

Earthquakes in divers places

Shaun Maher

AN EARTHQUAKE is surely one of the most terrifying experiences known to man, and the destruction wreaked by these events can be on a scale almost unimaginable. We read in Scripture that God sometimes uses the power of earthquakes to accomplish His purpose, whether for judgement, as in the case of Korah, Dathan and Abiram (Num. 16:31,32), or to effect a miracle, such the release of Paul and Silas from prison at Philippi (Acts 16:26).

The world was rocked, quite literally, by the monster earthquake in Japan on 11 March this year. So powerful was this convulsion that Japan sank by up to two metres in places and the earth was caused to wobble on its axis. Only a month or so earlier, the city of Christchurch in New Zealand was badly damaged

“For nation will rise against nation, and kingdom against kingdom. And there will be famines, pestilences, and earthquakes in various places” (Mt. 24:7, NKJV).

by a serious earthquake; and although this earthquake was 10,000 times less powerful than the one in Japan it still caused significant damage because of

the proximity of its epicentre to the surface of the earth.

We sometimes hear it said that the Bible teaches that there will be an increase in the number of earthquakes as we draw closer to the return of the Lord Jesus. This idea is based upon his words in the Olivet Prophecy, but is this really what Jesus was saying? According to the United States Geological Survey (USGS), there have not been more earthquakes recently than at earlier times in history. Larger numbers of earthquakes have been recorded, but only as a result of the proliferation of seismic monitoring across the globe. In 1931 there were 350 seismograph stations in operation globally; today there are more than 4,000.¹ In the past only the very largest earthquakes were recorded because recording equipment was neither as sensitive nor as prevalent as modern seismographs, whereas today even the smallest of earthquakes is detected and the corresponding data processed rapidly. When one looks at the data from the entire twentieth century, it becomes apparent that there was in fact a decrease in seismic activity in the latter half of this period.

In addition to USGS articles, a number of very well-constructed papers on this subject, written from a Biblical perspective, can be found on the website of the Institute for Creation Research.² These papers consider data for earthquakes greater than magnitude 8.0 during the twentieth

century. The conclusion is that there was a cluster of very powerful events in the 1950s and 1960s, and then a decrease during the 1970s and through to the early 1990s. However, these articles were written in the late 1990s and do not consider data from 1998 through to the present.

“For we know that the whole creation groans and labours with birth pangs together until now” (Rom. 8:22, NKJV).

So what was the Lord talking about? It is possible that Jesus was merely describing the final phases of God’s judgement on the world, very much involving literal, physical seismic activity (passages to consider in this regard include Isaiah 24:17-20; Ezekiel 38:19; Zechariah 14:5 and Revelation 16:18). We are also familiar with the use of the word ‘earthquake’ to describe political upheaval amongst the nations, a prerequisite to the time when rulership of the earth will pass to Christ and the saints, and we should not overlook the primary (A.D. 70) application of

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1. <http://earthquake.usgs.gov/learn/fag>.
 2. Austin, S. & Strauss, M. (1999), *Earthquakes and the End Times: A Geological and Biblical Perspective* (www.icr.org).

the Lord's words in the Olivet Prophecy in this sense.

More earthquakes?

When we examine the three records of Jesus' words in Matthew, Mark and Luke, we find no specific mention of an increase in the number of earthquakes. However, Luke's account does hint at an increase in the intensity or magnitude of earthquakes: there will be "great earthquakes," the Lord said (Lk. 21:11), indicating that scale rather than frequency may be the detail to look for.

This would be in harmony with other passages of Scripture that describe the close of this age and the beginning of the new as like the labour pains of a woman in childbirth (Rom. 8:22; 1 Thess. 5:3). Many readers will have either experienced or witnessed this process. The normal pattern is that the contractions heralding the birth occur at regular intervals and at fairly even levels of intensity, but as the birth draws

near there is a material increase in intensity and a reduction in the interval between contractions—the 'birth pains' become stronger and occur closer together.

The possibility of becoming over-absorbed in the possibilities of what the Lord meant, and thereby inferring more than he intended, is something to be aware of. Nonetheless, it is of interest to look at one related issue by returning to the USGS data we referred to earlier. I thought it might be worthwhile to look at the last thirty years and see whether this suggestion of earthquakes increasing in size was in any way reflected in the seismic data collected by the USGS over this period.

I chose thirty years because, first, there have been a large number of seismic detection instruments available during this time, and secondly, this seems a reasonable period in which to observe events that happen relatively infrequently. Finally, such a consideration includes the

data from 1998 to the present, which was not included in the analysis produced by the ICR. My analysis differs slightly in that I included all the earthquakes greater than 6.0 in magnitude, as these are the most powerful and destructive.

I entered the data into a spreadsheet and created from it a chart with frequency on the y-axis (vertically) and time on the x-axis (horizontally). I then added a ten-year moving average (the red dashed line in the figures) to see in which direction, if any, the trend was moving.

I examined the data in three different clusters, aiming to achieve maximum objectivity and to avoid any skewing of results from one-off events or random variation. The three categories of earthquakes examined were as follows, where 'M' stands for magnitude:

- earthquakes M8.0–M10
- earthquakes M7.0–M10
- earthquakes M6.0–M10

Figure 1 below shows the first

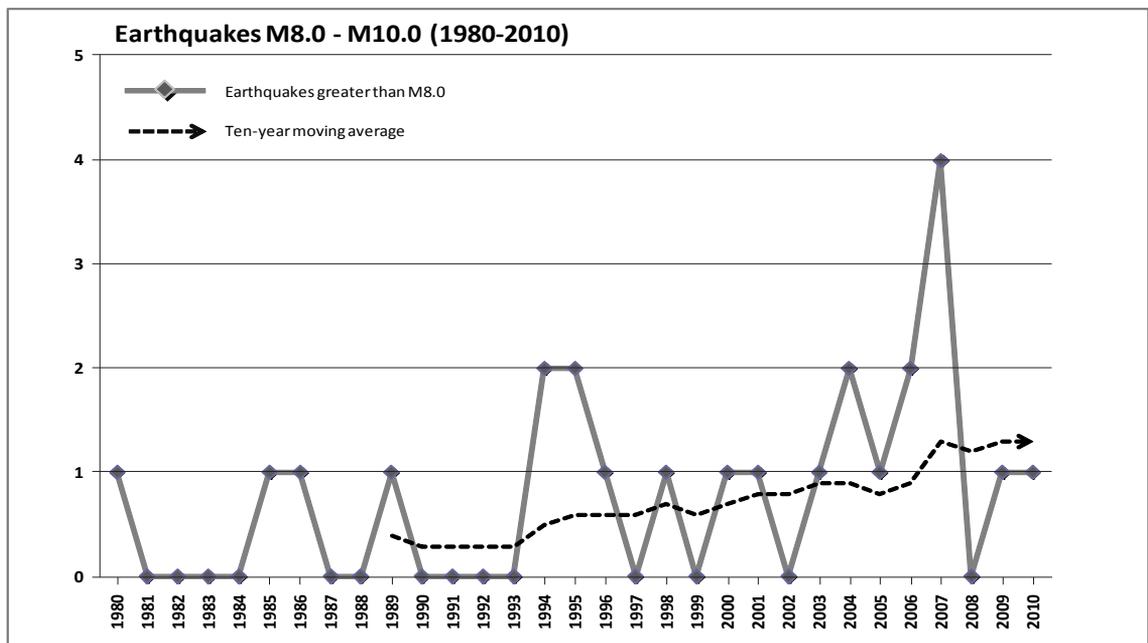


Fig. 1: Occurrence of earthquakes M8.0–M10 (data source: USGS)

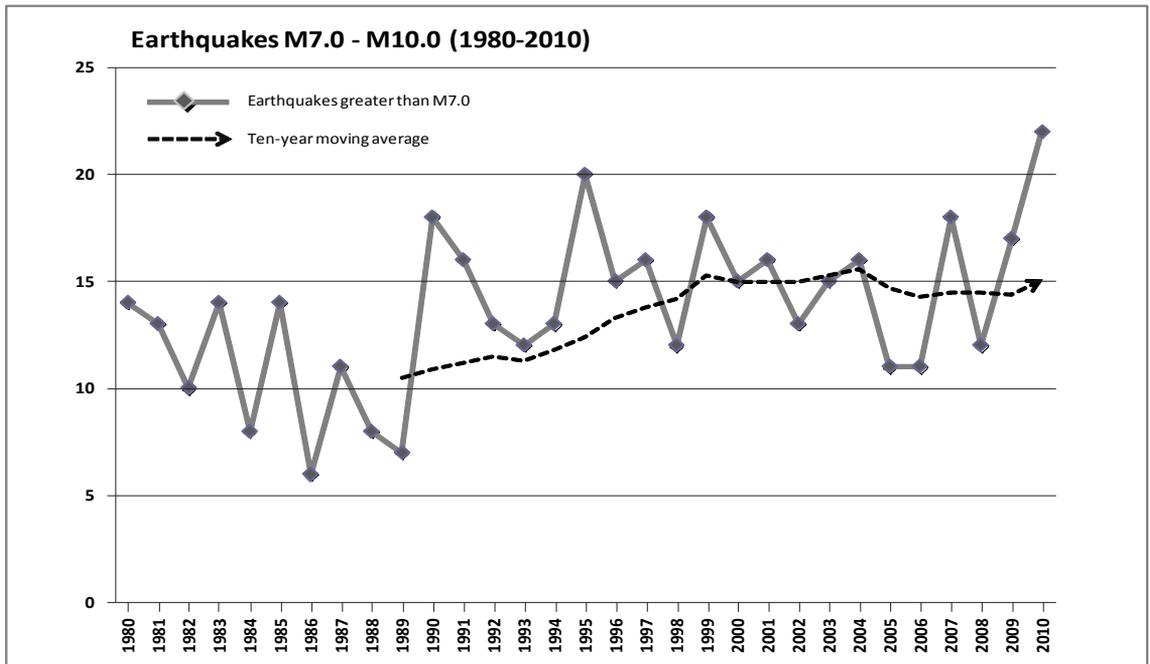


Fig. 2: Occurrence of earthquakes M7.0–M10 (data source: USGS)

batch of data analysed, covering earthquakes measuring from M8.0 to M10 between 1980 and 2010. These are the most powerful earthquakes.

A steady upward trend can be clearly seen in the ten-year moving average of instances of the most powerful earthquakes. The problem with these data lies in the relative infrequency of the events as shown on the vertical axis. Because the numbers are small, and the time period relatively short in geological terms, we cannot be certain that we are observing a shift of statistical significance. The peak in 2007 may be merely a blip, similar to that seen in the 1950s and 1960s, with 2008, 2009 and 2010 reverting to the norm, while the moving average has not yet had time to respond. To counter this, I added earthquakes measuring M7.0 and above in order to give more meaning to the numbers. The result can be seen in [Figure 2](#) above.

Again, we can see that the upward trend in the ten-year moving average is still apparent, and it is in fact more pronounced when the additional data is introduced into the chart. Finally, I added earthquakes measuring M6.0 and above, and aggregated all the data to try and even out any exceptions and to give the clearest view of the underlying trend. The results can be seen in [Figure 3](#) overleaf.

Once again, the chart clearly shows an upward trend in the ten-year moving average of earthquakes greater than M6.0, earthquakes known as ‘killer earthquakes’ because of their destructive power. So, when all the data is aggregated in this way, it appears that the number of the strongest earthquakes has been increasing significantly since the early 1990s.

Tentative conclusions

What are we to make of all this? First, we need to be aware of the

limitations of amateur data analysis. Secondly, we do need to be cautious when considering such a short time period, geologically speaking; remember, a similar increase was seen during the 1950s and 1960s, followed by a decrease in the period from 1970 to 1998. That said, it would appear that something may be happening to the frequency of the most powerful earthquakes. Like the labour pains of a pregnant woman, they seem to be occurring more frequently and with greater intensity. We hope and pray that we are indeed seeing the labour pains that will lead to the birth of a new age and the manifestation of the children of God—the Lord Jesus Christ and his saints.

In conclusion, when Jesus in the Olivet Prophecy talks of earthquakes, he does not explicitly state that there will be an increase in the frequency of earthquakes, yet he may suggest that there will be earthquakes of

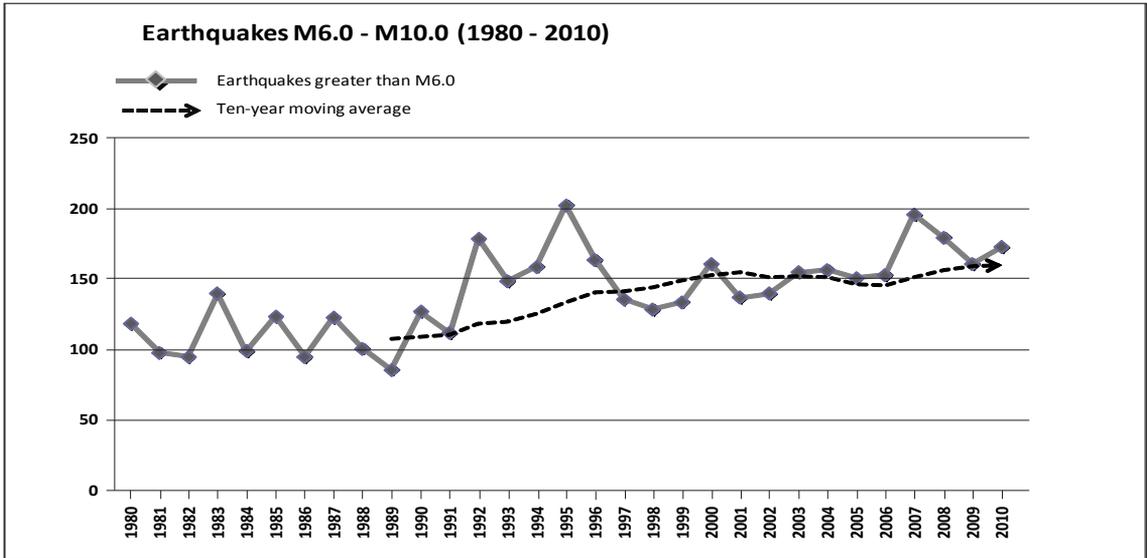


Fig. 3: Earthquakes M6.0–M10 (data source: USGS)

greater intensity towards the time of the end. On examining the USGS data, we see that, whilst there is not an increase in the overall number of earthquakes, there appears to be an increase in the frequency of the most powerful earthquakes, corresponding to the Scriptural imagery of a woman in labour. These interesting facts, combined with

the signs that abound amongst the nations, should lead us to heed more closely than ever the words of the Lord as recorded in Luke's Gospel: "Now when these things begin to happen, look up and lift up your heads, because your redemption draws near . . . But take heed to yourselves, lest your hearts be weighed down with carousing, drunkenness,

and cares of this life, and that Day come on you unexpectedly. For it will come as a snare on all those who dwell on the face of the whole earth. Watch therefore, and pray always that you may be counted worthy to escape all these things that will come to pass, and to stand before the Son of Man" (Lk. 21:28,34-36, NKJV).