of the reliability of their assessment. However, as we go further back in time before our era, the historical record gradually disappears and the archaeological record takes over. Unfortunately, the archaeological record is too coarse and ambiguous, without any precise internal archaeological indicators. Dating is based on, or influenced by the very few historical records, such as in the Bible and inscriptions, which provide an example of how their assumed accuracy may influence archaeologists’ interpretation and dating. Quite often this develops into a circular process in which archaeological assumptions or theories are transformed into facts and used by earth scientists to confirm the dates and size of their proposed events. In this article we discuss the problems that arise when Biblical and archaeological information is used at face value to assess earthquakes in the Holy Land. This combination may produce earthquakes of hypothetical location and of grossly exaggerated magnitude with consequences for the assessment of seismic hazard.

Introduction

Having completed the retrieval and analysis of data from earthquakes of the last 20 centuries in the Eastern Mediterranean region, and as matter of curiosity, not knowing what the outcome would be, we extended our studies into a much longer and little known period that goes back to the times before our era for which there is relatively little or no textual information about earthquakes, the data coming chiefly from the Bible and from the fields of archaeology and indirectly from tectonics.

We realised that the results from a historical study will be of value to earth scientists and engineers only when this information is converted into “numbers” representing epicentral location and magnitude of the

events, accompanied by an estimate of the reliability of their assessment.

As an example we chose to reappraise the effect of three earthquakes in Old Jerusalem, a city with a long and well-documented history, not only because it is situated relatively close to the active Dead Sea Fault zone but also because it is singular how, surrounded by all the destructive earthquakes with which old Syria and Palestine have suffered for so many centuries, Old Jerusalem, considering its ancient construction and its foundation mostly on cultural debris, has been comparatively spared.

In later historians of the Byzantine, Muslim and Crusade periods and of more recent times, in which Jerusalem was the central point of interest, we find again that of all the destruction of cities recorded in the

region, Jerusalem remained comparatively immune, in spite of the fact that an earthquake in the Holy Land would have been classed as one of those which excites widespread interest rather on account of the geographical location than because of its special violence or large magnitude.

Zechariah's earthquake

Among Biblical earthquakes we chose to reappraise the mid-8th century B.C. earthquake, known as the "Amos's", "Zechariah's" or "Uzziah's" earthquake, because of its importance. Modern writers date the earthquake to 759 BC and assign to it a magnitude of $M_{L(sic.)}$ 8.2, with an intensity in Jerusalem between VIII and IX (Ben-Menahem, 1979.262; Austin et al., 2000). In addition the event is associated with a coseismic left-lateral offset of the Jericho fault which is a segment of the north-south trending strike-slip Dead Sea Fault (Nur and Ron, 1996). Obviously, such an important earthquake deserves authentication and its effects reappraisal.

The earliest reference to a mid-8th century B.C. earthquake in Judea can be found in the opening verse of the Book of Amos who, without giving any details, mentions in passing an earthquake in his days, somewhere in Judea, in the reign of Uzziah (791–752 BC) [for quotations see Appendix 1, 1], perhaps the same event alluded to by Isaiah (c. 700 BC) [2].

About three centuries later, early in the 6th century, Zechariah (c. 520 BC) mentions an earthquake in Judea, again in the days of King Uzziah and probably the same event mentioned by Isaiah, which he says affected Jerusalem and caused Mount of Olives, east of Jerusalem, to split and form a valley [3].

The interpretation of this passage in Zechariah [14.4–5], which seems to be a 5th or 4th century B.C. insertion, is not clear. Other versions of the same passage say that the Mount of Olives will split in two and create a valley that will reach Azel. This valley will run from east to west with half of the Mount of Olives moving to the north, away from the position it occupied, while the other half will move to the south. The valley will stop where the mountains will touch each other [3.1, 3–7].

A somewhat different reading we find in the Masoretic Version, where following the mention of the splitting of the Mount of Olives, says that the valley shall reach unto Azal, as compared to the Revised Standard Version which says instead that the valley shall be

stopped up, for the valley shall touch the side of it (of the mountain) [4, 5].

The source of this difference lies perhaps in the confused reading of the Hebrew words for "shall be stopped up" (*ve-nistam*), and "you shall flee" (*ve-nastem*). The consonants in both words are identical, but when at a later period the diacritical points were added to the Hebrew Bible to facilitate reading the text was apparently misunderstood and the meaning changed, in this case (viz. editor's note in Wachs and Levite, 1984).

By adopting the latter reading as more plausible in relation to the natural phenomenon described, it is obvious that there is no other explanation than a large landslide, which may or may not had been triggered by this or by another earthquake.

Also, Josephus in his *Antiquities of the Jews* (93 AD), a book written about six centuries later, refers to an earthquake that happened in the last months of King Uzziah's life, which made a rent in the Temple at Jerusalem. Josephus adds that at a place called *En-rogel*, outside the city, half of the mountain in the west broke off from the rest and slid 800 metres up to the mountain on the east, spoiling the king's gardens [6]. Assuming that the two authors refer to the same event, this passage in Josephus seems to suggest that in all probability what Zechariah describes is a landslide, perhaps triggered by an earthquake rather than a graben formed by normal faulting.

Regarding the location of *Azal*, the name may denote some place near the western extremity of the valley near Jerusalem or a hamlet on the outskirts of Jerusalem, but this is not certain. As for the location of *Er-rogel* it has been suggested to be the fountain of the Virgin, the modern *Ain Umm al-Daraj*. Others identify it with *Bir Eyub*, to the south of the Pool of Siloam, and below the junction of the valleys of Kidron and Hinnom, which seems to be a more probable location, but again this is not certain.

There is one more reference to these events in Uzziah's days by Nathan ha-Bavli, who was writing in the middle of the second century A.D. He does not mention the earthquake but he says that at the time of the desecration of the temple by Uzziah, the temple split open and the fissure extended for twelve 'miles' in each direction [6a].

There remains the question of whether there is any evidence today for active faulting in the immediate vicinity of Old Jerusalem which can be associated with the ground deformations mentioned by Zechariah, Josephus and Nathan.

Old aerial photographs of the chalky geological formations of region show only landslides on steep slopes but no through-going faults. A relatively large slide can be recognised on the Mount of Olives which is located on the slope which faces west towards the Old City, the scarp of which can be seen halfway up the Mount of Olives, but which, according to the Geological Survey of Israel, is probably much more ancient than the Biblical times (viz. Wachs and Levite, 1984; Frydman, 1997). The multitude of short scarps shown in relatively recent geological maps of Jerusalem all terminate at the Kidron Valley (Gil, 1996). The exception is a short northeast-southwest running fault trace which is shown on the Geotechnical Map of Jerusalem (Israeli, 1977) which the Atlas of Israel labels : *Zechariah 14:4, earthquake fault*. This feature extends from a point a few hundred metres south of the Jerusalem Railway Station in the west, running for more than three kilometres, to just north of al-Ayzariyah in the east, striking about N-70-E (Figure 1), (Atlas of Israel, 1985). The reason for which this feature has been associated with Zechariah's earthquake is not given.

We could find no direct or indirect evidence that Jerusalem was damaged, and it is interesting that the details in Josephus about the effects of the earthquake on the temple are not supported by earlier sources that



Figure 1. Geological map of Jerusalem with the alleged "earthquake fault of Zechariah", taken from the Atlas of Israel (1985). Atlas of Israel (1985), *Physica and human geography*, 3rd Ed., p. 17, The Survey of Israel, Jerusalem.

remain silent about damage anywhere in Judea and Israel [7].

Amos' earthquake may be dated vaguely from the line of Jewish kings chronicled in the Old Testament, which provides us with 756 or 759 BC as a *terminus ante quem* (Soggin, 1970, p. 120) or perhaps earlier.

Courville dates this earthquake to 751–750 B.C., based on the Jewish legend reported by Josephus in which the prophet Zechariah is quoted as a source indicating the severity of the earthquake. But this would only be the correct date if the earthquake could be associated with the judgment on Uzziah, that is, only if Josephus's account could be proven true that the earthquake occurred at the same time that Uzziah was stricken with leprosy [6]. While the Zechariah quotation is suggestive, it does not specifically associate the earthquake with God's judgment on the king, and we cannot follow either Josephus or Courville's attempts at a correlation without further evidence (Courville, 1971:ii.122). For instance, Courville goes on to correlate Uzziah's earthquake with other catastrophic events, such as for instance the eruption of Thera. He can only do this because he brings the Late Bronze age down to the time of Uzziah, a view which must be rejected (Crisler, 2004).

If we adopt Courville's view, however, the placement of Uzziah's earthquake at the end of Samaria II can be correlated with a wave of destructions at this stratigraphic level that is said to have affected the Holy Land, which could be also due to the invasion by the Egyptians.

Modern writers have suggested that archaeological evidence points to at least another 20 sites in Judea and Israel that were destroyed by the same earthquake, which is difficult to ascertain. The chief problem is the identification of the cause of the destruction at these sites. Table 1 lists the sites, the destruction of which has been attributed by different writers to the earthquake, and Figure 2 shows their location. They are scattered in a north-south direction, from Tel Hazor in the north to Tel Batash in the south, a distance of 350 km, and from the Mediterranean coast to the east side of the Dead Sea Fault zone, that is, within an area of about 100 km radius.

But archaeological reports give little or no technical justification to support the conclusion that damage was due to an earthquake, and if so due to the very same earthquake mentioned by Amos. Also, stratigraphic control did not consider or discuss the possibility that the observed damage was the results of

Table 1. Selection of archaeological sources of information

-
- Iraq al Amir (Iam), [Butler, 1907.13=760?]
 - Khirbet al Asiq=En Gev, (Kas) [Dever, 1992.34.nt.10=n.d.]
 - *Lachish=Hesy, (Lch) *A natural catastrophe of this sort would, perhaps, be compatible with the earthquake mentioned by Amos.* Stratum IV, [Ussishkin, 1977.52; Dever, 1992.35.nt.10; Herzog, 2002.97=760]
 - *Megiddo, (Mdg) *The destruction may be linked to the biblical reference to a major earthquake ca. 760 B.C. in the time of Jeroboam II.* Stratum H5a [Knauf, 2002; Shmuli and Amotz, 2002=760]
 - *Samaria=Shechem (Smr) *The destruction was probably due to Uzziah's earthquake of 783 B.C.* Stratum II, IXB [Crisler, 2003,2004=783]
 - *Tel Beersheba=Tel Sheva (Tsv) *Tentatively the destruction might be associated with a severe earthquake dated c. 760 B.C., based on biblical references.* Stratum IV [Herzog, 2002.96=760]
 - *Tel Gezer (Tgz) *Evidence for the destruction, as in other sites, can be attributed to the earthquake in Amos and Zacharia ca. 760 B.C.* Tower VI [Dever and Younker, 1999.1.286; Younker, 1991; Dever, 1992.30=760]
 - *Tel Hazor (Haz) *The damage is likely to be due to the well-known earthquake mentioned by Amos.* Stratum VI, [Yadin, 1972.113,181; Knauf, 2002=760; Dever, 1992.28=800–750]
 - Tel Mevorakh (Tmv) [Mazar, 1993.298=?]
 - Tel Michal (Tmi) [Mazar, 1993.298=?]
 - Tell Abu Hawam (Tah) [Balensi, 1980.586; Warren and Hankey, 1989.161= in fact 1125–1050]
 - *Tell Arad (Tar) *The excavators attribute the destruction to an earthquake during the reign of Uzziah in 760 or 750 B.C.* Stratum XI [Herzog and Singer, 2002.96–98; Singer-Avitz, 2002.162=760]
 - *Tell Deir Alla (Tda) *Indeed, the earthquake that destroyed level M/IX could well be the one mentioned in Amos, dated about 760 B.C., Stratum IX=M* [Dever, 1992.35.nt.10; Lemaire, 1997.139=750.; Knauf, 2002=760]
 - Tell al Hama (Thm) [Mazar 1993.208=?]
 - Tell Qasile (Tqs) [Dothan and Dunayevsky, 1993; Stern, 1993; Mazar, 1993.298=in fact 1100–1050]
 - Tell al Saiidiyah (Tsa) [Mazar, 1993.208=?]
 - Timna=Tel Batash (Tmn) [Rotherberg and Lupu, 1967.59; Rothenberg, 1972.128, 149–50; Mazar, 1993=in fact 1160–1156]
-

All years are B.C.

Abbreviations of toponyms in brackets refer to locations shown in Figure 2.

Starred entries are for sites for which there is dated archaeological evidence for mid-8th century earthquake destruction.

Entries not starred refer to sites which modern writers (too many to listed here) consider to have been destroyed by Amos' earthquake, for which we could find no supporting archaeological evidence.

later earthquakes. Examples of the reasoning used by archaeologists in support of earthquake destruction at their sites are given verbatim in Table 1 in italics. An earthquake that could obliterate man-made structures within an epicentral area of about 100 km radius, is an earthquake of a size beyond the limits of the possible.

But this needs not be the case because it is not known whether the destruction of the towns and forts shown in Figure 2 was the result of Zechariah's earthquake or of separate events that occurred in the same week, month or year but not differentiated in the sources or, more likely, the result of the invasion of Judea and Israel by pharaoh Sheshonk I.

Note that many of the sites shown in Figure 2 are included in the list of cities conquered by the Egyptians, the names of which are carved into the south wall of the courtyard of the temple of Karnak in Egypt, i.e. Timna (Tel Batash) minor fortifications in the Negev, Tel Gezer, Tel Michal, Tell Qasile, Tell el-Mazar, Tell el Saiidiyah, Tell el-Hama, Tel Mevorakh, and Tell Abu Hawam. It is probable that Megiddo, where Sheshonk erected a victory stele, was only partially destroyed,

as it continued in use. However, this stele belongs to the time of Jeroboam 2, dated to c. 783 B.C. (Mazar, 1993.298; Joel Ng, 2004; Crisler, 2004; Kitchen, 1986).

Unfortunately, because of the differences between the Egyptian record and the Biblical account, it is difficult to establish whether the invasion by Sheshonk I was coeval with Amos's earthquake and the Egyptian invasion, a subject, which we are not qualified to examine further.

In conclusion it is possible that the earthquake mentioned by Amos, was embellished by Josephus and by later writers in their narrative by including the effects of an earthquake, to which the prophets do not refer and it could be another earthquake. But from the available tectonic and geological evidence it seems more probable that the natural phenomenon that Zechariah describes fits better the more plausible “shall be stopped up” reading of his text, which implies the occurrence of a large landslide perhaps triggered by an earthquake.

The uncritical amalgamation of biblical information and archaeological evidence from various distant parts of Judea has produced a very large earthquake

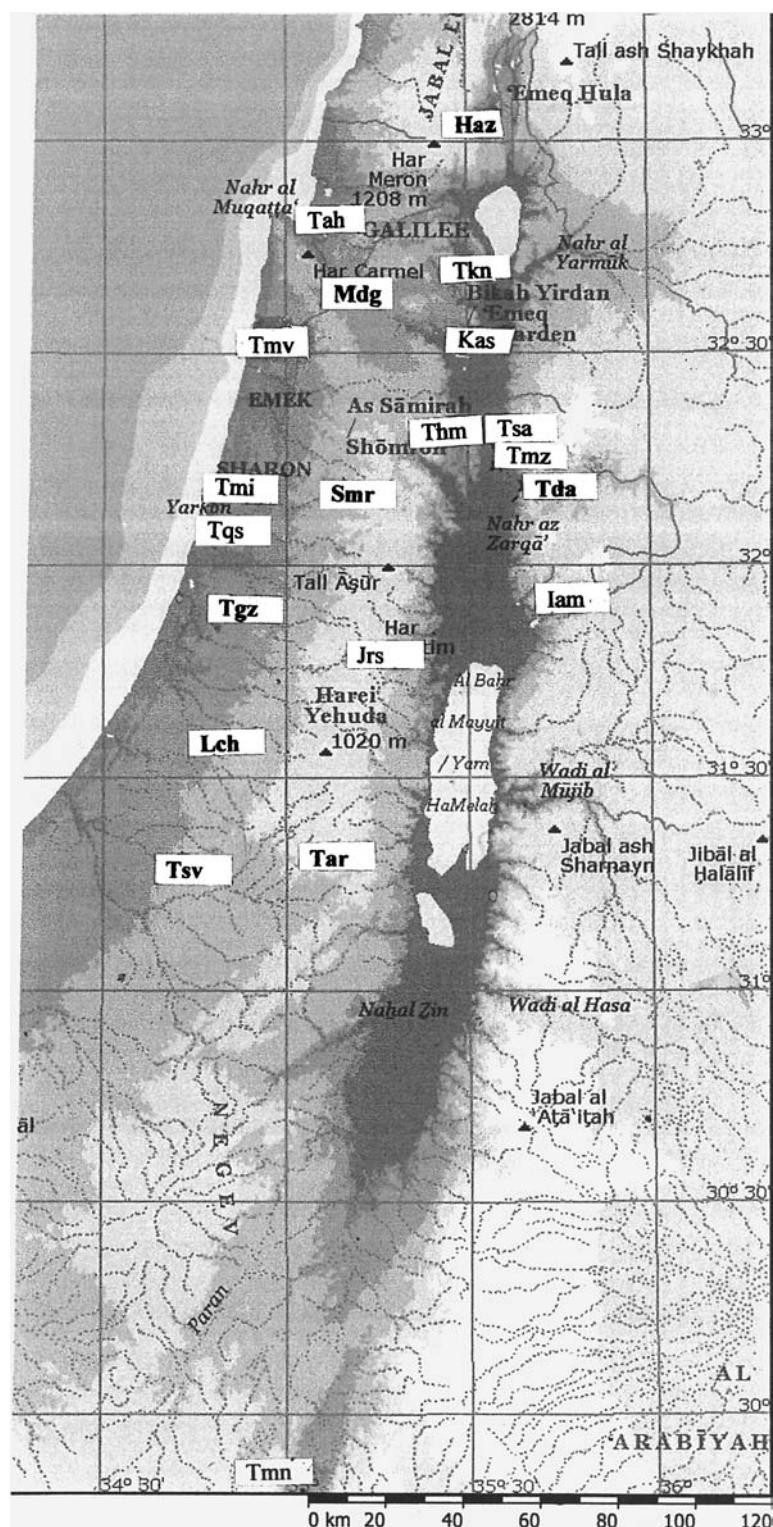


Figure 2. Location map of sites associated with Amos' earthquake, listed in Table 1.

of $M_s > 8.0$. Such an earthquake should have razed Jerusalem to the ground, an event which is unlikely that the prophets or later chroniclers would have not mentioned or itself leave its mark with a major surface fault rupture.

Dating this earthquake is very uncertain, as archaeological evidence is hampered by the unresolved differences that exist between conventional chronology and the New Chronology. The description by Josephus, whether really of the earthquake mentioned by Amos, Josephus and Nathan or not, is at least evidence of the effects of an earthquake that had occurred before their time somewhere in Judea for which there are no means today of assessing its location and magnitude.

The earthquake at the crucifixion

The second event we examine is the earthquake(s) that allegedly occurred at the Crucifixion and Resurrection of Christ in Jerusalem that caused darkness over all the land, tombs to open and the ground to split open.

The source for this information is St. Matthew's Gospel, where we find two earthquakes. The first, at the time of Crucifixion, which caused the rock-tombs to break open, revealing the bodies of the Just, who then rise after Christ's resurrection and symbolizes both nature's response to Christ's death and a prefiguration of the Resurrection. The second earthquake occurred after the Resurrection in order to let the women into the tomb so that they can see that Christ is not there [8, 9].

The year of these events is problematic as it is incompatible with certain chronological elements concerning the life and passion of Jesus, so that researchers can only narrow the possible years down to 33 and 34 A.D., the former more likely to be correct (Pratt, 1991; CE. Firpo, 1989).

These earthquakes are mentioned only by one Evangelist and by chroniclers who used St. Matthew as their sole source. It seems that St Matthew was more interested than any of the other Evangelists in Old Testament precedents, and he probably recorded these events because he had Amos's earthquake in mind. It would also be consistent with St. Matthew's style for these two earthquakes to be two accounts of the same event from different witnesses, both included for their theological significance [12, 13].

Later writers seem to opt for the Crucifixion earthquakes in order to symbolize the cosmic proportions of Christ's death, but in fact they link these events that

occurred in Jerusalem to the earthquake and eclipse of the sun which, in fact occurred a year earlier in OI.202/Tib.18 (32–3 A.D.), not in Jerusalem but in Nicaea in Bithynia [14] (Oppolzer, 1962). The earthquake in Nicaea is also mentioned by St. Jerome [15] who, however, does not mention Jerusalem. Eusebius does not mention the solar eclipse but he does notice, in passing, the earthquake at Christ's crucifixion, which he dates to the 19th year of Tiberius (33 A.D.). The account of Orosius's (early 5th c.) is very similar to Eusebius's [16], adding that Emperor Tiberius exempted the damaged cities in Bithynia in Asia Minor from tribute and gave generous donations towards repairs, and who also does not mention Jerusalem [17].

The fact that these earthquakes in Jerusalem are not mentioned by contemporary pagan writers, or by three out of the four Evangelists, suggests that they may have been inspired by the *topos* of nature's reflecting events of great importance, and they must not be considered as referring to historical earthquakes.

It is interesting that the interpretation of St. Mathew suggests that the earthquake at the time of the Resurrection was associated with the opening up of the rock beneath the Chapel of the Exaltation of the Cross, possibly as a result of surface faulting. These cracks in the bedrock is said to be still visible (Lavvas, 1998, 2004).

But the geology of the whole region and in particular the site of the Holy Sepulchre shows no evidence of recent faulting. The lower part of the traditional Calvary Hill is natural, and the upper part may very likely be so. It is of soft white nummulitic limestone, and stratigraphically concordant with such beds elsewhere in the region, also seen on lower levels in the basilica. The strike of fissures and joints in the rock is east-west, practically the same as that of the veining of the rocks roundabout, the fissures broadening eastwards (Wilson, 1886; Israeli, 1977; Gil, 1996). It is interesting that the open structure of the rock in the vicinity of the Holy Sepulchre was noticed after its restoration and it is spoken by Soewulf in 1102, who says that the ground was "...much cracked near the fosse of the Cross..."

It is very probable that the open fissure in the limestone beneath the Holy Sepulchre is nothing more than one of the many weathered joints in the rock foundation, perhaps the result of stress relaxation of the rock masses due to nearby excavations, quarrying, erosion or due to some other cause of non-seismic origin.

Doubt can be cast on whether the earthquakes at the Crucifixion were "natural". Had there been an earthquake with coseismic faulting of the Golgotha Hill, the causative earthquake should have been strong

enough to destroy Jerusalem, for which there is no evidence. Perhaps the earthquake in Jerusalem was borrowed from a surrogate destructive earthquake that took place about the same time elsewhere, most probably in Bithynia.

Nevertheless, some modern writers today accept the occurrence of this earthquake in Jerusalem to which they assign the magnitude of a catastrophic event of $M_{L(\text{sic})} 8.2$ (Ben-Menahem, 1979.262; Sieberg, 1932; Amiran and Arieh, 1994).

In conclusion, the value of this summary review of the earthquake at the Crucifixion is that it draws attention to the fact that modern Bible exegesis in its interpretation uses, what is called, "literary genres", that is, that certain descriptions do not have to correspond necessarily to historical facts, but are re-decorational elements, included, to make with greater stress, a religious point. The earthquakes at the Crucifixion and Resurrection may fall into this category and they do not

correspond to the occurrence of an actual earthquake. The text of St. Mathew may not refer to any historical earthquake and these events need not be taken into consideration in the estimation of seismic hazard of Israel.

The earthquake of 1546

The third event we examine here briefly is the earthquake of 14 January 1546, an event which is considered by seismologists to be one of the most important earthquakes to have occurred in the Middle East.

News about this earthquake, which reached as far as Spain and Poland, abound in both oriental and occidental coeval sources and flysheets. They say that the dome of the al-Aqsa fell in and so did the dome of the church of the Holy Sepulchre as well as of other public buildings, including the Ribat 'Ala' al-Din, of the

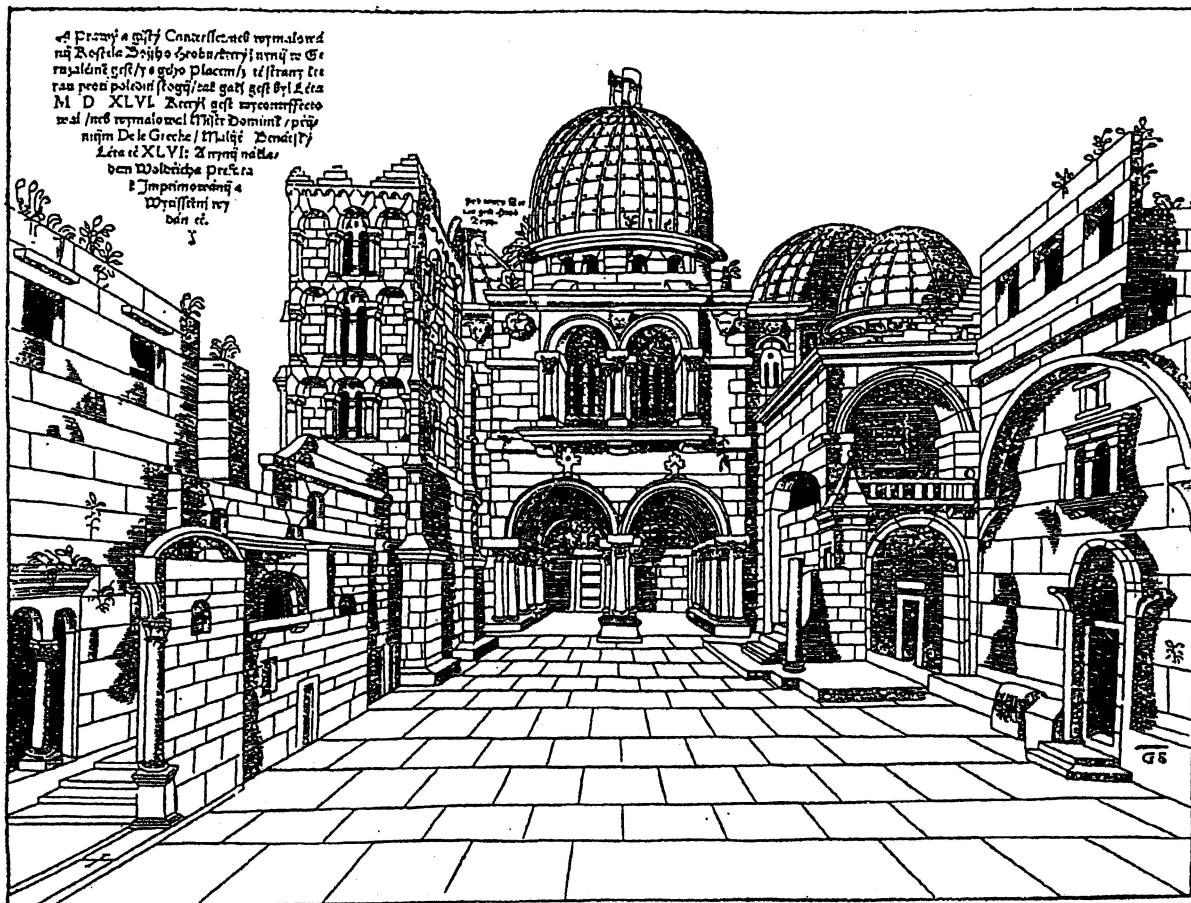


Figure 3. View of the Holy Sepulchre and its square seen from the south side, drawn by Dominik de la Greche months after the earthquake of 1546.

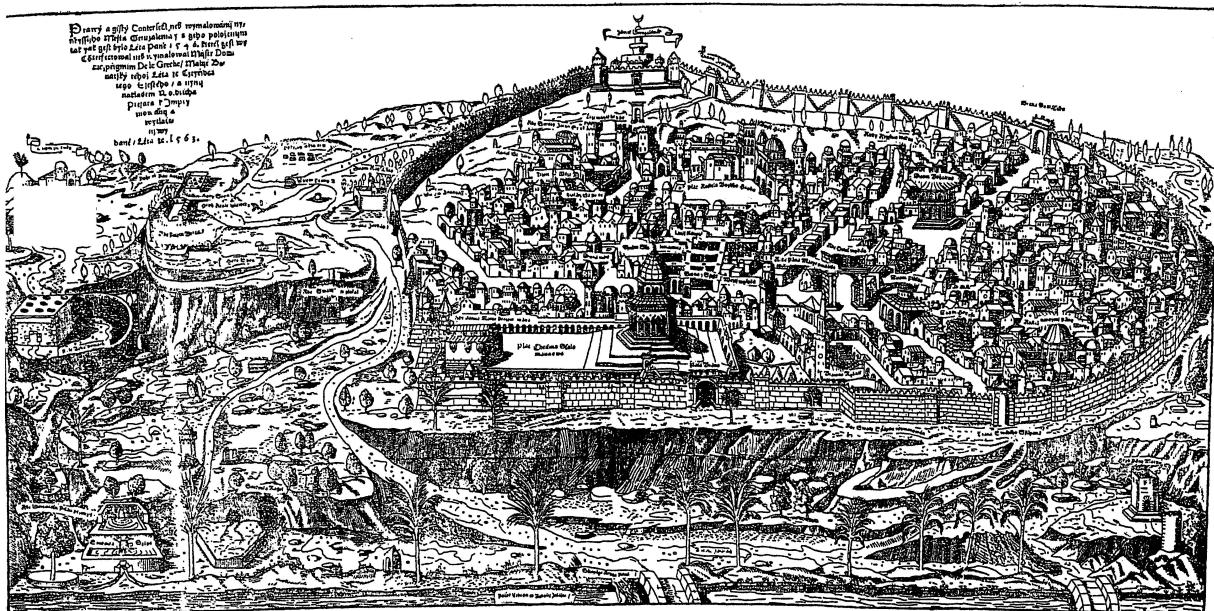


Figure 4. Jerusalem, drawn by Dominik de la Greche in the summer of 1546, seen from the east. It shows the bell tower of the Holy Sepulchre with its top part missing, but no other indication of destruction by the 1546 earthquake.

madrasa of Qaytibey (Ashrafiyya) and of Aminiyya as well as of the minaret of Fakhriyya which collapsed and that there was not a house in Jerusalem that was not destroyed or cracked, while on the Mediterranean coast 10,000 people were drowned by sea waves. For a discussion of these exaggerated reports see Ambraseys and Karcz (1992).

On the evidence of this information modern writers assigned to the earthquake a magnitude of $M_L = 7.0$, an intensity of X–XI at Jerusalem and describe the event as one of the most destructive earthquakes in the Dead Sea Fault zone (Ben Menahem, 1979; Rotstein, 1987).

There is no doubt that the earthquake was strong but nothing like what exaggerated reports suggest. This we know from orders detailing repair work, issued by the Ottoman authorities in Istanbul and addressed to the finance officer of Arabistan, which show that in Jerusalem damage was widespread but not serious. Some public buildings suffered repairable damage and few people were killed in their shanty dwellings.

This is confirmed by accounts left by pilgrims who visited Jerusalem a few months after the earthquake, in the summer of 1546, and who do not mention serious damage in the city. Oldrich, a Czech pilgrim, who was in Jerusalem early in the summer of 1546 notices that only the top part of the tower of the church of the Holy

Sepulchre collapsed because it was heavy, revetted with sheets of lead.

A view of the Holy Sepulchre and its square, seen from the south side, was drawn some months after the earthquake of 1546 by Oldrich's companion, Dominik de la Greche, and appended to his book (Figure 3). The detailed panoramic view of Jerusalem, also drawn by de la Greche shows no other tall structure missing or the collapse of the dilapidated city walls (Figure 4) (Oldrich, 1563).

The earthquake of 1546 has been included in this article because it is a typical example of how widely the effects of an earthquake can become known and also magnified, not so much because they were very serious but chiefly from the desire of contemporary writers to draw theological and political morals from a natural disaster, particularly when the earthquake happens to be in the Holy Land.

Conclusions

We find that archaeological evidence from early historical earthquakes is too coarse and ambiguous, without any precise internal archaeological indicators. Dating is based on, or influenced by Biblical sources, providing an example of how their assumed accuracy may influence archaeologists' interpretation and dating. Quite

often this develops into a circular process in which archaeological assumptions or theories are transformed into facts and used by earth scientists to confirm the dates and size of their proposed events.

To the earth scientist and engineer the results from this study are of little value, as the information about these earthquakes cannot be converted into ‘numbers’. What is of considerable value, however, is that the earthquake in Amos remains an event the date, location and magnitude of which cannot be assessed; that the earthquake at the Crucifixion is a spurious physical event, and that the later earthquake of 1546 is one of the many events given in modern catalogues the magnitude of which is grossly exaggerated.

Also that too many modern catalogues of historical earthquakes are not sufficiently rigorous to be treated with confidence. This is due to the inter-disciplinary nature of this field of study, which requires scientists to examine literary texts and historians to glean scientific information from their sources. The result has been the production of a large number of false earthquakes, or of seismic events of a size beyond the limits of the possible, often with a sensationalist tinge. This is of no technical consequence, provided the earth-scientist and engineer is aware of it.

Acknowledgments

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Appendix

Extracts from quoted source material are given in this appendix to facilitate their interpretation made in the text

- [1] Amos says that the prophet received visions “...during the reigns of Uzziah king of Judah and Jeroboam son of Jehoash king of Israel, two years before the earthquake....” (Amos, I.1)
- [2] “...they shall go into the holes of the cracks and into the caves of the earth when He arises to shake (terrify) the earth....” (Isaiah, II.19, 21).
- [3.1] “.... the Lord will go out fully armed for war, to fight against those nations. That day his feet will stand upon the Mount of Olives, to the east of Jerusalem, and the Mount of Olives will split apart, making a very wide valley running from

east to west, for half the mountain will move towards the north and half toward the south. You will escape through that valley, for it will reach across to Azel. You will escape as your people did long centuries ago from the earthquake in the days of Uzziah, king of Juda (BC ca. 767–753) ...” [Zachar.xiv:4–5] (prophesy 24 11th month Shebat, 2nd year of Darius)

- [3.2] *.... And the mountain will split in half, forming a wide valley that runs from east to west ... Then you people will escape from the Lord’s mountain, through this valley, which reaches to Azal. You will run in all directions, just as everyone did when the earthquake struck in the time of King Uzziah of Judah.* (Contemporary English Version)
- [3.3] *.... And the Mount of Olives shall be split in two from east to west by a very wide valley; so that one half of the Mount shall withdraw northward, and the other half southward ... An the valley of my mountains shall be stopped up, for the valley of the mountains shall touch the side of it; and you shall flee as you fled from the earthquake in the days of Uzzi’ah king of Judah.* (Revised Standard Version)
- [3.4] *.... And the Mount of Olives shall be split in two from east to west by a very great valley; and half of the mountain shall remove toward the north and half of it toward the south ... And you shall flee by the valley of my mountains; for the valley of the mountains shall reach to Azel; and you shall flee, as you fled from before the earthquake in the days of Uzziah king of Judah.* (Amplified Bible)
- [3.5] *.... And the mount of Olives shall be split in the midst thereof toward the east and toward the west, and there shall be a very great valley; and half of the mountain shall remove toward the north, and half of it toward the south.... And you shall flee by the valley of my mountains; for the valley of the mountains shall reach unto Azel. And you shall flee, like as you fled from before the earthquake in the days of Uzziah.* (American Standard Version)
- [3.6] *.... And the mount of Olives shall cleave in the midst thereof toward the east and toward the west, and there shall be a very great valley; and half of the mountain shall remove toward the north and half of it toward the south ... An you shall flee by the valley of my mountains; for the valley of the mountains shall reach unto Azal; you*

shall even flee, like as you fled from before the earthquake in the days of Uzziah king of Judah. (Darby English Version)

- [3.7] *.... And the mount of Olives shall cleave in the midst thereof toward the east and toward the west, and there shall be a very great valley; and half of the mountain shall remove toward the north, and half of it toward the south ... And you shall flee to the valley of the mountains; for the valley shall reach unto Azal; you shall flee, like as you fled from before the earthquake in the days of Uzziah king of Judah.* (King James Version).
- [4] “.... And ye shall flee to the valley of the mountains; for the valley of the mountains shall reach unto Azal ...” (Masoretic text)
- [5] “.... And the valley of my mountains shall be stopped up; for the valley of the mountains shall touch the side of it ...” (Revised text)
- [6] “... a great earthquake shook the ground and a rent was made in the temple, and the bright rays of the sun shone through it, and fell upon the Uzziah's face, insomuch that the leprosy seized upon him immediately. And before the city, at a place called Eroge, half the mountain broke off from the rest on the west, and rolled itself four furlongs and stood still at the east mountain, till the roads, as well as the king's gardens, were spoiled by the obstruction” (Josephus, Antiq. IX.x.4)
- [6a] “.... when leprosy appeared on Uzziah brow, at the same moment the temple split open and the fissure extended for twelve miles in each direction.” (Nathan ha-Bavli.ix)
- [7] “...the posts of the temple moved when the Lord spoke ...” (II Chron., XXVI.16-7; II Kings XV.1-7).
- [8] “...from the sixth hour until the ninth hour darkness came over all the land, And behold, the curtain of the temple was torn in two, from top to bottom; and the earth quaked, and the rocks were split; the tombs were also opened, and many of the saints who had fallen asleep were raised, and coming out of the tombs after His resurrection they went into the holy city and appeared to many.” [Matt. xxvii.45,51-3] [Luke 23.44]¹
- [9] “Now after the Sabbath, towards the dawn of the first day of the week, Mary Magdalene and the other Mary went to see the sepulchre. And behold, there was a great earthquake; for an angel of the Lord descended from heaven and came

and rolled back the stone, and sat upon it.” [Matt. xxviii.1-3.]

- [10] [Phlegon, xv/607 (Euseb., 148)]
- [11] [Hier. 175 – see under 32/33]
- [12] “*The Lord Jesus Christ, the Son of the living God, gave up the ghost on the same Parasceve, at the ninth hour. And then a great earthquake occurred through the whole world, and tombs were opened, rocks split and the dead arose, as is all related with truth in the Holy Scriptures, so that the Jews said, ‘Truly this was the Son of God that we crucified.’* [Mal., 241/369.]
- [13] “... just as when a great earthquake occurred at the time of His Passion, as is found in many Greek memorials, there was a great earthquake and darkness, so that the stars appeared.” [Georg.Mon., 232/376]
- [14] (*OI.CCIII.1 = 32/3 AD*) “*All of His deeds and cures of bodies and souls, His revelation and resurrection from the dead has been made known to us by apostles and scholars. A most terrifying darkness covered the whole world, the rocks were split by earthquake and most parts of Judaea and the remaining land were torn apart. In the third book of his histories Thallus calls this kind of darkness an eclipse, which to me seems unfounded. For the Jews observe the Pasch on the 14th moon, and the Saviour's suffering was before the first day of the Pasch. An eclipse of the sun occurs only when the moon comes before the sun. Jesus Christ Our Lord, according to the prophecies spoken about Him, in the 19th year of the reign of Tiberius, came to His passion; indeed the sun was eclipsed, an earthquake shook Bithynia, and the most part of Nicaea was flattened. And these things fit to what happened in this passion of our vivification. Thus Phlegon, the writer of Olympiads, speaks of the thing in the 13th book: ‘In the fourth year of the 203rd Olympiad there was the greatest eclipse of the sun which had ever been known, At the sixth hour of the day it became night, so that stars were seen in the sky. And there was a great earthquake in Bithynia, and a great part of Nicaea was ruined.’* [Euseb., 148, apud Phlegon, xv/607]
- [15] (*OI.CCII.18*) “*There was an eclipse of the sun, Bithynia was shaken by an earthquake, and in the city of Nicaea many houses collapsed.*” [Hier., 175]
- [16] “*And then in his (Tiberius') 17th year, when the Lord Jesus willingly gave Himself up to suffering,*

- but was impiously seized by the Jews and nailed to the Cross, the most parts of the greatest cities fell in a most extraordinary earthquake. On the same day at the 6th hour the sun was completely eclipsed and foul night suddenly covered the earth . . .” [Oros., Hist. VII.iv.13]*
- [17] “*And Tiberius exempted from tribute the Asian cities overturned by the earthquake and gave generously to them from his own funds.”* [ibid. VII.iv.18]

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