Catalogue of earthquakes and tsunamis in the Mediterranean area from the 11th to the 15th century

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Preface

The many years of research that underpin this catalogue began immediately after the publication of the first volume in 1994 (Catalogue of ancient earthquakes in the Mediterranean area up to the 10th century). Thus the time range of this second volume naturally follows on from the first one, covering the period from the 11th century until the end of the 15th. The fall of Constantinople in 1453 and the Turkish occupation constitute an important turning point in the history of the Mediterranean, affecting source types and the way information circulated. Our intensive research lasted a number of years, leading to results that were ready for publication in the year 2000. However, when the Istituto Nazionale di Geofisica took on a new institutional form in 1999, adding Vulcanologia to its name, different publishing policies were put in place at INGV, which meant that publication plans for this catalogue were halted from 2001 to mid-2004. During those years, however, the authors of the catalogue continued to update their bibliography and track down new editions of sources. Manuscript research and new source editions also continued without interruption, leading to additional information and the new interpretation of some major earthquakes, which became the subject of a number of specific publications (e.g. the Syrian earthquake of 1138, 1156-1157, 1170, that of 1117 in Italy, as well as a score of earthquakes unknown to current catalogues).

It is true that this catalogue is being published a good deal later than planned, and that it has undergone certain modifications. We decided, for example, not to publish the long and complex introduction that had been planned, or our iconographical research, but the delay has nevertheless produced some rather positive results: it has enabled us to carry out a more thorough review of our results and to examine certain matters in greater depth. The cartography has also improved in certain respects, and now appears in a new guise.

Although this complex and stratified catalogue covers an area now occupied by 19 countries, it can never be claimed that the work is complete. The levels of knowledge provided here are indeed different for different seismic events and tsunamis: in some cases the data make it possible to provide fairly detailed scenarios of effects, while in others it is not even possible to calculate the parameters. In the latter cases, at least the established chronological indicators remain, and may allow scholars to embark on new research. So this is an open-ended work, in two ways at least:
i) all the historical data that we have worked on and interpreted are presented in the original languages;
ii) the updating of our knowledge base to 2004 may well foster the advancement of other research work.

In general we have tried to stick to what we consider to be one of the basic principles of historical seismology, namely clear and controlled decision-making in the process of assessing historical earthquakes. We have also aimed to stir up an interest in historical seismological research as a valuable aid to seismological and palaeoseismological analysis. Medieval historians interested in the Mediterranean area can make good use of the information about the history of territories and environments which they approach from different standpoints. The persistence and destructive force of earthquakes and the impact of tsunamis have left deep scars in the cultures and economies of medieval Mediterranean societies.

Historical sources and works used

The texts of historical sources are provided in this catalogue in their original languages. There sources are in several different languages (Greek, Latin, Arabic, Hebrew, Armenian, Syriac, Italian, French, German etc.). In order to understand seismic acti-
vity in the Mediterranean area in medieval times, primary evidence is obviously not enough on its own, though we think it an essential part of the catalogue. Such information also has to be put into its context and related to other aspects of historiography, and the sites mentioned in the sources have to be located. In our opinion, this is the only way that assessments of earthquake effects can have a meaning and a consistency where there is a dearth of information. All the data in this catalogue have been subjected to ex noco analysis and interpretation, involving a close dialogue with other studies in seismological literature.

Although the results obtained cannot, strictly speaking, be described as definitive owing to the nature of the research involved, we have thought fit to give scholars and researchers the benefit of such advances as we have made. In addition, the catalogue makes it possible to systematise a tradition of catalogues and studies that is very frequently confusing, and far from faultless.

The events described

This catalogue contains information, with different levels of analysis, relating to 365 earthquakes, 22 tsunamis, and 102 environmental effects. The seismic effects located are 1,444 and concern towns, villages, and castles in the Mediterranean area, situated within 19 present-day countries. We have tried to make every entry as complete as possible, as concerns the historical sources selected. Within the heading for each individual entry, the reader can review the texts that have been used to analyse the event, ranging from historical sources to the relevant literature, historiography and catalogues.

For a summary assessment of the earthquakes and tsunamis analysed in this catalogue, the reader should refer to the general maps and parametric catalogues included at the end of the volume. For an overall picture of the density of seismic events across the centuries, regardless of the countries where the effects were felt, see the graph at the beginning of the Short Catalogue (p. 287).

The catalogue team

The authors of this catalogue have enjoyed the collaboration of text scholars and researchers working in oriental languages. Experience and the sources began in 1992; some of our researchers are now established at the University, but when they were helping on this project they were mostly postgraduates or researchers.

Since it was impossible to adopt a systematic approach for all language areas, we set up some basic research projects which gradually developed over time, partly in relation to the allocation of funds for the various projects involved in the INGV research plans.

It should be said that this catalogue developed "along the margins" of other research that was at the time reckoned to be more urgent or more important.

The work's complexity, the time required to carry out research and transcribe and interpret the sources as they became identified (often a tortuous and difficult matter),

the identification of the relevant scientific literature and catalogues, and the careful evaluation of the seismological results obtained, meant that the task of compiling the catalogue was a very lengthy one. Inevitably there were changes of collaborators in some language areas: but such changes were offset, so to speak, by the fact that we ourselves carried on with the incessant checking of the philological and historiographical sources, the manuscripts and new editions of sources. During its long period of preparation, this catalogue has been like a "laboratory" where we have constantly tried to improve its every aspect, deal with uncertainties, solve problems. On the one hand, the amount of time needed has allowed us produce results that are original and, we hope, not too short-lived, but it has also meant that we actually run the risk of losing sight of a comprehensive single approach to the sources, so we were obliged to reopen certain areas of study more than once, thereby going well beyond the remit of the current projects carried out on behalf of INGV. It is with a certain degree of satisfaction therefore, that we now present all this information — the fruit of over a decade of intense teamwork. We have decided not to give our collaborators' current academic qualifications, because in many cases that would mean misrepresenting the original nature of the group, which at the time consisted of talented young researchers who worked with us enthusiastically as well as confidently, especially in the years between 1992 and 2000. We list them below by language and theme:

Antonio Rigo (University of Venice) carried out a critical review of the Greek Byzantine sources already recorded by SGA researchers, and added them

Roberto Scopeco carried out systematic research into the Greek codices at the Biblioteca Apostolica Vaticana.

Adalberto Magnelli (Italian School of Archaeology at Athens and University of Florence) carried out a complex piece of research into Byzantine inscription sources.

Leonardo Capocioni (Università La Sapienza, Rome) and Roberto D'Onorato (Università di Messina) selected and transcribed the texts of published Arabic sources.

Nouha Stéphan transcribed manuscript Arabic texts in the Bibliothèque Nationale de France.

Claude Detienne (University of Louvain) and Gianfrancesco Lusini (University Orientale of Naples) supplemented and reviewed the Syriac sources already recorded by SGA researchers.

Giusto Traina (University of Lecce) and

Igor Dorfmann-Lazare (University Paul Valéry, Montpellier) selected and translated Armenian texts and inscriptions.

Federico Marazzi (Università Suer Orsola Benincasa, Naples) selected and translated the texts from the Recueil des Historiens des Croisades – Historia Occidentalis.

Nadia Zelden (Jewish National and University Library of Jerusalem) transcribed and translated published and manuscript Hebrew sources.

In the case of earthquakes in Italy, we reviewed, deepened and added to all the earlier studies, most of which published in the Catalogue of Strong Italian Earthquakes from 461 B.C. to 1997 (Boschi et al. 2000, and further releases on the web site http://earthquake.ingv/vti/). The results presented here are thus an update to the above-mentioned catalogue.
In addition, the following researchers played an important part in our working group:

Cecilia Ciuccarelli helped us with the final draft and the editing of the catalogue. She took part in several discussions as we sought to solve the many problems presented by the text;

Dante Mariotti located the most difficult place names, and collaborated with us in estimating the parameters;

Filippo Bernardini collaborated with us at an early stage in classifying the seismic effects; he also developed some of the seismotectonic aspects for the 12th century earthquakes in Syria (see Guidoboni et al. 2004);

Maria Giovanna Bianchi produced the large-scale maps of urban effects, the graphs and the digitalisation of the illustrations; she also collaborated in the final editing stage;

Maria Luisa De Simone dealt with the index of names and places;

Brian Phillips translated the texts and sources into English with the skill and accuracy that typify his work.

Cartography
The thematic cartography was done by Gabriele Tirabusi using MapInfo Professional (www.mapinfo.com) software. The relief cartographic bases have been made by Marco Guadarrina (GEOgrafia, Fiesa), using Visual Nature Studio 2.5 software (3dNature LLC, www.3dnature.com), on the base of the geo-referenced terrain altimetric data. The general cartographic base of the Mediterranean is derived from the GTOP030 Digital Elevation Model (U.S. Geological Survey EROS Data Center) resampled at the resolution of 500 m × 500 m in x and y. For the detail of the Italian territory a cartographic base elaborated from the Digital Terrain Model of the INGV was used; the cell size of the grid is 250 m × 250 m. The various ground models have been depicted in planimetric views with shaded-relief techniques using multiple lights, to improve the graphic quality of the three-dimensional relief.

Earthquakes in the Sea of Marmara were reviewed and examined as part of the RELIEF (Reliable Information on Earthquake Faulting) European project "L.1.1. Seismic Risk" EVGI-CT-2002-00069, responsible for INGV dr Daniela Pannioli.

The contributions to this Catalogue have entailed coordination with various work groups at different stages. Wide-ranging and decisive though these have often been, it is the authors who take full responsibility for any errors or omissions in the data presented here.
ns prot. 298/06

Bologna, 19 dicembre 2006

Su richiesta dell’interessata e per gli usi consentiti dalla legge, dichiaro che la dr Roberta Denaro ha collaborato nel nostro gruppo di lavoro finalizzato allo studio dei terremoti e dei maremoti del Mediterraneo medievale, per la traduzione dei testi arabi editi, relativi ai secoli XIII-XIV.

In fede

Dr Emanuela Guidoboni
responsabile scientifica della SGA

S. G. A. s.n.l.
STORIA GEOFISICA AMBIENTE
Presidente
what stood here, destroying arcades, gates and well-constructed stone buildings. But the powerful lord of the land of the Ausoniens, Alexius Comnenus, the pious sovereign, rebuilds it again and renders it superior, thus demonstrating who he is in what needs to be done. In the month of July, in the fifteenth indiction, in the year 6705 [1 September 1196 – 31 August 1197].

The inscription clearly sets the collapse of the Gate of Chariotus, including the stoa (a term which covers both arcades and colonnades: see Downey 1947 and 1946). The first part of the inscription, taken together with the age of the building, indicates that a natural disaster was at least a concomitant cause.

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Nicetas Choniates, a contemporary Byzantine historian, mentions a collapse and the opening up of a chasm at Constantinople when the Emperor Alexius III Comnenus (1196-1203), at the end of his campaign in Anatolia against Michael Ducas, disembarked at Constantinople shortly before dawn on 17 February 1201. When he arrived at his palace: "Now God demonstrated that he is the Lord of seasons and years [Matthew 24:36; Acts 1:7] and that he guides the steps of some or tripped them up: the floor before the emperor's bed collapsed without visible cause and opened up to a yawning chasm. Contrary to all expectations, the emperor was delivered from the danger, but one of his sons-in-law, Alexius Paioleologus, and many others fell through the opening and suffered grievous injury to their legs. A certain eunuch was killed as he fell to the very bottom of the gaping hole".

The text does not state the cause of the collapse, but it is likely that the earthquake caused the damage. The collapse of the stoa and the opening of the chasm in Constantinople during this event may be related to the earthquake that occurred in 1187, which is mentioned in the text. The earthquake in 1187 was one of the strongest in the Mediterranean region and caused significant damage to buildings and structures.

This event is one of the strongest and best documented seismic events in the Mediterranean area, and its study provides important historical and archaeological evidence of the effects of earthquakes. The earthquake caused damage to many buildings and structures, including the stoa and the arcade, which had to be rebuilt. The damage to these structures highlights the importance of understanding the effects of earthquakes on urban environments.
serious damage at Gibelet (Jubayd) and many villages at Tripoli, but the sources are not in total agreement as to the extent of the damage there. At Baalbek, the citadel collapsed, with the shrine being slightly damaged and stable construction. At Damascus, many buildings collapsed, and there were many victims. The Umayyad mosque suffered damage in a number of places: the eastern minaret and 16 merlons collapsed, but the other minaret was simply damaged. The lead dome of the mausoleum of Naar was damaged, and a large part of the Kallan mosque collapsed, killing two people. The hospital of Nur al-Din also collapsed.

At Chechel Blanc (or Sufak), most of the walls collapsed, and the main tower, although well-built and solid structure, was seriously damaged and split open. The castle at Anjar was destroyed. It is difficult to attribute a location to this castle, but Ambraseys and Melville (1988, p.191) suggest that it is to be identified with Arima (Qalat al-Uraymah), a few kilometres from Chabat Blanc. The castle of Crac des Chevaliers (or Hiss al-Akrad, present-day Qalat al-Ham) and Marqab (present-day al-Marqab) were badly damaged, but remained capable of resisting any enemy attacks. The citadel at Hims was damaged, and its guard tower collapsed. The fortresses of Hamat and Bar'ın were damaged, in spite of their solid construction. The town of Tartus (present-day Tartus) and its castle were slightly damaged.

Three strong shocks were felt in Cairo. Buildings and doors shook, while ceilings, floors and anything unstable or on an elevated position collapsed. The inhabitants awoke in terror and fled screaming. Elsewhere in Egypt, the earthquake was felt at Damietta, Alexandria and Qasr. The earthquake also struck the island of Cyprus, but the exact effects there are not known. The earthquake had a vast propagation zone. It was felt at Allof, Antioch, at Atlit (now Atlit) and its province, at Mossul, and in the region of Mesopotamia, Iraq, Azerbaijan and part of Anatolia.

There remain to be considered the puzzling references to Sicily and Sardinia (i.e. Creta, a Mediterranean island opposite of the mainland of Africa), which appear in Ibn al-‘Aṣir and Ibn Wāsi‘ī respectively. Ambraseys and Melville (1988) very cautiously include them amongst the localities and areas where the earthquake of 20 May 1202 was felt, pointing out that they are not mentioned anywhere else in western Arabic sources, and that there are no reports of effects at western Mediterranean locations. The problem is dealt with by Guidoboni and Trifirò (1996, pp.1216-9), who discuss the suggestion that, given the enormous distance from the epicentral area, the references to Sicily and Creta may concern separate earthquakes from that of 20 May 1202. The lack of other sources of information about effects in Sicily and Creta means that this problem remains unsolved.

The major earthquake at dawn on 20 May was followed by other shocks towards noon on the same day which were slightly felt in Cairo. This may be the same earthquake recorded as having been felt by everyone at Hamat, but we are told that the earthquake at Hamat occurred at midday on Tuesday 21 May and was followed by another shock in the afternoon. Altogether, the shocks lasted for four days.

The two Latin sources and the most important Arabic source to describe this earthquake agree as to the date. The letter from Geoffrey of Dunjen and that from Philip of Plevis date it to Monday 20 May 1202; Ibn al-Labab al-Bagdadi and the two letters he quotes date it to Monday 26 Shaban in the year of the Hijri 598, which corresponds to 21 May 1202, but that day was a Tuesday. This discrepancy of a day is something one sometimes finds in the transmission of dates from the Islamic calendar, but it proves to be negligible since Ibn al-Labab al-Bagdadi himself also gives the date as 25 Bahash (Pachon) in the Coptic calendar, a date which corresponds to 20 May. These two different traditions also agree in recording that the earthquake occurred at dawn or shortly before.

Environmental effects

Amongst the environmental effects of the earthquake, the sources mention a tsunami and substantial landslides and slips on the Lebanese mountains.

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**Earthquake on 20 May 1202:** number and languages of the sources analysed

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of Languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin</td>
<td>17 (74%)</td>
</tr>
<tr>
<td>Arabic</td>
<td>9 (36%)</td>
</tr>
<tr>
<td>Vulgar French</td>
<td>5 (95%)</td>
</tr>
<tr>
<td>Vulgar Italian</td>
<td>1 (8%)</td>
</tr>
<tr>
<td>Sirocco</td>
<td>1 (9%)</td>
</tr>
<tr>
<td>Armenian</td>
<td>1 (9%)</td>
</tr>
</tbody>
</table>

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**Historical sources: an overall view**

The earthquake occurred in the period between the Third and Fourth Crusades. As in the case of the earthquake of 1170, the Latin and Arabic sources — which are the two main and independent traditions concerned — deal almost exclusively with the lands under their respective control, each adding to the information provided by the other. Much briefer reports also appear in Vulgar French, Sirocco and Armenian sources, which largely reflect those in Latin and Arabic. Of the Latin sources, the most important are two letters written respectively by Geoffrey of Dunjen, Grand Master of the Order of Knights Hospitallers, to king Sancho VII of Navarre (1194-1234), and by Philip du Plevis, Grand Master of the Knights Templars, to Arnold I, abbot of Cîteaux. Both letters were written in June 1202, that is to say shortly after the earthquake, and have been published in Mayer (1972, pp.306-8, 308-10). There may also be some information of the 1202 earthquake in a letter dating to 1243 (Rohricht 1893, nos.1114), from Marquis Zorzi, Venetian ambassador (balio) for Syria, in which he refers to a group of properties in the city of Tyre, some of which had been destroyed in an earthquake. The report in the Chronicle of Robert of Auvergne, a contemporary monk and writer who died in 1212, derives in large part from the letter from Philip du Plevis, as Mayer (1972) has shown. The other Latin sources are much briefer than the above and are expressed in more general terms, so we list only those which date to the mid or late 13th century (sources 2, 3, 4, 6).

Annales Dobbes from the abbey of St Ervand d'Ouche, which were compiled by various hands from 1089 onwards (the earthquake is wrongly dated to 1203); Chronicle of Ralph of Coggeshall, a Cistercian monk who died in 1225; Speculum Mundi of Vincent of Beauvais; Cronica de Salimbene de Adam; Cronica Imperatorum of Alberto Milioli; Chronicle of William of Naupe.

Of the Vulgar French sources, the 13th century Estoire de Eroncle Emperour states that part of the funds collected for the Fourth Crusade could be used for rebuilding the walls.
of Acre and Tyre. The Annales de Terre Sainte and the early 14th century Chroniques de Terre Sainte, though providing information in very summary form, mention Gibelet, which is not named by any of the other sources. As far as Arabic sources are concerned, the most informative is Ibn al-Latad al-Baghdadi. What he tells us is particularly important, because he does not only records events at Acre, in Egypt generally and elsewhere, but also transcribes two letters from Hamam and Damascius, thereby providing a reliable and detailed picture of the earthquake. When the earthquake struck, he was in Cairo, and his letter was written two years later, in May 1204. In other contemporary Arabic sources (the Moslem historian Ibn al-Athir and Ibn al-Jawzi, who lived at Damascus), or later 13th and 14th century sources (the Damascene historian and textual scholar Abu Shamsa, the historian Ibn Wasil, and the Syrian historian Abu T-Fida and Ibn al-Wardi, who are both earlier than Ibn al-Latad al-Baghdadi), the earthquake is dated to the month of Shawwal in the year 597 of the Hegira, which corresponds to the period 7 May–4 June 1204. In some cases these writers record earthquakes in the year 598 of the Hegira, or even 600 (Ibn al-Athir). However, as Ambraseys and McVilly (1988, pp. 185–7) have suggested in their discussion of the sources and problems of chronology involved in the study of the earthquake, since the more reliable Latin and Arabic sources only refer to one earthquake, it is reasonable to suppose that the other datings in the Arabic sources are all duplications of an earthquake which actually occurred on 20 May 1202.

Latin sources

ARCHIVAL DOCUMENTS

The letter from Geoffrey of Dionys (June 1202) provides the most detailed information: "While all things lay in silence and the night preceded on its course, on the twentieth day of May, to which is given the name of the moon (i.e. Monday), at the hour when all rivers were frozen and all seas had frozen, on the 18th of the month, before dawn, the wrath of God rose up against us and there was a great earthquake. Of the towns and castles in the East, whether belonging to pagans or Christians, some were annihilated, some destroyed, and some damaged, some weakened and some broken, because of the damage inflicted by the strong earthquake. The city of Acre, which is a very convenient port, has suffered incredible and devastating damage to its towers, to the royal palace and to the walls with which it was protected, while countless houses have been reduced to ruins, and the death of rich and poor is unbearable to speak of. Alas! Tyre, the city of strength, the refuge of Christianity, which ever faced the oppressor from the lands of the enemy, has suffered such damage to its walls, towers, churches and houses, that no man alive today can hope to see their restoration complete during his lifetime. What can we write about the death of the people of this town, for death has taken them without number in the ruins of their homes? This affliction, this catastrophe to be swept over above us, and this dreadful event have added terror to our fear. The city of Tripoli, repudiated with its walls and houses, has been gravely weakened by the great number of victims, and yet it has suffered less damage than other towns. At Acris, towers, walls, houses and town walls have been reduced to ruins, and places which have been left deserted because their inhabitants have been killed, look as though they have never been inhabited. Our castles of Cratium [Crak des Chevaliers] and Margat have suffered much damage, but nevertheless still have little to fear from enemy attacks, if they are spared greater shaking by the will of God. Antioch and the lands of Armenia, although struck by the earthquake, have not suffered too serious damage amidst all these dreadful events. Pagan towns and their people bemoan the incurable wounds that they have suffered through the blows of implacable fate. And while our hearts are afflicted by this deep grief, the great lack of food and a deadly pestilence which has struck animals cause further suffering for those Christians who have survived. We have decided to report to the charitable ears of Your Majesty that when our crops were still young, we had the expectation of an abundant harvest. But as the ears were sprouting they came on the day of St. George a fog which rendered vain all our hopes of gathering in the crop, because it made everything rot, with the result that the desolate earth is now trodden by a mass of the poor and a crowd of beggars. And so, O Lord of Virtues, most excellent sovereign, may the Earth, which saw the Birth of the Word but now lies grief-stricken, desolate and almost annihilated by this disaster, breathe again thanks to your clemency, and be consoled by your advice!"

"Dum medium silentium tenerent omnia et in suo curso iter pergaverunt, vinceo die sanctis nolui esse impositum, in hora, qua defossis sepolr blanditur oris, paulum ante diluculam, in quo deo aestus spectatur, heremoteta fucis est magnum. Territum at castirum Orientem inam Paperio summam fuisse hostiam, in salute, quosque dominus nostrum Jacobus apeririopus esse consueverat, non praeiter inimicis incisiones lexionem ut adue minorum rurum. Civitas Aconsensis, quae portus est opportunitatis, in partum turribus, regalis etiam palatii atque ciborum, quibus fuit palatium, in ruinam domorum inveniatur, in morte dictorum et in postamble mordem infinitam nem coniungam. O dolensis! Tyr, urbis fortitis, refugium Christianitatis, quae semper oppressor de manu inimorum fuit, inures et turribus, ecclesiis et domibus tantum passus est exorsionem, ut nullus hominum est norma et posses ut videas restauracivism. Quod de morte dominorum eiusmodi estatia scribendum, cum in ruinam domorum mors nos sine numero apprehendisset. Sic dolor, quia exstitim pre ceteris generibus et hic eussent infortunas timor nostro tremorem sociarunt. Tripolitanae civitates splendidissimae in murti et dominus, in morte populi, gestus corruptos, in murti est passus esse lexionem. Archepirus tyrrens, muri, dominus atque mihi fundamenta evaevi, populi interdicti hic desert erunt et nem non erit habitabit in. Castra nostra Creutum et Margat praeiosis graciae insulae tamen hostis audebant perfundere, si sine morte comedendo et pozitione in urbem terrae progressionem. Anticopia et partes Armeni soberrimae, nullam mulem, nem non aliam in tantas lundias passus sunt corrupcione. Pangenensi cisternae et populi devastatio simul sparsitio insanabilis se recepit vulnera conqueruntur. Preservum eam in plerique doloribus corda nostrai siti afflicto, carinis etiam sacratissimae in veteris manubia, quae semper reprobata est, mortem praefecta, pro eorum corrupcione condita. Domus dominus, atque dominus dominorum, nem non aliam in tantas lundias passus sunt corrupcione. Iglesias domine et svatavit, rex ex쎈doliasis, Terra Dominica Nativitatis aedem in dolore et miseriis, iam fere halantitatis extrema, vestro respirem clementia, vestro consilio consolet desolatam.

In his letter (June 1202) to Arnold I, abbot of Citeaux, Philip de Plessis recalls two earlier "sacroues," in the form of military encounters in the Tripoli area and the adverse weather conditions which had severely affected the grain harvest, and he then goes on to describe the disastrous effects of the earthquake; and he ends by pointing out that of those three who survived the earthquake died in an epidemic:

"To the venerable fathers and dearest friend by the grace of God abbot of Citeaux and of the whole Order [...]. The third scourge proved more catastrophic and terrible than the others; for on the twentieth day of May, at dawn, a terrifying voice was heard from heaven and dreadful rumblings rose from the earth, and there were earthquakes such as had not been seen in the creation of the world, and they razed most of the city of Acre, and the fortresses of the castle of Tin and of the whole Order [...]. The third scourge proved more catastrophic and terrible than the others; for on the twentieth day of May, at dawn, a terrifying voice was heard from heaven and dreadful rumblings rose from the earth, and there were earthquakes such as had not been seen in the creation of the world, and they razed most of the city of Acre, and the fortresses of the castle of Tin and of the whole Order [...]."
of Archias has been reduced to ruins, including all its houses, walls and towers, and the castle of Arsum (Arma) has been razed to the ground. At Chastel Blanc, most of the walls collapsed, and the main tower, which we thought to have been built with outstanding strength and solidity, was so badly cracked and damaged that it would have been better for us if it had completely collapsed instead of being left standing in such a state. Divine mercy spared the town of Tortosa and its castle, the walls, the habitations, and everything else. The fourth scourge with which we are afflicted is that, in addition to the disasters we have mentioned, the corruption of the air has caused such high mortality that almost a third of those who survived the earthquake have died, and those who were able to rise from their beds after such prolonged enfeeblement were barely alive. And since we are weighed down by all these disasters and calamities, we need your prayers to overcome them, and we firmly trust in God that we shall obtain them.

Venerabili patre et amico varissimo dei gratiam Cisteriensil nobis abstatu totum conuenit ordinis [...]. Tertia vero ceteris felicibus et horribilibs tales fuit, quod vicissima die maiorum sumnum dixitculo audita est vox terribilis de coelo, mugitut horribili de terra, et terremotus, quales non fuerunt ab initio mundi, facti sunt, ita quod partem maximam Accaron in murus et domibus ad terram prostraverunt et gentem innumerabilis occupatam occiderunt. Domus autem nostras divina misericordia nobis integras reservavit. Civitatis vero Tyri omnes turres excepta tribus et mari excepto exteriori barbacana et omnes domus cum plebe sua paucis reservatis in terram corruerunt. Civitatis vero Tropolis maxima pars occidit et magnam piebem occupavat. Castrum vero Archadus cum omnibus dominibus suis et muris et turribus in terram prostratum est et castrum Arsum funditatis corruit. Castris autem Abi maxima pars murorum occidit, turris autem maior, qua nullam cedimur fortis vel firmius adficitam, in hoc rimas et quassatibus debilitata est, quod melius nos esset, si funditatis corrueret, quam ut stans permaneret. Civitatem vero Tortosae et castrum curturibus et mariis et plebe et omnibus divina misericordia reseruat. Quarta autem pestilentia fuit, quod tanta mortalitatis ex corruptione aeternae pestes priorae secuta est, quod fere tertia pars eorum, qui de terremoto evaserunt, defuncta est et sicut inventus vivus, qui longi languoris lectum evadere potuisse. Et quam tantae miseriae et calamitatis oppressum, necesse est nobis, ut cœstis orationibus, de quibus plerumque in domino confidimus, de miseria predicta rugeremus.

It is reasonable to suppose that there is a reference to a damage caused by the 1202 earthquake in a letter written in October 1240 by Marnilo Zorzi, who was the Venetian ambassador for Syria (in Rihrlcht 1893, no.1114). After recounting how he and other noblemen in Syria had gained control of the city of Tyre, Zorzi enumerates the benefits and privileges enjoyed by the Venetians in the city, including the estates of the church of St.Mark, consisting of a series of properties in Tyre and its surroundings. Of some of these — all inside the city — he says that they had been destroyed in an earthquake, which he does not identify. He mentions three bakeries, an unspecified number of houses and a tower house: "[...] another bakery, which belonged to the Veneto community, but has now been destroyed in an earthquake; another bakery that community, now destroyed in the earthquake; and another bakery, situated on the public street towards the east, also destroyed in the earthquake; a piece of land, whose houses have now been destroyed in the earthquake, towards the north, by the city wall; and a house, similar in form to a tower, which stood on the street, but has now been destroyed in the earthquake". 

(... alter furnus, qui fuit communi Venetorurn sed nunc terrae motus destructus isce; alius furnus communis terrae motus destructus; alius furnus, terrae motus destructus, qui firmat in orientem in via publica; petia terae, cuius domus nunc terrae motus destructus eirnand versus septentrionem in murum civilitatis; domus quasi turris, quae est super ulum, sed nunc terrae motus destructa est.

Two more houses, a warehouse and a mill are mentioned in the same letter as having been destroyed (destrucitur), but the cause of the damage is not specified. We have not set out the text of Robert of Auxerre, because it depends largely on the letter from Philip du Pleasie as already pointed out.

Vulgar French sources

ANNALES AND CHRONICLES

The Estorie de Eralde Emperour tells how Fulc of Neulidy (d. 1202), a country parish priest from near Paris and preacher of the Fourth Crusade (1202-1204), had been making use of the Ordar of Cistercians since 1198 to gather funds for the new crusade to the Holy Land, on the instructions of pope Innocent III (1198-1216). In particular, we are told that: "the funds entrusted to Citeaux (the mother house of the Cistercians), were taken to the Holy Land, and there was never a better arrangement than that made by master Fulc at Citeaux, for there had been earthquakes [in the Holy Land]; if the walls of Tyre and Acre were rebuilt, it should be done with some of those funds".

Li avons, qui fu comandat a Citeaux, fu portes Outre mer; ne onques avoir ne vint a si bon point comme celui qui maistre Rague avoit a Citeaux, car li crolles avoit esté en la terre; si estuynent fonda li mar de Sur et d'Acre que li renferu tos d'une partie de cel avoir.

In the Annales de Terre Sainte, we read: "In the year 1202, there was an earthquake which destroyed Acre, Tyre, Gibilat and Archis, and part of Tripoli; and many Christian and Saracen towns were reduced to ruins".

A mill et CC et II, fu le croielle qui abatit Acre, Sur, Gibelat et Arees et une partie de Tripelles; et chairent plusieurs chies des Creesiens et des Saracins.

Very similar words are to be found in the Chronique de Terre Sainte.

Arabic sources

In Ibn al-Luhud al-Baghdadi’s long text, we read as follows: "At dawn on Monday 26 Sha‘ban, which corresponds to 25 hoshooch [Pachon] in the Copic calendar, there was a tremendous earthquake; people leapt from their beds in panic, screaming in terror and calling on God to help them. The earthquake lasted for a long time: its movement was like that of a sieve or the beating of a bird’s wings. There were three violent shocks, which caused buildings and doors to shake, while ceilings, floors and anything unstable or in an elevated position collapsed. The shocks started again at midday, but few people were aware of them because they were weak and brief. That night, the cold was so intense that it was necessary to cover oneself, but the next day the hot samun wind blew so much that the air became unbearable. Rarely had there been such strong earthquakes in Egypt. Later on, news spread that the same earthquake had struck distant regions at the same time as here. I learned that the earth had shaken at Qus, Damieta and Alexandria. Many places were destroyed so completely that no trace of them was left, and there were many victims. I heard of one town in as strong a position as Jerusalem, and yet it suffered unexpected damage. However, the damage suffered by the Franks in the earthquake was greater than that in Muslim lands. We learned that the earthquake reached as far as the town of Akhist and its province on the one hand and the island of Cyprus on the other. The sea became extremely wild, causing serious damage to light-houses. In certain places, the waters divided and waves rose up like mountains, hurling boats on to the land, and throwing fish on to the shore. Then messages came from Syria about the earthquake."
Set out below are two letters, from Damascus and Hamat. Letter from Hamat:

‘On Monday 26 Sha‘ban the earth began to shake as though it were beginning to walk; the mountains swayed, and everyone thought the day of Judgement had come. There were two shocks: the first lasted for about an hour, whereas the second was briefer but stronger. Some fortresses felt the effects of the earthquake, especially the fortress of Hamat, in spite of its solid construction, and that of Ba‘albak [Baalbek], in spite of its solidity. We have not heard any details of more distant regions and fortresses. On Tuesday 27, at the time of midday prayer, there was a violent earthquake which was felt by everybody. No one knew whether they were awake or asleep, and whether they were standing or sitting down.

On the same day, there was another shock at the time of afternoon prayer. News came from Damascus that the earthquake had destroyed the eastern minaret of the [Umayyad] mosque, a large part of the Kal‘a, and the whole hospital (of Nur al-Din); many houses collapsed on top of their inhabitants, killing large numbers of them.’

Letter from Damascus:

‘Your servant reports on the earthquake which occurred on Monday 26 Sha‘ban at dawn, and lasted for a long time. Some witnesses say it lasted as long as it takes to read the sura of The Cave; some other elderly people of Damascus maintain that they have never seen anything like it in their lives. The damage includes the collapse of sixteen merlons and a minaret (the other was only damaged) at the [Umayyad] mosque, and of the lead dome of the mausoleum of Nasr. The Kal‘a collapsed, killing two men. There was another victim at Bab Jayrún. Furthermore, the [Umayyad] mosque was damaged in many places, and a large number of houses have collapsed everywhere.

In Muslim regions, they say that Banuysa has partly collapsed, and also Safad, where the only survivor is the son of the governor. There has been destruction at Tihim, and at Nabulus, where not a single wall has remained standing, except in the Samra district. According to reports from Jerusalem, the buildings have been left undamaged. At Bayt Jinn, foundations and walls are left, although the latter have collapsed in many places. Similar collapses have occurred in the region of Hawran, to the extent that it is impossible to make out the old form of its villages. They also say that most of Acre has collapsed, and that a third of Tyre has been destroyed. Araqa and Salita are also in ruins. On the mountains of Lebanon, a group of people had gone out to collect wild fruit and two mountains closed over them, killing about two hundred. In reporting what happened, some have exaggerated the number of victims. The earthquake lasted four days. Then our prayers were answered by God, our protector and saviour’.

The other 13th century or later Arabic sources are much briefer, and only in a few cases do they add information to what we find in Ibn al-Labib al-Bagdadi. As we have already pointed out, moreover, some of the authors pré or post-date the earthquake, or else create a doublet. Ibn al-Athir records two earthquakes in Egypt and Syria, dating them to the years 597 and 660 of the Hegira; but we are in fact almost certainly dealing with a single event which other Arabic sources date to the year 598 of the Hegira (1202).

“In the month of Sha‘ban in that year [597 H. = 4 July – 4 June 1201], the earth shook at Mawrī, everywhere in Mesopotamia, in Syria, in Egypt and elsewhere. In Syria, the effects were dreadful: many houses were destroyed at Damascus, Hims and Hamat, and a village near Bu†ra was swallowed up by the earth. There was also massive damage along the Syrian coast; the citadels of Tripoli, Sur, Acre and Nabulus were destroyed. The earthquake also reached Byzantine territory. In Iraq, the damage was slight.

In the days of the Thirteenth of the Third Ordinaries, the inhabitants of Damascus, Hims, and Hamat, and all the inhabitants of Syria, and of the cities of the coast and of the interior, were struck and terrified by the immense destruction caused by the earthquake. The inhabitants of Damascus, Hims, and Hamat, and all the inhabitants of Syria, and of the cities of the coast and of the interior, were struck and terrified by the immense destruction caused by the earthquake.

The second reference reads:

“In that year [600 H.], a terrible earthquake struck a large part of the territories of Egypt, Syria, Mesopotamia, and Byzantium. It reached Sicily, Cyprus, Mawrī and Iraq. The walls of the city of Tyre were destroyed, and the earthquake caused damage throughout the region.”

Sibt Ibn al-Jawzi’s narrative is as follows:

*In the month of Sha‘ban, there was a violent earthquake which caused destruction in
the citadel at Hims and the collapse of its guard tower; Hiam al-Akrad was destroyed. The earthquake also struck the island of Cyprus, and reached as far as Nablus, destroying that region. This tremendous earthquake caused destruction in all the northern Muslim countries. At Damascus, it caused the collapse of the tops of the minarets in the mosque [the Great Umayyad Mosque], as well as some merlons on the north side. A man from the Maghreb was killed at the Kullasa lime kilns; and a Turk also died: the slave of a money changer who lived in the Sumayrat district. It happened at dawn on Monday 26 Shawwals, which corresponds to 20 Ab [August in the Syriac calendar]. "The next morning there was a weak shock".

وجاءت في شعبان وزلزلة خفيفة فسقطت قلعة حمص ودمرت الظرة التي أجاها السكان. وقعت زلزالاً آخر باليوم الأول من محرم ولم ي주의 بالرغم من ذلك. وفي اليوم الثاني، زلزال ضارب ردود فعل الناس به لا يمكن تجاهلها. وفي اليوم الثالث، زلزال آخر ضارب ردود فعل الناس به لا يمكن تجاهلها. وفي اليوم الرابع، زلزال آخر ضارب ردود فعل الناس به لا يمكن تجاهلها. وفي اليوم الخامس، زلزال آخر ضارب ردود فعل الناس به لا يمكن تجاهلها. وفي اليوم السادس، زلزال آخر ضارب ردود فعل الناس به لا يمكن تجاهلها. وفي اليوم السابع، زلزال آخر ضارب ردود فعل الناس به لا يمكن تجاهلها.

Abu Shama, *al-Dhahab 'ala al-Raudatayn*, fol. 20 reports that:

"In the month of Shawwal, there was a tremendous earthquake [which came? from Upper Egypt. For an hour, the ground was like the sea; the towns of Baniyan, in Egypt, and Nablus were destroyed, and many people perished in the ruins. Then the earthquake reached Syria and its coast; at Nablus not so much as a wall was left standing, except in the Samra district, and there were 30,000 victims. Acre and Sidon were destroyed, as well as all the citadels along the coast. The earthquake reached Damascus; part of the east minaret of the [Great Umayyad] mosque collapsed. There was massive damage to the lime kilns (al-Kullasa), the Nur al-Din hospital, and nearly all the houses in the city. The inhabitants ran out into the squares. Sixteen balconies fell from the [Umayyad] mosque, and the Nasr mausoleum split open. Banias was destroyed. People from Baalbek who had gone out to pick wild fruit were crushed to death when two mountains collapsed on top of each other. The citadel of Baalbek was destroyed, in spite of the fact that it was a strong building made of solid stone. The earthquake reached Hims, Hamat, Aleppo and other towns. The sea withdrew from the coast as far as Cyprus. There were very high waves which smashed boats on the shore. Then the earthquake spread..."
towards Akhlat, and into Armenia, Adasarbayjan and Mesopotamia. About 1,100,000 victims were counted. The initial violence of the earthquake abated in the time it took to read the sura of the Cave, but the shocks continued for days.

The historian Ibn Wasi records that in 600 H. [=1203-1204]:

"There was a violent earthquake which affected most regions of Egypt and Syria, Gazira [the Arabian peninsula], Bilad al-Rum [Byzantine territories], Sicily, Cyprus, Mosul, and Iraq; and they say it reached Sbitat (Cortas) on the far side of the Maghreb [in Morocco]."

According to Ibn Munkal:

"Amongst the extraordinary things which happened in Syria, there was an earthquake in the year 597 which was felt from Syria to Mesopotamia, Byzantine territory and Iraq. The sea withdrew from the coast as far as Cyprus, throwing ships onto the island, and ending up on its eastern shores. God only knows how many earthquake victims there were."

The historian Ibn al-Wardi records that in the year 600 H. [=1203-1204]:

"There was an earthquake which affected Egypt, Syria, Gazira [the Arabian peninsula], Bilad al-Rum [Byzantine territories], Sicily, Cyprus, Iraq, and And Sur [Tyre] was destroyed."

Abu l-Fida gives the same date as Ibn al-Atir. He maintains that in the year of the Hijra 597 [=1200-1201]:

"There was a violent earthquake in the regions of Gazira [the Arabian peninsula] and Syria and along the coast, and many towns were destroyed."

In brief:

- Amidst the earthquakes and aftershocks, Gaza and Jerusalem, and along the coast, and many towns were destroyed.
- The date of the earthquake can be determined only approximately by the contents of the deed, allowing us to establish two termini: the first is the taking of Constantiople by the Latin (13 April 1204), or else, perhaps, the fall of Beroia into the hands of Baldwin, Count of Flanders, during the period of 1205 to 1207; while the second is the year in which Demetrius Choniata (c.1236).
- The only building to be mentioned, however, is the church dedicated to the Theotokos Eleousa, which belonged to the Palaeonian family at the end of the 12th century. However, we do not know where it was situated (Kraut 1985, p.68). Papasacos and Papasacos (1997, p.191) date the earthquake to 1211, but the basis for their dating is unclear. Another date is 1204–1206.
In the year 655 of the Armenian era (1206-1207), the city of Erzna (now Erzincan, in Turkey) was struck by an earthquake whose effects are recorded in general terms. There is a reference to the event in a chronicle by Kohelet (951, no. 86, col. 203). The manuscript contains a historical narrative by Kohelet, which includes a chronicle for the years 1015-1016 containing the following passage:

"In the year 655 [1206-1207] an earthquake occurred in Erzna."

The fact that it is often confused in the Armenian historiographical tradition with the later earthquakes at Erzincan in the years 767 and 855 of the Armenian era (1226-1227 and 1236-1237, see the entries concerned), makes one suspect a doublet. A comparison between the sources for these three earthquakes, however, has shown that the earthquake of 1206-1207 was almost certainly an independent event. The doublet is probably lies in the earthquakes of 1226-1227 and 1236-1237.

**1206 01 29 - 1207 01 28 [655 A. e.]**

**location**

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- **1209 Abruzzi Apennines (central Italy)**

This earthquake is unknown to the seismic catalogue tradition. In 1209, strong earthquakes caused the collapse of many buildings, fortresses and fortified villages in the districts of Valva and Ciotti. The area affected was probably in the Apennines where the two disasters meet, in the upper valleys of the rivers Atro and Pescara. The only available source in our present state of knowledge is the contemporary Annali Cassini. This is the title given to the published collection of a number of compilations made by the Benedictine monks of Montecassino in the 11th-13th centuries, spanning the years 1000-1312. The text is very terse and not without ambiguities, but the authoritative nature of the source makes it possible to assert that we have evidence here of a very destructive event. It is recorded that in 1209 strong earthquakes struck various localities, in the province of Sannio — a name which, at that time, referred to a much larger area than it does today.

"1209. [...] Great earthquakes in various places. At Valva and Te. In the province of Sannio, fortresses were reduced to ruins, as well as castles and other buildings."

1209. [...] Terre motus magni per loca. In Valva et Te. Provocia Sannii monstranlis dictantur, plura edista et castella.

The place name Valva refers not to a town but to territory belonging to the diocese of that name, whose cathedral of 3 Profilo, built in the 5th century and rebuilt in the 11th, can still be seen today near Corfinio (in the province of L'Aquila). The diocese of Valva was subsequently merged with the adjacent diocese of Sulmona, and the present-day bishopric is still called the diocese of Sulmona-Valva. The place name "Pete" is to be read as "Tete", which is the Latin name for present-day Ciotti, and one must assume, by analogy with Valva, that the reference is not to the town but to the diocese. Furthermore, the fact that the description of the earthquake mentions the destruction of many fortresses and fortified villages suggests that the event is being attributed to an area rather than to a specific locality.
Finally, the famous Caire historian al-Suyuti (16th century) records:

"In the year 608 H. (1212-1213), there was a violent earthquake in Egypt and at Cairo, and many houses were destroyed. There was also an earthquake at Al-Karak and Shobak, and some towers in its citadel were destroyed and many people died in the ruins. Smoke was seen to come down from heaven to earth between dusk and evening at the tomb of Atika in the western part of Damascus."

This earthquake is known to the seismic catalogues.

On 22 June 1213, there was a destructive earthquake in the region of Isauria, now in southern Turkey. Many villages and castles collapsed, as well as two unnamed towns and an abbey near Philadelphia. Fissures appeared on the slopes of a mountain, out of which came, for one day, red and white water which subsequently acquired an unpleasant smell; large quantities of sand came out of fissures in the ground.

The earthquake is not mentioned in chronicles. The source is a letter sent in 1213 to Amadou, archbishop of Constantinople from 1197 to 1220. Röhrich (1885, p.53), who edited the letter, thought he could identify the writer as a soldier named Gilbert de Boi. The text refers to phenomena which almost certainly did occur, but which may have been exaggerated in order to adapt them to an ethical and religious message. In the letter, we read as follows:

"In the last week of August, we learned from reliable sources that, although the matter seemed almost incredible to those who heard of it, there had been an earthquake of greater violence than had ever been known before. It happened two days before the feast of St. John, the Baptist (22 June), in the region of Isauria, which borders on the dominion of the sultan of Egypt; and it was so strong that many villages and castles were reduced to ruins, and two towns and an abbey near a city called Philadelphia have plunged into the abyss, disappearing along with their inhabitants, and leaving behind a stretch of level ground where many things had existed before. What a tremendous prodigy this was before the gaze of all! Of many things I still have to relate, one in particular certainly happened, my lord, that is to say, a mountain was split in two by the earthquake and for a whole day blood came out of one side and milk out of the other, after which, for another day, there came out stinking water and great quantities of sand, and you should know that the land where these prodigies occurred is inhabited by Christians. That is why I have told you about it: so that you may report it to your people."

Notissursum est nobis ultima septimana Augusti per veras nuncio, quod, quamvis verum non audiamus et crederemus, terrae modus talis fuit, est quod namum fuit. Postum est pridie ante vigiliae sancti Andreas baptistae in terris Occisor, quae aereis erant solari d'Ena, et tunc magnus, quod multa ville et castra corruerunt et disitiate, quodam abbatia antea quodam civitates nomine Pindelfie in abitibus perditae, tamen terrae planae in impetu loco renascuntur: cum habitantibus recesserunt. O mirum et sancto admissionibus paxanuntur! Inter hoc, quod rectum erat, certe est verissima, donum, quod quidem nonus terrae motus sequitur per medium ex una parte anguinetum, ex alteraque visus est esse numerum per latum diem et ex contrario eaque fidelissima substantia cum multitudine in sua, et antea, quod eterum, in quae hoc mirabile faciunt est, christianorum est, et ideo mandari obis, ut hoc populo annuncioest.
This earthquake is unknown to the seismic Italian catalogue tradition. On 19 February 1258, at about 16:30 UT (shortly before sunset, i.e. at about 17:30 local time), an earthquake probably struck the village of Barrea (in the present-day province of L'Aquila), where the walls of the church of S.Tommaso partly collapsed. No further information about the church is provided.

A strong shock at Sessa Aurunca caused the bell to ring. Due to unspecified places there was no further information about the location

The information about Barrea is recorded in a document of about 1260 which refers to indigences granted by the bishop of Trivento (now in province of Campobasso) for the restoration of the church of S.Francesco da Barrea, which had been damaged in an earthquake. This is presumably a reference to the earthquake recorded in the Cronicon Suessanum, although no specific date is given. The document is in the Archivio dell'Abbazia di Montecassino (folio 1260, p.169). The text is as follows:

"Pater Lucas, by divine mercy humble bishop of Trivento. To all and to those who read this present letter, greetings and the true love of God. Since part of the church of S.Tommaso at Barrea (Barrea) collapsed in an earthquake and its walls were almost destroyed and the funds earmarked for the restoration of the church are insufficient, in the name of our love of God we advise and exhort that for the restoration of the said church we should offer not only the goods that we have gathered for God, but also charitable offerings made by individuals. We trust indeed in the compassion of God and the intercession of Saint Nastasius and Saint Celinus, and to all those who offer assistance and support for the restoration and administration of the said church, exemption from forty days of penitence will be granted in the name of God's mercy.

From clericus misioneone dictam humillim Truentanum episcopos, universis presentes letens inspiciens salutem et veram in Domino charitatem. Cum quodam puero ecclesie Sancti Thome de Barregio ex supervisione terremoto coruensit et ipsius mensa fecerint concussa et ad ipsius ecclesie refectionem preposito non suppetit facultates dictionem nostram monentur et orantur in Domino quatenus ad ecclesie predicte perpervigatur. Nos vero de creaturis hortamur et bistantem martirium Nastartii et Celii patrocinis querdantibus omnibus porgentibus auxilia et favorem quibus predicta ecclesiae reficatur ac etiam gubernatur, quadraginta dies de intanta sibi postentiae in Domino misericordiam relaxans.

The information about Sessa Aurunca comes from the Cronicon Suessanum, an anonymous chronicle of the town:"

In the year of Our Lord 1258, on Tuesday 19 February after compline and shortly before sunset there was a large and impressive earthquake at Sessa and in almost all the other towns, and in some it caused a considerable amount of damage, and so the bells of the monastery of San Germano and of the church of San Matteo rang of their own accord, such was the extraordinary shaking of the said earthquake [...]."

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**fig. 55** Parchment, 1200 c.e. An indulgence granted by the bishop of Trieste (now in the province of Campobasso, southern Italy) to those contributing to the restoration of the church of S.Francesco da Barrea, which had been damaged in 1258 (Archivio dell'Abbazia di Montecassino, parchment no.280).

Anno Domini MCCCLVIII. Die Martis XIX mensis Februarii post compleniorem et orationem solis fuit magnus, et manifesta terremotus Suessanum, et eis in omnibus aliove Civitatibus, et in quibusdam in aliovene solis dominium attigit, ita quod Campasane Montaerii Sancti germani, et Ecclesiae Sancti Matthaei propter nisiam impulsione dicti terremotus ex se venantur [...].

19 February was indeed a Tuesday in 1258. There is a very generic reference to earthquakes in Italy in 1258, without any indication of the day or month, in the Annales Beatae, a short 16th century chronicle.
The Egyptian Arab historian Ibn Duqmān (1349-1406) combines the earthquakes in Egypt and Syria when he records:
"In this year, there was a violent earthquake in Cairo and the other Egyptian territories, and there were numerous shocks in Syria at the time when the Tartars arrived, for they crossed the Euphrates and invaded the region of Aleppo, and many citizens of Damascus fled and put their goods up for sale and wandered around in terror and scattered through the meadows and mountains and some of them made their way towards Egyptian territory. It was midwinter, and many died of cold, and others were robbed as they travelled."

There is a brief reference to the earthquake in the chronicle in Arabic by al-Ayni (1361-1451), a Turkish historian: "There was a very violent earthquake in Egyptian territory, and people heard the news that the Tartars were making for Syria."

And, another source, Abū-Ṭabar (1405-1470) records: "In the year 657 H. (1258-1259), there was a very violent earthquake in Egyptian territory."

Finally, the famous Cairo historian al-Shaybānī (1446-1586) records: "In the year 657 H. (1258-1259), there was a very violent earthquake in Egyptian territory."

It is estimated by many historians that there were two earthquakes in Egypt and Syria during this period, one in 1258-1259 and another in 1261-1262. However, there is no clear evidence to support this claim, and the exact number of earthquakes during this period remains uncertain. The sources record the earthquakes with varying degrees of detail and accuracy, and the exact location and magnitude of the earthquakes are not always clear.

According to Ambrose et al. (1994), there is a doubtful event. In our opinion, there is evidence for the having at least affected Cairo, but we have nothing on which to base an assessment of effects.

**Localities**

- **Cairo**
  - lat: 31° 15′
  - long: 30° 45′

**Damascus**

- lat: 36° 19′
- long: 33° 30′

**Literature**

- Ibn al-Dawwardi, An-Naṣr, pp. 117c, 117e.
- Al-Shaybānī, Tabaqat, VIII, p. 44.
- Teher (1979).
- Sahib (2000).
- Chauvet and Tabar (1980).

**Catalogues**

- Seiber (1932a).
- Ambrose et al. (1994).

**Date**

- 1258-1259

**Event**

- 1259 March 23: Damascene [south-western Syria]

**Comments**

- The source record that the arrival of the Tartars was accompanied by numerous shocks in Syrian territory. At this same period, there was also a strong earthquake in Egypt (see the previous entry).

**Additional Information**

- In 1261-1262, Barbars al-Din fled to Egypt and in the same year there was an earthquake among the Syriacs.

**There are no elements with which to indicate the parameters.**
On 20 February 1264, Egypt was struck by a strong earthquake which caused damage. The Egyptian Arabic sources which record the earthquake do not specify where the damage occurred. The reliable historian al-Yunani (1334-1405) writes: "On Tuesday 20 Rabi’ II in this year [662 H. = 20 February 1264], there was a very violent earthquake which aroused great fear and destroyed some houses".

There is a similar report in al-Maqridi (1364-1442): "20 Rabi’ II, a violent earthquake in Egypt caused a great deal of damage".

There were other reports in the region:

- Al-Suyuti (1445-1505) is even briefer: "In the year [662 H. = 1263-1264], Egypt was struck by a violent earthquake".
- Ibn Sa’d (1332-1424) and Ibn Sa’d (1332-1424) record that the city of Cairo was severely shaken.

There are no elements within the text to indicate the parameters.

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1265 early August (before 16th) Proconnesus [north-western Turkey] > landside<

In early August 1265, the island of Proconnesus (now Marmara), in the Sea of Marmara, was struck by an earthquake, and a mountain landslide engulfed the village of Galeneion (present-day Cinarci or Galimi) on the island's west coast.

Information about this earthquake can be found in Pachymeres, a contemporary Byzantine historian who witnessed it himself. Pachymeres was a member of a delegation sent to the patriarch Arsenius, who had been exiled to the monastery of St. Nicholas, near Souda on the island of Crete (in the middle of the Sea of Marmara). The delegation had boarded a ship to return to Constantinople, and was sailing close to the island when the earthquake occurred (Galeneion was on the island's west coast).

"In the middle of the night, in fact, a violent earthquake occurred. The mountain split open and crashed down to the sea, engulfing the village, and it gave us the impression that we too were being engulfed, as we were close by the shore."

Naturally, the mountains split open and crashed down to the sea, engulfing the village, and it gave us the impression that we too were being engulfed, as we were close by the shore.

Although Pachymeres does not specify exactly on which day the earthquake occurred, we can establish the chronological sequence of events during the visit to the patriarch Arsenius as follows: the delegation left Constantinople on July 25 and arrived where Arsenius was confined on July 27 (Pachymeres, II, p.373-16-17). The return journey took place on 16 August (Pachymeres, II, p.377.7-8). Hence the terminus post quem and the terminus ante quem for the date of the earthquake. Evangeliihu-Notara (1993, p.37) suggests a day between 10 and 12 August.

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1265 08 -

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<td>Pachymeres, Relit. hist., II, p.377</td>
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In the chronicle attributed to Balat we read:

"In the year 1265 (13 January 1269 – 12 January 1270), there was a violent earthquake which reduced numerous villages to ruins in various parts of Cilicia, especially at the feet of the Black Mountain [Mt.Amanus]; it destroyed the impregnable fortress of Sarvandikar, killing all the inhabitants; in the holy monastery of Arkalak the priests and monks died in the ruins of the buildings; and in this mountainous region the earthquake damaged and destroyed numerous villages and, elsewhere, the castle of Delnkar."

The other Armenian sources for this earthquake consist of a brief mention by the contemporary chronicler Matt’ar of Ayrikvan’ and two references in the Annals of King Hetum and the Chronicle of the historian Hetum. Matt’ar of Ayrikvan’ simply recorded a "strong earthquake" in Cilicia. Kostanesian (1992, p.10, 21) wrongly dates the earthquake to 1268, probably through misreading Matt’ar. More problematic, but substantially unfounded, is the dating to the year 1261 by Stepanyan (1904, p.61; cf. Zeytunyan 1991, p.5), based on the assumption that Matt’ar of Ayrikvan’ has got the date right.

In what is known as the Annals of King Hetum (Chron. min. Arm., 1.3), we read:

"In 718 (1269-70) Sarvandikar and Hamus were destroyed in an earthquake".

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It was known that in the year 1580 of the Byzantine era, 1269 of the Christian era, there was a fearful earthquake in Cilicia, at the first hour of the night of one Wednesday the fortresses of Suranur, Issamua, Al-Hajur Al-Ashar, and the convent of Balut Al-Malik — the biggest Armenian convent — were destroyed. Around 6,000 persons perished because of this earthquake.

In September 1269 a strong earthquake struck Ancona and Hamana (now called Numana) in the present-day Marche region. In both towns many walls collapsed and were damaged, and in Ancona towers and houses suffered similarly. The terrified townsmen fled, and took refuge in tents and shacks. On Mt. Conero (situated between Ancona and Numana, and also called "monte d'Ancona"), a big landslide crashed down into the sea, probably as a result of the earthquake. The waves which it produced reached the Croatian coast of central Dalmatia on the opposite side of the Adriatic.

The most important sources are four Latin chronicles, three of which are contemporary: the Annales Tavuncienses, an official chronicle of the city of Genoa, compiled for the years 1267-1269 by four authors (Nicola Gesara, Guglielmo di Mallieto, Enrico Degrillo and Buonaventura Deodare); the Annales Piacenzenses, an anonymous chronicle from Piacenza who lived in the second half of the 13th century; the Pomerium Romanorum Ecclesiae by Riccioldo of Ferrara, a notary who was born in 1246 and died in 1318. The fourth, slightly later work is the Chronicon by Francesco Pigna, who was a notary and sub-prior at the Dominican convent of S. Domenico in Bologna (he was born about 1270 and died in 1328).

There is also a probable reference to the earthquake in a Hebrew expiatory prayer (nezahal), composed by Shemuel ben Mecheb ben Yohanni (or Ashanimit de Rossen).

There is no specific chronological reference to the earthquake in this religious text: the only certain reference point is 1284, the year when the writer died. The only specific geographical reference is the prayer's title: "For the earthquakes which struck Ancona", which suggests a relationship with the 1269 event (Larouss 1973, p.48) rather than the 1377 earthquake in Umbria and Marche, as suggested by Busi (1995, p.474).

The earthquake is also recorded in 15th century chronicles, but they do not add to the
1275
October 3

the fifth day (of the week), on the third day of the month of Tisbeia I (October), a violent earthquake took place in the city of Arkesia, which is Arsus [Arres], and its strong walls and all its buildings collapsed, and a large number of its inhabitants perished. And the same thing happened in the city of Khahit [Xlat], and the earthquake in its territory took place at the ninth hour; there was great destruction there, but it was not as widespread as at Arsus". [Budge's translation]

Further information can be found in the chronicle of the 14th century Arab historian al-Nasir:

"In that year (1275 H), a violent earthquake occurred in Khahit [Xlat], destroying houses, workshops and markets; there were many victims in the ruins, and only a few people survived. The seismic activity moved to Arsus [Arres], where it caused destruction and ruin. Later it reached Diyarbakr, causing damage at Maydirin and Mardin on its way."

Abich (1882, p.438, quoted by Step'anyan 1964, p.60) replaced the date 1246, which would seem to coincide with what Nasir the Jacobite suggests, with the year 1245-1246. Step'anyan (1964, p.61) follows the dating proposed by a continuation of Samuel of Ani; Zeyt'anyan (1981, p.158f.) seems to place the inscription within the context of 1265.

This earthquake is unknown to the Italian seismic catalogue tradition. On an unspecified day in 1275, the island of Ischia was struck by an earthquake; some houses were destroyed and there were many victims, though the exact number is not known. A stretch of the coast may have collapsed into the sea, and a good deal of agricultural property was totally lost. The source is a document now lost, from the Angevin records in the State Archives in Naples. The text was transcribed by Eduard Sthesmer (1883-1938) before the fire of 30 September 1943, during the Second World War, which destroyed the Angevin archive. It was first published in Buchner (1886, p.189) and now in Cubells (1996, pp.128-9).

The document shows that on 2 November 1275, a king Charles I of Anjou gave orders for an investigatory commission to be sent to the island, following a petition from its inhabitants asking for exemption from payment of taxes because of earthquake damage. The document is of special interest because of the light it throws on a particular administrative procedure which demonstrates the complex arrangementgoverning tax exemptions after a strong earthquake. The text of the document is as follows:

"To Charles of Naples and the notary Giovanni de Barolo. From the men of Ischia [...] A petition sent to our Excellency contained a request that, since not long ago because of the disaster of the earthquake many of these men were killed, for part of the said place sink into the sea, and many agricultural properties were completely lost, and some houses were destroyed, since they can no longer enjoy the fruits and income on which their subsistence largely relied, therefore the other others (these who did not suffer damages) are not able to make payment of the general tax imposed on their land, and to fulfill other [tax requirements] which are charged to them by our curia, and so we have deemed to make provision about this with royal graciousness. We are therefore disposed to accept these petitions in the name of your loyalty [...] we send you as a collective body to the island of Ischia to ascertain whether the earthquake was as reported, at what time and in what part of the island it occurred, and what damage it caused. Investigate and report to us in writing. Given in Naples on 2 November, in the third indiction (1275).

Carmenio de Necpoli et notario Johanni de Barolo
Ex parte hominum Yacle f... perrecta excellenter nostro patre continvnet, quod, eum super ex quodum inferintur terminat mesunlqu isorum hominum, parte dide terre in inagi submiser, perierunt et possessiones multis omni patride et allique cides sunt destreco, quod nulli possunt presentes seu redditis, quibus in moque parte substantia sequitur acteau, presente proprie quod nequenti alii remuneri imposium eider terre suadentem collecto evidere et alia, que pro parte curie nostrae es imпоnuntur, inUILDERI, ut super hoc procedere de benignitate regia dignamente. Nos igitur isorum supplecicinbas inlinati, fideitate vestri [...] mansimuis, quasimus ad terram Yacle vos"
The Additamenta record:
"In the said year 1283, in the month of January, at the hour of vespers, there was a very great earthquake at Venice."

In dicto millésimo MCCCXXXIII mesis Januaryi hora vesperina fuit Venetiis maximus terremotus.

Pietro Giustinian writes in similar terms:
"Also in that year (1283), on 17 January, at the hour of vespers, there was a very great earthquake at Venice."

Item, dicto millésimo, die XVII Ianuarii, hora vesperina, fuit Venetiis maximus terremotus.

Although the report gives no details of effects, it is precise in its dating. Both 14th century chronicles date the earthquake to 1283; and they are the work of notary chroniclers who were accustomed to using the traditional "Venetian style" chronology. The old Venetian tradition began the year on 1 March: that is to say, two months later than the modern style, and so the dating has been corrected to 17 January 1284, modern style. Such a chronological modification makes it possible to relate this earthquake to the one recorded in the anonymous Chronicon Parmaense, a reliable notarial chronicle compiled in the first half of the 14th century, where we read:
"On 15 June 1284, a Tuesday, at the hour of vespers, the earth shook [lit. Parnal]."

Di 15 junij in marse, hora di vesper, tremò la terra.

The fact that the day of the week is given makes it possible to correct the indication of the month. June is given instead of January, but in Latin, their abbreviated forms are very similar ("jun." and "jan."). 18 January 1284 was indeed a Tuesday, whereas 15 June was a Sunday. At the time, the numbering of each day began at sunset; with the result that the date of events occurring at vespers often varies in the sources between that of the day which had just ended and that of the following. Thus, if the chronological indication given in the Chronicon Parmaense is interpreted "17 January 1284, at the hour of vespers", it coincides perfectly with that in the Venetian sources.

In the 14th century, this information was taken up in Venetian chronicles. Some 15th century Venetian historians, such as Dolfina, record the information as it appears in the 14th century sources without alterations or additions. But they date the earthquake to 1282. This change is probably due to their supposing that their predecessors had not used the Venetian style of dating, and that the date January 1283 corresponded to 1282 in their chronological system. Other historians, such as Martin Samuele, dated the earthquake to 1283, as the 14th century chroniclers had done, but in Muraro's often inaccurate edition, the date given is 1282.

This variation between 1282 and 1283 persists in the historiographical tradition of the following centuries, and enters the chronographical tradition: Perruy (1618) records two separate shocks: on 17 January 1282 and January 1283, though he thinks it unlikely that they were indeed separate; Moccari (1888) lists a single shock dating to 17 January 1282, in the appendix to his catalogue (p.627), Baratta (1901), dates the earthquake to 1283, whereas he had previously given 1282, but he does not state explicitly which is to be preferred; Zanon (1937) appears to prefer 1283, but at other points in his work, the earthquake is dated to 1282.

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<td>1284 October 13 – November 10</td>
<td>[Sha’ban 683 H.] Damascus (Syria)</td>
<td>al-Dhahabi, Kitab al-Thar, V, p.342; al-Ya’fi, Mir’at, IV, p.196</td>
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In the middle of [Sha’ban], in the year 683 of the Hegira, which corresponds to the period 13 October – 10 November 1284, Damascus was probably struck by a strong earthquake which caused collapse and serious damage. The uncertainty as to what really happened at Damascus at that time is due to the fact that the closest source to the event, the Damascene Arab historian and theologian al-Dhahabi (1274-1348), does not refer explicitly to an earthquake, simply reporting that there were serious disturbances at Damascus caused by both natural events and warfare. However, the Yemeni Arab historian al-Ya’fi (1300-1307) maintains that the disturbances mentioned by al-Dhahabi had been caused by an earthquake.

The latter states:
"In the month of [Sha’ban], there were great disturbances at Damascus. Egyptian troops hippos at the construction site were destroyed, and rivers overflowed their banks."

Commenting on this passage, al-Ya’fi states:
"As far as I know, it was an earthquake; but God has greater knowledge."

The report of an earthquake seems quite convincing, but it is not possible to establish whether there is any connection between the rivers overflowing their banks, as mentioned by al-Dhahabi, and the earthquake.

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The earthquake is unknown in the seismic catalogue tradition.

In the winter of 1285, a violent earthquake struck eastern Turkey. Many buildings collapsed at Bar Sauma, and churches collapsed at churches in the city of Melitene (near present-day Malatya). Honigmann (1954, pp.50-1) has identified the monastery of Bar Sauma in ruins at Bursa, near a mountain about 1800 metres high between Malatya and Adıyaman, near the historical site of Nemrut Dağı (or Mount Nemrut).

The source is the contemporary historian Bar Hebraeus. At the end of the first part of the Chronicon Ecclesiasticum, we read:
"In the year 1285 of the Greeks, 1 October 1284 – 30 September 1285, in the winter, there was a violent earthquake at Melitene and its territory. The arches of churches collapsed in the town, and at the monastery of Bar Sauma so many buildings were destroyed that the whole monastery was in danger of falling off the mountain."
of the sultan's troops, began the march towards Laodicea. They arrived there with catapults, whose tongues and fingers are accustomed to conveying the words and signs of victory. They set down their machines in thoroughly firm positions, and built a stone bridge. Then they threw the battering ram [I maphul] against those points which had been blown up in the earthquake, thereby leaving the tower undefended. In this way the position fell into their hands. [The Franks] were convinced that our sultan was fighting with the aid of the angels and earthquakes, and when things went against them, they laid down their arms and surrendered. The tower was captured on Sunday 5 Raids' 1 (20 April). The Muslims allowed the Franks to leave with their possessions, obliging them to abandon only their weapons. At midday the cross was removed from the top of the tower, as the muqaddim made the call to prayer.

In the month of Muharram in the year of the Hegira 966 (which corresponds to the period 16 February – 17 March 1265), and at the beginning of the following month of Safar, three strong earthquakes struck; what is now the coast of Syria (the territory of Laodicea, present-day Al-Latique) and an area of hinterland stretching from western Syria (the territory of Safad, present-day Zefat), The first shook occurred in the second half of February, and damaged various Mamuk fortresses, including those of Safad and Hims. There was a fresh and violent shock on 3 March, which increased the damage at Hims, where restoration work on military buildings had already begun. The second shook on 3 March caused the partial collapse of a quarter of the tower at Laodicea, including the lighthouse, which was then in the hands of the Franks. The serious damage which this military building suffered facilitated the Mamuk conquest of Laodicea on the following 21 March, under the leadership of the sultan Qalawun. The sources for this earthquake in the contemporary Arab historian Ibn Abd al-Zahir (1233-1298). He is particularly authoritative and reliable because at the time of the earthquake he was secretary to the sultan Qalawun, who was not only one of those chiefly responsible for the Muslim reconquest of the crusader states, but also actively involved in the capture of Laodicea, referred to above.

"The tower (of Laodicea) rose proudly above the whole region. It was sought after by the Muslims and protected by the infidels because it rose up out of the sea without being connected in any way to the land. How could it be taken, if its base was the sea?" The Franks profited greatly from the port of Laodicea, which was comparable in importance to that of Alexandria. God willed it that in the month of Muharram in that year (688 H. = 16 February – 17 March 1287), there was a series of earthquakes which damaged some fortresses, including that of Safad. Half way through Muharram, our sultan set about repairing the damage. The fortresses at Hims were also being repaired, when it was again struck by another shock on 21 Muharram (8 March). During the night of Saturday 5 Safar (22 March), there was an earthquake in the direction of Laodicea which almost completely destroyed its tower in the sea, for God had wanted to give that region to the Muslims by protecting the tower in this way. A quarter of the tower was destroyed. The dovecot was also destroyed, as was the lighthouse which showed the position of the coast. The earthquake was a violent one and made the capture of the tower easier. When he had taken the town of Sahiyun, the Emir Husam al-Din Tarantum, who was in command...
On 16 May 1287, there was a strong earthquake at Erzincan, in present-day Turkey. It must have been extensive damage, as we are told that there were many victims. The principal source for the earthquake is the contemporary work known as the Annals of the Anonymous of Sivas (Chron. min. Arm. II:4) which records, in a context relating to the year 1286-9 January 1287 – 8 January 1288:

"In the same year, on 16 May, a strong earthquake occurred at Erzincan. Many people died, and only God knows their number".

The earthquake is also recorded in other Armenian sources, but with different datings. The continuation of Samuel of Ani gives the date as 740 (8 January 1291 – 7 January 1292); similarly, the chronicle in Arm. Jerus. ms. 343 (in Yesevian 1951, no.239), which continues the Syrian up to 1346, reports the destruction of Erzincan by an earthquake in

"1292 [sic] = 789. The earthquake destroyed Erzincan"

Abich (1895, p.443) dates the earthquake to 1290, on the basis of evidence from Arakel of Tabriz, whose information is similar to that in Gregory of Tumshuq; but this information actually concerns a different earthquake, namely that of 1280-1281 (see the entry concerned). Kostanez (1902, p.10; 21, followed by Stepanyan 1964, p.62, who creates a doubt) dates the earthquake to 1280, whereas Inceyan (1902, p.17) had already listed one earthquake in 1287 and another in 1290. This is probably a case of duplication of the earthquakes of 1280-1281 and 1287.

The only chronological reference provided by Pachymeres is the resignation of the patriarch Gregory II, which took place in June 1292. According to Evangelatou-Notara (1993, p.344) the earthquake occurred before 14 June, the day when Athanasius I ascended the patriarchal throne. This suggestion proves to be mistaken, however, because Athanasius began his first patriarchate on 14 October 1289.

1289 June Constantinople [north-western Turkey]

This earthquake is unknown to the seismic catalogue tradition, being recorded only by Evangelatou-Notara (1993). On an unspecified day in June 1289, an earthquake was felt at Constantinople, but its effects are not recorded. This is probably a case of a distant epicenter. The earthquake occurred during a synod summoned after the resignation of the patriarch Gregory II. Information about this earthquake is to be found in Pachymeres, a contemporary Byzantine historian, who tells us that the clergy,

"[...] met with the emperor in the great palace, when a sudden earthquake struck their meeting and banished all doubts"

In the Attic account, the following is added:

"I met with the emperor in the great palace, when a sudden earthquake struck their meeting and banished all doubts"
In the month of Safar (629 H. = 11 January – 8 February 630), the towns of Gaza, Ramla, Ludd and especially Al-Karak, were struck by a violent earthquake. Of the towers at Al-Karak, three were destroyed. A message from al-Ghuzn ibn Shawar, governor of Ramla, told that there had been incessant rain, causing destruction in fields and houses. The flood knocked down bridges and mills on the river Awa'. The bodies of eleven drowned men were found in the flood waters. Immediately after the flood, a tremendous earthquake struck the coastal towns. The earthquake caused destruction in many places; and the minaret of the congregational mosque at Ramla was so badly cracked that it collapsed. The governor was ordered to assess the damage, and the Emir ‘Ali al-Din Ayyub al-Shuja’i was sent with labourers and skilled workers to rebuild what had collapsed at Al-Karak.

The numerous sources which record this earthquake on March 1293 provide information solely about the city of Pistoia and its hinterland. In the city many houses collapsed and others were damaged, a vault in the cathedral fell down, and the columns of the altar of S.Jacopo were damaged. The top of the tower at the town hall also collapsed, and there were many deaths in the city and its surroundings. The life of the city was disturbed by the event, for many people left, taking refuge in tents or fleeing into the mountains. A source hitherto unknown to the seismicological tradition has been discovered during our inquiry in the Archivio di Stato at Pistoia. It is in fact an administrative decision by the Emir of S.Jacopo (the body responsible for the upkeep of the building), dated 31 August 1293, approving expenditure for repairing the columns of the altar of S.Jacopo in the cathedral, which had been damaged in an earthquake: "To the blacksmith master Comando and to master Jacopo di Como, for ironwork; lead, mastic, and the work of repairing the marble columns which support the ciborium of S.Jacopo, which were destroyed or damaged at the time of the earthquake, so that they shall no longer be in disrepair and shall stand better and more firmly, 2 lire and 7 soldi." 

 mogliari Comando fabbro et Jacopo de Como pro ferramentis, plumbo, mastico et magistrorum coram pro reparatione columna marbrae que sunt et sustinent ciborium sancti Jacobi, que erant disapaire et seise tempore terrroratum, ne amplius

The numerous sources which record this earthquake on March 1293 provide information solely about the city of Pistoia and its hinterland. In the city many houses collapsed and others were damaged, a vault in the cathedral fell down, and the columns of the altar of S.Jacopo were damaged. The top of the tower at the town hall also collapsed, and there were many deaths in the city and its surroundings. The life of the city was disturbed by the event, for many people left, taking refuge in tents or fleeing into the mountains. A source hitherto unknown to the seismicological tradition has been discovered during our inquiry in the Archivio di Stato at Pistoia. It is in fact an administrative decision by the Emir of S.Jacopo (the body responsible for the upkeep of the building), dated 31 August 1293, approving expenditure for repairing the columns of the altar of S.Jacopo in the cathedral, which had been damaged in an earthquake: "To the blacksmith master Comando and to master Jacopo di Como, for ironwork; lead, mastic, and the work of repairing the marble columns which support the ciborium of S.Jacopo, which were destroyed or damaged at the time of the earthquake, so that they shall no longer be in disrepair and shall stand better and more firmly, 2 lire and 7 soldi."
There is evidence of damage at Boiano in an order from Charles II of Anjou, drawn up on 15 May 1294 and addressed to the justiciar of the Contado of Molise:

"in the margin: Boiano is suffering as a result of an earthquake. Exemption from the tax due from the community of the town of Boiano which, as an enquiry reveals, has suffered severe damage from the unfortunate recent earthquake, which caused the death of many men and women, 15 May of the seventh indiction, in the year 1294, folio 159."

Boiano pativa del terremoto Terremoto Universitatis ter Boianit, qua ex infideli eventu pretiosi terremotis danam gravia pertulit, sic quod marinas, et feneminarum, facta est magna strage, prout ex inquisitione constat, resonavit medicarum collectarum, sub die 15 maii 7 indictionis anno 1294 folio 159.

A fuller version of this document (once preserved in the Archivi della Regia Zecce of Naples) is transcribed in Boniti (1891, p.530):

"To the community of the town of Boiano, which asks for immunity from tax because of the earthquake it has suffered, the king declares that he accepts. Since an investigation carried out at the behest of Charles, eldest son of our king of Hungary and Prince of Salerno, who was then Vicar General, shows that because of the sad event of the recent earthquake the town of Boiano suffered such serious damage that a great many men and women were killed, deeming it appropriate that the surviving people of that town should have some respite from their usual (tax) burden, since they themselves declare that they could not otherwise survive in that place, therefore we exempt them from half of the general tax, etc. given this 15 May of the seventh indiction, in the year 1294 of the reign of Our Lord and the tenth year of the king's reign."

Universitatis Terre Boianiti potestis immundam e Collecte ob Terremotum passum, Rex indulget absolvere. Quia per inquisitionem factam de mandato Caroli primogeniti nostri Regis Ungarici Principis Salernitaniti, tunc Vicarii Generalis, constat, quod ex infelicit eventu pretiosi Terremotus terra Boianit dama gravia pertulit, sic quod marinas, & feneminarum facta est magna strage, dixit rex permissis quod resedit homines dixit terremotus de consuetudine erubescerent aliquod resolvi, cum ipsi eum resistenti ait ille non salvebant. Propter eorum salus et requies ex mandato generale dispensarentur, etc. sub die 15 Maii 7 Indictionis anno 1294 Regni Dominorum Regis anno 10.

Charles II's order sent to the justiciar of Capitanata on 15 April 1294 grants compensation to Bertrand of Belmonte, a locality in Sinnium struck by the earthquake:

"in the margin: Earthquake at Belmonte in the Kingdom. Order for the payment of 130 acius to the knight Bertrand of Belmonte, as compensation for losses suffered in the earthquake which caused damage to that area this year. To the justiciar of Capitanata, 15 April of the seventh indiction [1294], folio 245."

Belmonte Terremoto in Regno Bertrandus de Belmonte muli proviso pro solutione aciarum 120 in compensationem damnorum passorum ex terremoto qui hoc anno presenti in paribus tali immundis, et dirigitur insinuato Capitanato sub die 15 Aprilis 7 indictionis folio 245.

The order sent by Charles II of Anjou to the justiciar of the Terra di Lavoro in May 1296, again in favour of Bertrand of Belmonte, states: "in the margin: Belmonte Earthquake. Order in favour of the knight, Bertrand of Belmonte, to whom we have granted 120 acies in compensation for damage suffered in the year of the seventh indiction, this sum to be in full and final payment. Folio 25 verso."

Belmonte Terremoto Bertrandus de Belmonte muli cui concessimus acias 120 in compensationem damnorum quae passae est ex terremoto infra annum 7e indictionis proviso quod cum effecta solvatur. Folio 25 verso.
mosque in new Cairo and dislodged some columns in the Amr mosque in the Fustat district. As Ambrose et al. (1994) have maintained, it is possible that this earthquake and the one recorded as occurring in Palestine in January – February 1293 are in fact the same one, but the sources do not provide sufficiently precise information to confirm this.

The earthquake in Egypt is recorded by the famous Cairene Arab historian, al-Suyuti: "There was an earthquake throughout the city of Cairo (Mīr) that some columns in the Amr mosque struck against one another. However, the effects were lighter than those in the cathedral mosque of new Cairo (el-Qahirah)."

Towards midnight on 1 June 1296, a strong earthquake struck Constantinople, causing the collapse of many ancient buildings, destroying many new buildings, and producing cracks in the city walls. At the church of All Saints, which had already been damaged in the earthquake of 1016, part of the roof collapsed above the altar and the nave. A bronze statue of the Archangel Michael, erected by the Emperor Michael VII Palaeologus (1259-1282), was lost from its position on a column. The Emperor Andronicus II Palaeologus (1259-1282) was away from Constantinople at the time, but immediately returned to the city. This earthquake was compared in strength to an earlier earthquake — perhaps that of 11 March 1223. A succession of minor shocks continued during the months of June and July; on 10 June there was a powerful shock. The Emperor had the statue of the Archangel Michael restored, as well as the city walls (Müller-Wiener 1977, p.295). The church of All Saints no longer exists, having been restored, however, and it lay in ruins until the end of the 14th century.

The church of All Saints is the richest source of information. Within the context of June 1296, he relates: "...at the first day of the month, in the evening; as midnight was approaching, there was a great earthquake, which caused living bodies to pulsate. Authors who wrote about it say that these pulsations were extremely disastrous, because they passed through the underground and shock foundations. Neither young nor old experienced an earthquake of greater or equal power. Some of the elderly compared it to the 'great' earthquake. So this one, too, lasted for many days, and often by day or night the aftermath of the exhalation was experienced until 17 of August (an archaism for July), but less powerfully [...]."

From the traces of the microgloria, we know that the earthquake was stronger in the west, especially in Eğirdir. The earthquake caused many buildings to collapse, some of which were ancient, and some new buildings. The earthquake also caused cracks in the city walls, which had been damaged in the earthquake of 1016.

The earthquake struck Constantinople on 1 June 1296. The city was in a state of shock, and the inhabitants were frightened. The earthquake caused the collapse of many ancient buildings, destroying many new buildings, and producing cracks in the city walls. At the church of All Saints, which had already been damaged in the earthquake of 1016, part of the roof collapsed above the altar and the nave. A bronze statue of the Archangel Michael, erected by the Emperor Michael VII Palaeologus (1259-1282), was lost from its position on a column. The Emperor Andronicus II Palaeologus (1259-1282) was away from Constantinople at the time, but immediately returned to the city. This earthquake was compared in strength to an earlier earthquake — perhaps that of 11 March 1223. A succession of minor shocks continued during the months of June and July; on 10 June there was a powerful shock. The Emperor had the statue of the Archangel Michael restored, as well as the city walls (Müller-Wiener 1977, p.295). The church of All Saints no longer exists, having been restored, however, and it lay in ruins until the end of the 14th century.

Information about this earthquake can be found in two contemporary Byzantine historians, Pachymeres and Nicephorus Gregoras, as well as in some Byzantine Notitiae. Pachymeres is the richest source of information. Within the context of June 1296, he relates: "...at the first day of the month, in the evening; as midnight was approaching, there was a great earthquake, which caused living bodies to pulsate. Authors who wrote about it say that these pulsations were extremely disastrous, because they passed through the underground and shock foundations. Neither young nor old experienced an earthquake of greater or equal power. Some of the elderly compared it to the 'great' earthquake. So this one, too, lasted for many days, and often by day or night the aftermath of the exhalation was experienced until 17 of August (an archaism for July), but less powerfully [...]."

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court. The pope took refuge in the Dominican convent in Rieti, as it was situated in a higher and former spot, and there he lay down in the convent garden when a small test with the papal palace had been set up. Then men left at night and fled into the fields, staying out in the open for fear that buildings would collapse on top of them, and they waited in great fear. Here and there men and women fell down, for the earth shook and moved with unusual movements.

Anno Domini MCCXCVIII Bonifacius papa cum sua curia Rote residente, dominica presbyteri ad Dominam Domini, in feste beat. Andreo apostoli, inceps Rote et vicinis partibus evehens terre motus quam et quantum nullius tunc vivens siderum praeus. Duxitque multa edificia in pluribus locis, multaque diebus et noctibus perderetur, non quidem continuo, sed per plures evers in die pariter et in nocte; tum victus non modicem incitavit papa et cathedrallus in toti curti. Contiguus papa ad castrum, sed gaudet erudiri quod pontificer erat, ubi in claustro prouto facto testamento festinante de subtilibus assurbas conspectus. Horum vicinis diebus et noctibus suscitati, sub douce manto, edificia se super; ut suaeurant formidantur, in timore magni spectantes. Cadebantque passim homines et iumenta, cum terra tremuerat et multas naturae insanitas.

There is a brief reference to the earthquake in the Annales of Tellomega da Lucca:

"At that same time [1288], there were very great earthquakes at Rieti, where the papal court was in residence, and the choir of the palace and several of the town's towers to collapse."

In sedem temporum fuerunt tremens per maxini apud Reatem, ubi curia erat, communique palatium pape et multa terra sua totaliter ruere fecit.

This reference is taken up by the continuator of his Historia ecclesiastica.

Giovanni Villani (who died in 1348) among others describes the earthquake as one of the shocks which led to the death of Pope Boniface IX, and it is also described in the Flores historiarum (in Tuscany) in 1293 (see the entries concerned). The Rieti earthquake is also recorded as having occurred in the presence of the pope, and no more than half a century later caused a disturbance in the dating of what was considered a less important event, by attributing it to its own date. Thus Villani writes:

"Of the great earthquakes which occurred in certain towns in Italy, in the town of Rieti, and Spoleto, and in the town of Pistoia in Tuscany. Many houses, palaces, towers and churches collapsed in these towns."

De grandis terruem qui furono in certa citta d'Italia.

Nel anno 1288 fuori molti tremui in Italia, specialmente nella città di Rieti e in quella di Spoleto, e in Toscana nella città di Pistoia, ne le quali citta addoio molte case e palazzi et torri, et chiese [...].

The earthquake is also recorded in contemporary chronicles from other parts of Europe, thereby demonstrating the presence of the pope in Rieti gave it a certain celebrity in European culture. The Compendium historiarum of Sifridus de Brinhusin (now Gross-Ballhausen, in the district of Erfurt in Thuringia, Germany), was known to Bonito (1491), but escaped the notice of Baratta (1901). It records the earthquake in considerable detail:

"In the same year [1288], before Christmas, a great and amazing earthquake began [...].

... and spread for three days as far as the town of Rieti, where pope Boniface and the cardinals were then residing, and for four days it spread from Rieti as far as the walls of the city of Rome. The earthquake was so violent that it destroyed many towers and houses in various villages and towns, their collapse causing an unknown number of men and women to be struck and killed. Just as pope Boniface himself was preparing to celebrate mass at the altar, he was suddenly thrown to the ground by a terrible shaking and noise, while the walls of the church shook and pieces of stone became detached from the walls. Nor is that all. The terrible shaking produced by this event caused the pope to grow faint, and although he was protected by the crowd of cardinals and solders, he collapsed into the arms of his priests, and after being taken out of the church with difficulty, died with everybody else. In that same year, a star had been seen which was said to be a comet."

Odhmod anno ante nativitatem Domini magnus terremotus in insulatis est egeri fieri [...].

Postdamatur pars per trias dies apud Reatem, ubi curia erat, cum exitus dominicae partibus evehens terre motus quam et quantum nullius tunc vivens siderum praeus. Duxitque multa edificia in pluribus locis, multaque diebus et noctibus perderetur, non quidem continuo, sed per plures evers in die pariter et in nocte; tum victus non modicem incitavit papa et cathedrallus in toti curti. Contiguus papa ad castrum, sed gaudet erudiri quod pontificer erat, ubi in claustro prouto facto testamento festinante de subtilibus assurbas conspectus. Horum vicinis diebus et noctibus suscitati, sub douce manto, edificia se super; ut suaeurant formidantur, in timore magni spectantes. Cadebantque passim homines et iumenta, cum terra tremuerat et multas naturae insanitas.

The comet referred to by Sifridus is almost certainly the one which was actually seen between late January and early March 1299, as William of Nangia records in more detail in his Chronicon, and also as appears in Chinese, Korean and Japanese sources (Ho Peng Yoke 1962, p.194; Yoshimura 1991, p.490). Brief references to the earthquake appear in the Chronicon of William of Nangia, in the continuation of the Annales Rotomagensis from the monastery at Reusen (the latter wrongly gives Vilnius instead of Rieti as the temporary seat of the papacy), and in the Flores historiarum, a chronicle which has been incorrectly attributed to Matthew of Worms. On the other hand, there are more substantial and detailed reports in the Annales di Wimarnia compiled in the monastery at Worcester, perhaps by Nicholas of Norton, who was custodian of the cathedral there, and in the Continuaciones Anglicas fratrwm Minorum, which are a continuation of the chronicle of Martin of Trompau. Since none of the above chronicles add further information to what is provided by sources from Italy, we do not transcribe their text.

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(154) 1289 December 1 Egypt

source: BNPans, ms. Ar. 6739, al-Jazari, Josaphat al-Suliq, 61.280v.

*Ambrosio et al. (1964)
Between December 1298 and January 1299, Egypt was struck by a strong seismic sequence, consisting of two shocks. The first occurred during the evening of 1 December 1298 and is reported as having been felt in two phases, whereas the second and stronger shock occurred on 8 January 1299. No damage is recorded.

The sources for this earthquake are the contemporary Damascene writer al-Jazari (1260–1303). For the first earthquake he strangely provides the date in the Christian as well as the Muslim calendar, but makes an error of 4 days in the conversion:

On 24 Saffar (689 H. = 1 December 1298), which corresponds to 5 December, there was an earthquake in the region of Egypt after the last evening prayers, and it took the form of two earthquakes, lasting as long as it takes to recite five verses of the Koran. And on 3 Rabi’ II (690 H. = 8 January 1299), there was a more violent earthquake in Egypt than had ever been seen before.

The Arab geographer al-Mas‘udi, who was the author of a famous travel book, records the earthquake in Egypt and the subsequent damage caused by it. In his book, he mentions that the earthquake was so severe that it caused damage to the city of Cairo. The earthquake was so intense that it caused the collapse of many buildings and the deaths of many people. The Arab geographer also records that the earthquake was accompanied by a strong earthquake in the region of Syria, which also caused damage to the region.

There are no elements with which to indicate the parameters.

(156) c.1300 Corinth [Greece]
source 1. SNUL, Ms. Hol. 4° 616 (Eng. trans. in Bowman 1985)

Around the year 1300, there was an earthquake at Corinth, but at the present state of research, its effects cannot be specified. The source is a letter in Hebrew, sent to Rome and dealing with the affairs of the Jewish community at Chalchis (Epiros, in Nephron, the present-day island of Euboea, of eastern Greece). The manuscript is now in the Jewish National and University Library in Jerusalem, having come from the "Collège Rubricien" in Lvov. The earthquake is mentioned in passing at a point where the letter provides news of R. Shabbetai ben R. Moses, who had fled from Euboea to Corinth, and made his way to Thebes after the earthquake. The effects of this earthquake are not specified in the letter, but the fact that R. Shabbetai ben R. Moses left Corinth suggests that the city suffered some damage. The brief passage reads as follows:

"And also, Shabbetai ben R. Moses fled from Euboea to the Chalchis community and took refuge in Corinth. And there came an earthquake as he went to Thebes, and he died there." (Eng. trans. in Bowman 1985).

There are no elements with which to indicate the parameters.

(157) 1302 December 13 Constantinople [Turkey]
doubtful event
source 1. Athen. I, Letter, 57, p. 78
Interpretation: Laurent (1971a); Lassas (1572); Talbot (1973); Ducellier (1980)

Amongst problems affecting the city of Constantinople mentioned by the patriarch Athanasius I in a letter to the Emperor Andronicus II Palaeologus (1282–1328), there is one "diastrophic event", which has been interpreted by some scholars as an earthquake. What Athanasius wrote was:

"[...] this city would not have been preserved until now from the 13th of December when that resounding blow occurred, nor even the eastern region from Aesia itself as far as Scutari[1]."

[... i.e. εὐφράτης ἡ πόλις ἄκουτα ἑκοίν νόον γιὰ αὐτὴν τὴν εἰς τὰ τοῦ Σκυθρίου, ἀνέγραφο γεγονός κτῖσθαι, τὸ τῆς Ἀντολίας, τὴν τοῦ Αἰασοῦ μέχρι τοῦ Σκυθρίου.]

The first editor of the letter, Lassas (1572, p.354), thought it had been written in 1303 or early 1304, since it mentions the forthcoming marriage between Nicephorus Chamaus's daughter and the emperor's son.

Ducellier (1980, p.106) simply gives the year as 1304; Laurent (1971a, app.7) and Talbot (1973, p.355) date the letter to early 1303 and the presumed earthquake to 13 December 1302. The letter has caused some debate amongst scholars. Of more recent writers, Lassas (1572, p.354) and Ducellier (1980, p.106), think the event was an earthquake, whereas Talbot (1976, p.346ff., with bibliography), rejects this hypothesis, since "no natural disaster is recorded at this time." He takes the view that the tetepos ("resounding blow") probably refers to an enemy invasion — possibly by the Turks.

But since the points of reference are vague, Talbot's argument ex silentio do not settle the matter.

Laurent — an expert on Athanasius — writes (1971a, app.7): "There remains the possibility that a visionary monk [i.e. Athanasius], dreaming on 13 December in one year or another, of a dramatic event in which the whole empire seemed to him to sink beneath the blows of countless enemies[2]."

(158) 1303 January 15 Constantinople [north-western Turkey]

(159) 1303 January 17 Constantinople

source 2. Theod., Zaptikl, p.32
source 3. Calot, Op., pp.690-4

Two earthquakes were felt at Constantinople in January 1303. The first occurred towards morning on 15 January, but was so weak as to be scarcely perceptible. The second occurred two days later, during the morning of 17 January. It was stronger than the previous one, but did not cause any damage.

Information about these earthquakes can be found in the works of the Byzantine historians Pachymeres and Nicephorus Gregorac, and in the biography of Athanasius written by Thessalitius Stephanites, a 14th century Byzantine historian and hagiographer.

Pachymeres relates that the ex-patriarch Athanasius sent a monk named Menas Scelocides (PLP 2654) to the Emperor Andronicus II Palaeologus (1222–1282) with a message from Athanasius, asking him to protect the city from "plagues, famines, earthquakes, and floods." (ἐπὶ λοιπῶν, λυκῶν, θερμῶν, καταστροφῶν)

The following morning, there was a weak, hardly perceptible shock, which convinced the emperor of the truth of Athanasius' words:

"an earthquake so weak as to be scarcely felt by anyone who was awake, convinced the emperor of the truth of what he had been told. [... And on the morning of the 17th, there was a stronger earthquake, but not such as to place anything in danger."
After reporting Athenaeus' message, Nicophonus Gregoras adds: “an earthquake which occurred the next day was interpreted by the emperor as the divine wrath predicted by Athenaeus.”

The Life of Athenaeus by Theoctistus Smilidos, the same events are narrated in these terms: Athenaeus reveals to the emperor “the terrible wrath of God which was about to descend in the form of an earthquake.” And he sent Monas, that master of words, works and virtue, to deliver his message.

Athenaeus adds that the predicted earthquake occurred on the day and at the time announced by Athenaeus. The 14th century theologian Joseph Calabestis, who wrote another biography of Athenaeus, narrates the same episode in the following terms: “not many days earlier, [Athenaeus] sent Monas, a man who excelled in words and virtue, to inform the pious emperor that the terrible wrath of God would descend upon us in the form of an earthquake and the collapse of the great imperial residences in the palace.”

While the chronology of the earthquake is not a problem, an assessment of its effects requires comment. Pachymeres and Calabestis are not merely not in agreement but actually in total contradiction, for one speaks of a scarcely perceptible shock, while the other tells of a “great earthquake” which even damaged the imperial palace. Perhaps what underlies this contradiction is the different, if not opposed, attitude of the two writers to the patriarch Athenaeus. Pachymeres is always cold, indeed almost hostile to the patriarch, whereas Calabestis celebrates one of the most admired personalities of the time. Since other sources do not mention this earthquake, however, we may give credence to Pachymeres and conclude that the shocks on 15 and 17 January were minor ones. Such a conclusion is confirmed by a comparison between the Life of Athenaeus written by Calabestis and the earlier one by Theoctistus. Calabestis' source is indeed the earlier Life, where we find a description which fits well with the information provided by Pachymeres and Gregoras. The “great earthquake” is thus a creation of Calabestis' hagiographic and rhetorical pen.

This earthquake was a very large seismic event in the Mediterranean area, involving in its scenario countries of the period with a variety of languages, cultures and economies. It is referred to in the seismological tradition from the mid-19th century up to the modern catalogues of Evangelatou-Notara (1935) and Asmaraz et al. (1994), whose investigation of the earthquake made particular use of Arabic sources—i.e. sources not from the island of Crete—then a Venetian dominion—where the worst damage was suffered. The summary which we set out here is based on the study by Guidoboni and Comantri (1997). In addition to re-examining the sources already known to the literature, they also made use of previously neglected Venetian

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A substantial number of Arabic sources (chronicles and inscriptions) describe the effects of the earthquake. For example, Abu T-Fida (1273-1331), the historian and geographer, was able to obtain official information about the effects. During this period, Arabic sources were compiled and used extensively by historians and geographers. The most important sources are works by Abu T-Fida, a Syrian of the family of the Ayyubids; al-Nawawi (1279-1332), a historian and senior official under the Mamluks, who also compiled an encyclopedia which is invaluable for the history and geography of his time; Ibn ad-Dawwar (13th-14th century), an Egyptian historian who was alive at the time of the earthquake, and Mafaddh b. Abi l-Fadl II (14th century), a Coptic historian whose surviving work is a chronicle covering the period of the Bahri Mamluks from 1260 to 1340. The event was also recorded in the next century by other writers, who provide detailed accounts, including particular events in contemporaneous sources. One is al-Ayni (1361-1451), a Turkish historian, much of whose output is in Arabic. He was an intellectual and an official close to the Mamluk sultans, obtaining high office in their service on various occasions. Another is al-Maqiri (1364-1424), a learned antipartisan born in Cairo, who collected materials of great value for the topographical history of Egypt. He was employed in the civil service, but later retired in order to devote himself to historical and documentary research.

The large earthquake of 1303 continued to be recorded in the 14th century by other writers, such as Ibn Taghibardi (1409-1470), an Arab historian who was born and died in Cairo, Ibn Bahador (1352-1473), al-Suyuti (1415-1508), an Arab polygraph of Persian origin who lived in Baghdad and Egypt (he is famous as a historian of the period of Mamluk influence, and devoted a book to the study of earthquakes).

Research into Arabic inscriptions was carried out within the programme of study of large earthquakes in the Mediterranean area from the 11th to the 18th century. With regard to this earthquake, 3 inscriptions record restoration work on some buildings in Cairo.

Other inscriptions recording restoration work that may be dated to the first half of the 14th century have not been considered, since the cause of damage is not clearly explained (Ciccarelli 1986).

Set out below are the texts of those Arabic sources which provide descriptions of earthquake effects:

Abu T-Fida, Mukhtasar ta'rikh al-balad, IV, p.50:

In this year (702H), there was a terrible earthquake which caused the collapse of part of the citadel walls at Hazah and other buildings in the area; it also destroyed many buildings in Egypt, and a number of people perished in the collapse of buildings. Fewer than twenty butresses (badana) collapsed in the city walls at Alexandria. They were worth two hundred dinars each, and they were hurt and restored at the expense of the government.

The exact meaning of the term butresses is difficult to establish: it refers to a projecting architectural element used as a support, and can sometimes be translated as "pilaster" or "column". For the use of the term, see Van Berchem (1891, p.431 n.2).

al-Nawawi (Dar al-kutub al-mi'riyya, Cairo, ms. 549 Ma'mar al-Husayn, Nihayat al-arab, fol.83r) records:

At dawn on Thursday 23 Dha t'Hijja in the year 702, a terrible earthquake struck the whole of old and new Cairo, the whole region of Egypt, Damascus, and the whole of Syria, including the coastal and mountain regions. But the worst affected area was the province of Cairo.

In a later passage al-Nawawai (Nihayat al-arab, fol.64) records:

(The earthquake) caused massive damage at Alexandria; there was damage to almost the whole of the lighthouse and part of the city wall. The sea completed the situation: first it invaded, and then it flooded the area, reaching as far as the city wall. Many people were killed in the flood and the launderers' shops were destroyed.

And for a few days there was a conflict between the people of Alexandria and the people of Cairo, who accused each other of causing the disaster. Alexandria blamed Cairo, who accused Alexandria of causing the disaster. And many people were killed in the conflict - although the damage was done by the earthquake.

In addition, al-Nawawi (Nihayat al-arab, fol.65-66) records:

"Such was the intensity of the earthquake in the territory that it still appears in the chronicles even now. Faced with these disasters, the government's concern was to rebuild the mosques which had been destroyed. Sayf al-Din Salih, the sultan's representative, was given the task of restoring the mosque of Amr ibn al-As in old Cairo (Mihr), while Rukn al-Din Baybars [the future Mamluk sovereign of Egypt, 1369-1370] dealt with the al-Hakim mosque in new Cairo (Qahira), renovating its halls and ceilings, decorating the walls afresh, restoring it to its former splendour, assigning to it numerous legacies, and organizing study courses and other helpful initiatives. The minaret of the Mansouriyya madrasa was restored using funds bequeathed to the madrasa; the cost of repairing the damaged half of the minaret, from the base to the dome and up to the top was about 90,000 dirhams, just for materials. However, Enver Pasha, when he succeeded, restored the mosque of saint Nasiri managed to make the dome even more beautiful than before. Damage to the mosque [in which the madrasa was attached], on the other hand, was repaired under the direction of Emir Shams al-Din Sanqur al-Ayyubi. The Sallim mosque — the one outside Bab Zuwayla — was also restored, as was the one outside the sultan's gates. All these places and the little mosques which had been destroyed in old and new Cairo were also restored, and everything was made more beautiful than before, thanks to God."

By the time this topographical study of the earthquakes of 1260 and 1303 had been completed, a large number of recent earthquakes had been recorded, each one of them having caused considerable damage. The number of earthquakes recorded in the 14th century, especially in the 13th, is particularly large, and this number increased sharply in the 15th century. The earthquakes of 1303 and 1304 are recorded by many sources, including the works of Ibn Tufayl, Ibn al-Qalawun, and Ibn al-Qalasah. The earthquake of 1303 is described in detail by Ibn Tufayl, who provides a comprehensive account of the damage caused by the earthquake. Ibn al-Qalawun provides a more general account, mentioning the damage caused by the earthquake in the city of Cairo. Ibn al-Qalasah provides a more detailed account of the damage caused by the earthquake in the city of Alexandria. The earthquake of 1304 is described in detail by Ibn al-Qalawun, who provides a comprehensive account of the damage caused by the earthquake. Ibn Tufayl provides a more general account, mentioning the damage caused by the earthquake in the city of Cairo. Ibn al-Qalasah provides a more detailed account of the damage caused by the earthquake in the city of Alexandria.

Al-Nawawi (Nihayat al-arab, fol.66-67) also records:

"The effects of the earthquake were disastrous at Safad, too; one side of the citadel collapsed. At Acre, the sea flooded the shore, covering the land of Acre as far as the Duyan tower, which stands in the sea — and the distance is considerable. [At Duyan] objects were found which the people of Acre had thrown into the sea during the panic caused by the Muslim siege of the city; some people wanted to retrieve them, but a wave as high as a mountain swept them away and they were drowned. The sea came almost as far as Tall al-Fudul."

1303
ذكرت هذه الزيارة في عيد آذار على أنها وقعت في مكان الأثري وطريق الممر بالقرب من تركمانيا، حيث كانت هناك معركة شهيرة بين الآب والروس في الحرب العثمانية-روسية الثانية. بعد انتهاء المعركة، عاد إلى النزاعات من قبل الدولة العثمانية، حتى استعادها الأتراك.

The anonymous author of Tarikh (in Zettersteine, Beitrite, pp. 108-9) recorded:

"At dawn on Thursday 23 Dhu-T-Taif, there was a tremendous earthquake at old and new Cairo and throughout the Egyptian provinces. It was so powerful that it reduced town walls to ruins, split open mountains, reduced buildings to ruins, split open rocks, and opened up springs of water. The earth shook under one's feet, houses swayed about their inhabitants, walls and pillars cracked, and cries of terror resounded everywhere. Women fled into the streets unveiled, and since people were convinced that the time had come for the death of the living and the resurrection of the dead, they prayed to the God of Heaven. God showed his clemency by halting the catastrophe, which would otherwise have obliterated everything on the face of the earth; this was a sign of the benevolence of God towards dwellers on his earth. So writes the humble servant of God, the author of this chronicle. At that time I was on the coast of Mina. At dawn we felt thunder beneath us; it was the earth shaking. I looked towards the mountains in the East, and saw rocks falling to right and left. I looked towards the Nile, and saw the water's part, revealing the river bed before coming to the surface. In the city of Mina, the mosque collapsed, as did houses and other buildings."
Here is the text of al-Ayni (Iqd al-jama'an, IV, pp 260-5):

"Baybars has recorded as follows in his history: in that year [792], in the early morning of Thursday 23 of the month of Dhu'l-Hijja, there was a terrible earthquake in old and new Cairo and in the other provinces of Egypt, and especially at the port of Alexandria. The earthquake was so intense that walls collapsed, mountains split open, buildings were reduced to ruins, and water burst violently forth from cracks in the ground. The earth violently shook those who were on it, houses swayed around their inhabitants, walls and pilasters cracked and shuddered everywhere at the port of Alexandria. Women and children fainted, and since people thought the moment of death had come for the living and of resurrection for the dead, they prayed to the Lord of Heaven that what they feared should not take place. Then his pity reached them, and his mercy saved them, for he calmed the earthquake and reduced its terrible power; for it had lasted for a third of an hour longer, not a single house would have been left on the earth, nor would a single wall have remained standing. Thus the decrease in the extent of the earthquake and the reduction in the damage it caused was a sign of the grace of God towards his servants and of his mercy on the inhabitants of his earth. The earthquake affected the Nile and the sea, causing waves in both. They were stirred up with extreme violence and the effects of that were greatest at Alexandria and in western regions; in fact, the towers and walls were largely destroyed in the port, and the earthquake also destroyed a large part of the lighthouse. The sea rose and floated vessels, the water soaked the laundresses' stuffs, sank the sailors' boats, and broke the moorings of the Frankish ships, throwing most of them against the walls and rocks.

When the inhabitants of the port saw with their own eyes that the waves were in a fury, the lighthouse had been destroyed, the town walls and minarets had collapsed, pieces of stone from walls were scattered around, and the massive foundations of buildings were about to collapse, they rushed out in flight to Bab Sidra [the Gate of the Locus, one of the principal gates, on the south side]; and when at last God calmed the earthquake shocks and caused the shaking to cease, people returned to their own dwellings and made their way back to their own homes.

News arrived continuously: the said earthquake produced violent effects in western regions and in the islands along the Frankish routes, and the earthquake also took place at the same time on the same day in the lands of Karak and Shawkab and Sawad and in the areas round about.

They say that a merchant who sold fermented milk in the shops of Cairo was in his shop when it collapsed on top of him during the earthquake, so that people thought he was dead; but he remained under the ruins for three days and three nights, and when the earth was cleared away, he was found safe and sound, and was brought out alive and unharmed: for the wood in the building had formed a lattice above him, which bore the weight of the bricks for it, as what is more, a jug of milk in his shop was undamaged, and he lived on the milk until the rubble was removed.

Part of the Umayyad mosque (in Damascus) collapsed, and rebuilding work was begun later on. People were in a turmoil of fear and fright for days, and moved from one place to another, because they thought the earthquake would start again. This happened in the summer, and after the earthquake came the spinn (a very hot, dry wind from the desert), which dries up and burns one's face when it blows, but in spite of that, only a few people were killed in Cairo, Egypt, and the port of Alexandria.

The sea rose and floated vessels, the water soaked the laundresses' stuffs, sank the sailors' boats, and broke the moorings of the Frankish ships, throwing most of them against the walls and rocks. People rushed to get them back, but the sea returned and drowned everyone of them.

The author of the Nazha (Digestion) has recounted: we have already mentioned the care devoted to the construction of the new citadel, and how its decoration was a cause of great pride; celebrations began on the fifth day of Ramadán and ended in the last ten days of the month, and in spite of the supervision to which they were subjected, honourable women lost their reputation, showing no fear of God, and this went on until the beginning of the month of Shawaan, when reprehensible deeds and indecent acts spread amongst the population, and for each tower people began to bring prohibited things, displaying sinful conduct; and in this situation women kept in confinement were compromised, and those amongst honest people who feared dishonour were publicly dishonoured, and so there were no models of illustrious households, notables and others who did not come out of their homes in the company of young slaves, servants or porters, and their minds assumed that anything which amused or excited them was acceptable, to the extent that they rejected decency and took pleasure in shameful acts.
So God made their hearts blind, first by his decree and then by his order, until on Thursday 23 of the month of Dhu 'l-Hijja, towards the hour of morning prayer, he sent a terrible earthquake against them: the earth shook to its foundations, walls were fell to shake and rattle, roofs did likewise, and the earth pulled aside anyone who was walking, causing him to leave his path, and it knocked down everything it disliked. Then it was said that the sky was shaking over the earth, and those who were on foot fell in terror down another alley, only to find there even greater shaking and rattling than in the alley they had just left. Young women came out with legs uncovered, without picking up anything to cover themselves in their clothing, and the same was true of young girls and children. Beggars came out of the mosques and zawiyah (the houses of religious confraternities), and many women miscarried. In the sea, the wind whipped up violent waves which broke against another side, and so the sea rose up and crashed down on boats by the shore, carrying them on the wind for an arrow-shot, and then, when the sea returned to its normal state, the boats were left on dry land with broken masts and rigging, and in the same way, the wind pulled huts at sea out of the water and threw them on to dry land. Many dignitaries erected tents in open spaces, bringing out the women of the family and taking them there, and similarly, many people went out towards Bulaq (a small port on the Nile near Cairo), the island of Rawda and other islands. In the morning, the city found itself in such a state that a close look would not have revealed a single house intact, for either a wall had been destroyed, or one side had collapsed, or the whole structure was undermined, the gutters on houses had been broken into pieces, and all that remained was a pile of dust and bricks in front of houses. Then people devoted themselves to deep prayer in all the mosques, great and small, during the day and night of Friday, staying up night and day until Friday prayers to petition the Almighty and implore his mercy.

Then news arrived from the western region that a village called Sukhna had been completely destroyed, so that not a single wall remained standing, and the whole place had been reduced to a heap of rubble. Much the same had happened to two other villages, and this had also occurred in the eastern district.

On the orders of the sultan, Emir Salam successfully prevented the collapse of the Amr mosque in Cairo, and doing so cost him a great deal of money. Emir Rakan al-Din Baybars al-Jashankir undertook the rebuilding of the al-Hakim bi-amir Allah mosque, where a large wall was destroyed and the minaret collapsed. When he surveyed the damage, he said to the superintendent and the employees: compare this with what we have done, and their situation will show them what has been done. And Emir Salam assured them of their money for rebuilding work, for he was indeed a provident man. Then the men suitably embellished it, arranged for worshippers to have extra space. He restored and enlarged the minaret, bequeathing advantageous waqf (trust) for the mosque, and in addition to that he assigned it to a teacher, an expert in Islamic law, and a legal alim, and setting up a waqf which would cover the total cost. When the minaret was demolished, they found in one of the supporting walls of the pulpit a hand with a hand, wrapped in paper, and on it was written a text which no one could decipher. The pulpit was palm-sized, but they could not decipher the writing.

Emir Sayf al-Din Salam undertook the rebuilding and restoration of the al-Azhar mosque, and also the repair of the minaret and what was left of the façade. He carried out all possible restoration work, reinforcing the mosques and painting it white, at very considerable cost, and Shams al-Din Sunjir also shouldered the burden of joining him in the restoration of the al-Azhar mosque.

On the other hand, the Sahil mosque, situated outside Bab Zuwayla (one of the gates of Cairo), was rebuilt at public expense, and the task was undertaken by Emir Alam al-Din Sunjir. Money for rebuilding the minaret at the Manṣūriyya madrasa (built in 1383)
getting to cover their faces in their terror; everything was plunged into chaos and confusion. Houses crumbled, walls split open, the minarets of mosques and madrasas collapsed; pregnant women gave birth prematurely. Then a storm wind blew up. The Nile overflowed its banks, taking boats that lay by the river bank and hurling them into the distance like arrows shot from a bow, and then flowed back into its bed, leaving them stranded on dry land, with their masts broken. Then the wind took the boats which were on the river and drew them to the shore. (Zeus was angry at the sea.) Boats were torn out of the ground, rocks split open, and springs of water erupted out of the ground. People thought that the hour of judgement had come, but the perversity of God halted the earthquake: if that had not been so, there would have been no trace of the city left in three hours. People lost a great deal of property as all fled in panic, and things fell in their homes: thieves took advantage of this and looted as much as they liked. The population poured out of the city; many spent the night outside Bah al-Bahr (one of the city gates), settling up a camp in the suburb of Balqas on the island of Bawda. Not a single house in new Cairo (Al-Qahira) was spared, those which did not collapse were badly damaged. All the roof gutters were in pieces, and all that was left of houses was a heap of bricks. Many people spent Friday night in mosques great and small, praying until the next day came. From the west came news that all the houses in the town of Salhin had collapsed; not a wall was left standing, and there were heaps of rubble everywhere. Two villages in the east were also completely destroyed. Then news came from Alexandria: there, the lighthouse had split open and about forty melons had fallen from the top. The sea had risen up, with waves which reached as far as Bah al-Bahr (one of the gates of Alexandria), pushing the boats of the Frankish merchants to dry land. The city walls also collapsed on one side, and there were many victims. In a subsequent letter the foreign correspondent (a German journalist) described the damage in great detail: "This city walls also collapsed on one side, and there were many victims."
ancient monuments. The city of Qas was destroyed. A man who was milking a cow was lifted up into the air by the earthquake along with the cow and the pail of milk. When the earthquake subsided, the man found himself a long way away, but not a drop of milk had splashed from the pail. News from Al-Bahayra told that not a single house was left standing at Damoah Al-Aswah. Of the important buildings destroyed in Cairo, one was the Amr Ibn Al-As Mosque in old Cairo (Mina); Emir Ballur undertook its reconstruction. Most of the walls of the Al-Hakim mosque in new Cairo (Al-Qahira) were destroyed, together with its two minarets; rebuilding work at this mosque was entrusted to Emir Beybars Al-Shahi. The Al-Hakim mosque was also destroyed, and Ballur and Emir Al-Saqqar Al-Awar were in charge of rebuilding work. The Salih mosque outside Bab Zuwayla (one of the city gates) was also destroyed, and was rebuilt at the expense of the sultan, under the direction of Emir Al-Qam Al-Din Sinjari. The minaret of the Masrurin mosque was destroyed, and rebuilding work was carried out using wood and funds from the madrasa, under the direction of Sayf Al-Din Al-Kharadsh Al-Zarrag. The minaret of the Fakhiyin mosque also collapsed. Then the damage at Alexandria was dealt with: 46 buttresses and seventeen towers were rebuilt there.

Furthermore, al-Maqrizi records in another work (al-Khitab, II, p.278):
“Almost all the buttresses collapsed; the tops of two minarets were destroyed, and ceilings and walls suffered massive damage. The task of directing restoration work was entrusted to Emir Rukn Al-Din Beybars. In the following summer, Ali Pasha of Egypt and Alexandria, thereby producing a substantial annual income. Once more the mosque had its courses in jurisprudence, organised according to the four schools, as well as a course in the Sunna [the emir] also endowed the mosque with a teacher for each course, and many students flocked to them. [...]”

During restoration work, an extraordinary thing happened. I was told about this event in Mecca, in the year 787, by my master Abu 'Abdallah Muhammad Ibn Darghan Shukr Al-Maqrizi, known as Al-Mu'ammur, who had been told by someone who observed the reconstruction work on the Al-Hakim mosque, that a chest was found in a niche in the minaret facing Bab al-Futuh. The foreman opened it and found inside, wrapped in a piece of cloth, a human hand with some writing on it which no one could decipher.

al-Maqrizi (al-safaq, 1, 3, pp. 944-5) subsequently adds:
“News from Safad reported that one side of the citadel had collapsed on the day of the earthquake. At Acre, the sea withdrew about two parasangs [12.6 km], revealing many great objects and commercial goods on the sea bed. The walls of the Umayyad mosque in Damascus cracked. The shock lasted for five dirhams, but the earth continued shaking for twenty days. Countless victims were buried in the rubble. It was summer, and after the earthquake, the very hot samun wind blew for days. In old and new Cairo people set about rebuilding what had been destroyed; the price of building materials rose in dizzy heights because of the demand. Anyone who saw Cairo would have thought that the enemy had come that way and razed it to the ground. It was a sign to the faithful from God; they all abandoned the excesses of the previous days. Many abandoned sin, for fear of keeping away from the hands of the French and other places struck by the earthquake.”

Inscriptions:
There are three inscriptions recording the rebuilding of a minaret in Cairo which had collapsed in the earthquake. They have been thoroughly studied by Ciccarelli (1996).

1. Madrasa of Qalawun, Cairo. Date 703/1303-1304 (RCEA, XII, 1944, p.243, no.5160).
"In the name of Allah the Most Merciful. Our lord, the sultan, the victorious king, victorious in the world and in religion, Muhammad b. Qalawun as-Salih, ordered [?] the reconstruction [?] of this minaret, at the time of the phenomenon and the collapse [?] of its upper parts, in the months of the year 703 of the prophetic Hegira."

2. Madrasa of Qalawun, Cairo. Date 703/1303-1304 (RCEA, XII, 1944, p.243, no.5161).
"In the name of Allah the Most Merciful. Our lord, the sultan, the victorious king, victorious in the world and in religion, Muhammad b. Qalawun as-Salih, ordered the reconstruction of this minaret, at the time of the phenomenon of the earthquake and the collapse of its upper parts, in the months of the year 703 of the prophetic Hegira."

3. Madrasa of Qalawun, Cairo. Date 703/1303-1304 (RCEA, XII, 1944, p.243, no.5161).
"In the name of Allah the Most Merciful. Our lord, the sultan, the victorious king, victorious in the world and in religion, Muhammad b. Qalawun as-Salih, ordered the reconstruction of this minaret, at the time of the phenomenon of the earthquake and the collapse of its upper parts, in the months of the year 703 of the prophetic Hegira."

356 2023-11-29 11:24:37
There is no mention of the earthquake, however, in other reliable contemporary sources, such as the Annales Veronenses De Romano (1258-1306), the Notae eremonenses (1328-1409) and the Cronica Iloram de la Scala (823-1341), all of which were published by Cipolla in the collection devoted to Antiche cronache veneziane (1899).

The event does appear in the Veronese historiographical tradition. In the 15th century Cronica di Verona by Pier Zavata and the anonymous 14th century Cronica di Verona (Biblioteca Civica, Verona, Manoscritti, 786) it is recorded in very similar terms to those found in the above-mentioned 14th century source. To the bare mention of an earthquake found in the contemporary source, the Veronese historian Dalla Corte (1584) was the first to add the suggestion that many houses collapsed.

Another item of information was added by the 18th-century scholar Biancolini (1749), according to whom another shock was felt at Verona on 31 December 1334. The picture of effects delineated by Dalla Corte and Biancolini became part of the seismological tradition through Goiran (1880) and Bottoni (1886), and penetrated as far as Baratta's catalogue (1901).

In order to improve our state of knowledge, we carried out an archival research, but without result. Since the documents of the commune of Verona and of other Veneto towns are largely lost, we also examined church documents (Archivio di Stato, Biblioteca Civica and Biblioteca Capitoline, Verona, and Archivio di Stato, Venezia).

The fact that chronicle sources for all the rest of the Veneto area are silent on the matter, suggests that the earthquake was both moderate and localised. It also has to be remembered that there was famine and an epidemic in 1334, which may have caused any less than serious effects of the earthquake to be pushed into the background.

### 1334

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### 1339 January 13 - February 11

**Tripoli [Lebanon]**

In the month of Raabj in the year of the Hijra 739, which corresponds to the period 13 January – 11 February 1339, Tripoli (present-day Tarabulus, in Lebanon) was struck by a strong earthquake which killed 60 people.

The principal source for this earthquake is the contemporary Yemeni Arab historian al-Yafi (1300-1367), who records:

"In the month of Raabj sixty people died in an earthquake at Tripoli in Syria."

The report in Ibn al-Ma'mud (1622-1789), a late source, is almost identical:

"There was an earthquake at Tripoli in Syria, which killed 60 people."

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And the earth [...] trembles, as it is just that it should, ready to devour those who commit similar deeds.

There is what seems to be another reference to these events in a document by the patriarch Callistus I, dating to the autumn of 1350. In it, he lists amongst the signs of divine wrath:

[... the terrible earthquakes and movements of the earth which shake it to its foundations, and the sea-waves which drag the angry sea beyond its limits].

[...] one of the signs averted by seismograph, i.e., the deflection of seismographs, and one of the phenomena of earthquakes, phrenological changes and tremors. Phrenological changes in the form and in the phrenological organs of the brain.

Tsunami

Set out below are selected passages from the sources in which the effects of the tsunami are mentioned. Theophrastus has written:

"At the same time, the waters of the sea overflowed, flooding the land over a long stretch where it was flat and suitable for horse-riding, to a depth of two stades (about 1.8 km). At times the sea dragged away light vessels, dragging them inland from the ports and coastlines where they were lying. And it flooded a great deal of land, overwhelming men, flocks and beasts of burden. The sea-wave returned twice to its usual and established shores after a considerable time, and mud and dead fish were to be seen everywhere."

The Chronicle of Bologna, Biblioteca Universitaria, manuscript 3852 (published in Schreiner 1975, no.93), provides a specific geographical detail about the tsunami at fol.356v:

"In the year 6852 on [10] October [1843], there was a great earthquake, and the sea rose up as far as Staurus."

Staurus (modern Beylerbey) is now situated within the metropolitan area of Istanbul to the north of Chrysocramus (daxin 1964, p.466).

At fol.147v in Istanbuloucher Hagi Triada 72 (published in Schreiner 1975, no.87.1), we find further chronographical information in the form of details which seem to suggest that the tsunami began at the same time as the earthquake of the evening of 10 October:

"And that same evening [10 October 1343], at the first hour of the night, there was another great and terrifying earthquake, with the result that the sea, too, was disturbed and overflowed its limits. And the sea-wave caused ships to be thrown violently [laxa] over a large area. And when the sea returned to its place, they were left high and dry."

And the earth [...] trembles, as it is just that it should, ready to devour those who commit similar deeds.

The Nolosio in Istanbul manuscript Chalki Panagia 78, fol.37v (published in Athenagoras 1935, p.176), contains this description:

"And also during the night of [18] October 1343 the earthquake struck again more powerfully, and the sea rose up towards the walls of the height of a man, or of two or three men. In both a westerly and easterly direction on the following day, 20 of the month [the sea] was agitated from the ninth to the eleventh hour."

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And the earth [...] trembles, as it is just that it should, ready to devour those who commit similar deeds.
trict: the fortresses of Bayra (present-day Birecik), Ayntab (present-day Gaziantep) and Rawandan, all of which are in Turkey, and that of Muslimi-ya, in Syria, were largely reduced to ruins. Further north, there was also massive destruction and widespread collapses at the fortress of Bahana (present-day Besni in Turkey). Aleppo (Alalah) also suffered very serious destruction: 38 towers collapsed at its citadel and many houses, mosques and shrines were destroyed. The town walls were also badly damaged. In relation to the worst affected area, it is recorded that the places concerned were abandoned by their inhabitants for more than a month. The felt area stretched as far east as Mardin, and to the south, the earthquake was slightly felt by a few people at Damascas. The report by some sources that it was strongly felt in Syria and Egypt is in all probability to be explained as a conflation of two quite separate seismic events, which have in common only the year in which they occurred (see also entry (178)).

The earthquake is recorded briefly by the contemporary Syrian Arab historian Ibn al-Wardi (990-1349):

"In that year, towards the middle of Shebân, there was a tremendous earthquake which caused a great deal of destruction in Alappo and its province, especially at Manbij, where the fine fortress of Rawandan was damaged."

The reliable contemporary Damascene historian Ibn Kathir (1300-1373) provides some extra items of information, reporting in particular that the earthquake was slightly felt at Damascus:

"On Saturday 15 [indeed 16] Shebân, there was an earthquake at Damascus, of which many were unaware, because it was so weak, thanks be to God. Then there came news that there had been massive [earthquake] damage in the province of Aleppo: some towers had collapsed at the citadel, as had many houses and mosques, and the town walls. Many citadels in the surrounding area were also destroyed. It was said that little or nothing remained of the fortress at the town of Manbij and that all those who lived there had died in the ruins. God have mercy on them."

The contemporary Syrian Arab historian Ibn Habib (1310-1377) is one of the sources for this earthquake who extends the damage zone to Egypt as well:

"In the month of Sha‘bān in this year (744 of the Hegira), there was a violent earthquake which brought trouble, caused panic, affected the whole country and worried the inhabitants, putting them in a state of agitation and destroying buildings, and that is how it affected Egypt and Syria."

Rozi Semburatyn, an eyewitness, recorded that the earthquake caused the destruction of homes and bridges across the area. The event was described as a "screaming sound" and "earthquakes that made people cry and run."

Al-Maqri (1364-1424) is a reliable source, and well-informed about the earthquake:

"In the month of Rajab, this message came from Aleppo: On Saturday 15 Sha‘bān, thunder and lightning heralded a tremendous, fear-inspiring earthquake felt up to half a mile from Aleppo. Thirty-two towers in the citadel of Aleppo were destroyed, and the fortresses of Hevra and Ayyun were completely destroyed. The town of Rawandan in the province of Aleppo was also completely destroyed."

The earthquake struck Aleppo and the surrounding area, causing much of the citadel [of Aleppo] to collapse, and spreading ruin along the northern coast at Aytab, for example, and at the fortress of the Muslims [Muslimi-ya] and that of Al-Bayra. It was said that the shock reached as far as Mardin. The first shock was followed by a second, weaker one. The earthquake inflicted a severe wound on the people of Aleppo. They went out into the countryside and camped there for days. The earthquake was most violent at the town of Manbij, which was entirely destroyed, burying most of the inhabitants in the ruins. About 5,700 men and women survived, but to God we belong and to God we return. My father was very young at the time of the earthquake, but his story is enough to tell it. The people of Aytab stayed in tents for forty days, as did the inhabitants of Aleppo and the other Syrian towns [affected by the earthquake]."

Al-Maqrizi (1364-1424) is a reliable source, and well-informed about the earthquake.
as well as houses. The fortress at Bayza was more than half destroyed, as were the fortresses of Aynat, Rawandan, that of Babasa and that of the Muslims [Mussimy]. The district of Manbij was also destroyed. The inhabitants of Aleppo fled into the countryside, setting up tents and camps, and leaving the markets closed. Every hour a terrible roar was heard. People gathered in groups, bared their heads, and with their children, Koran in hand, they began praying to God to take this catastrophe away from men. Only God knows exactly how many houses were burned in the ruins. For the work of reconstruction, the assistance of the financial authorities was sought.

In the year 744 (of the Hegira), there was a violent earthquake in Egypt and Syria and people left for the desert. And the earthquakes continued. It is said (this is a reference to Sura 99 of the Koran, entitled 'The Earthquake'): the earth has brought to bear its earthquake upon us and each one was there asked what ailed her. I said: issue forth into the desert, your earth has shown her strength.

Finally, al-Suyuti, a reliable source who lived from 1445 to 1505, states:
"There was a violent earthquake in Egypt and Syria. People fled out of the towns into the countryside. The first shock was followed by other shocks."

In our opinion the effects in Egypt were the result of a separate earthquake (see the event listed at the date 1349 May 26 – 1344 May 14).

1344 November 6 Sea of Marmara (Turkey)


Fig. 79 Constantine (Istanbul): on 19 May 1346, about two years after the earthquake of 6 November 1344, the west side of the dome of the church of St. Sophia collapsed (from Antoniadis 1907). The date of this collapse subsequently became attached to the literature to an (obviously false) earthquake.
palazzi e torri in Ferrara e nelle ville casalensi, fondi, pise e altri edifici. Ciò s'intese secondo li avvisi che furono mandati da diversi parti del mondo, del mese di gior
che tiro, qual terremoto durò poco manco di tre ore prima che la terra si fermasse, il che pose grandissimo spavento nel cuore di ciaschedun creature.
The description of the event provided by Filippo Rodi, a 16th century chronicler (Biblioteca Comunale Artioli, Ferrara, Manuscripts, c.l, 645), not only repeats much of the evidence from the earlier chronicle, but also adds the detail that many people died in the ruins. This may perhaps be due to the fact that Rodi was sinistro generale for the entire Este dominions, and therefore had access to the rich documentary material in the Este state archives, part of which is no longer available.
The shock of 22 February is also recorded in the Chronicon Regiense, compiled by another contemporary writer, the notary Sagagino Levalosse: the description is rather confused, but the reference to evening is a detail which suggests that the earthquake was also felt at Reggio Emilia. Levalosse records:
"On 22 February in 1346, there was a great earthquake throughout the world, and it happened late in the day, causing the destruction of many towers and houses". MCCCCLVI die XXI febrarii factus est terramotus maximus per universum orbem, et fuit in fine, ex quo maullis turris, et domus disiure sui.

Keeping in mind the way writers expressed themselves in these days, we can use this piece of information — which was taken up in later centuries by chroniclers and historians — to establish one important characteristic of the 1346 earthquake: namely, that it affected a very large area. In La città di Monza (ed. Mezzotti, 1838-40, p.68), an anonymous local chronicle of Monza covering twelve centuries, we read:
"Monza 1346. A very violent earthquake occurred on 22 February". Monza 1346. Terremoto assai gagliardo avvenuto al 22 di febbraio.
The exact chronology of this seismic sequence is something of a puzzle: were there various shocks or only one? Giovanni da Bazzano provides the most chronological detail by specifying Wednesday, 8 February, and 28 February was indeed a Wednesday. Those other sources which give the date as 22 February do not tell us the day of the week. 22 February was in fact also a Wednesday, but that may be a coincidence. There are also partial discrepancies about the time of day when the shocks occurred. Giovanni da Bazzano says "about the time of one's first sleep", while Sagagino Levalosse uses the vague expression "late in the day"; and when Giovanni da Marano says "at dinner time", he may be referring to the evening meal. All these indications suggest the late evening or night time, but though they agree to some extent, they do not completely coincide. In view of the fact that Giovanni da Bazzano and the other sources have in common only the day of the week, but not the date or the exact hour, we think that there were two earthquake tremors: one on 8 and the other on 22 February 1346, and that they may have been part of a single, more complex seismic sequence.

As for the Lombard area in general, the information provided by Corio's Storia di Milano (1603) is too vague to allow us to establish whether the city of Milan suffered earthquake damage or not. There are a great many references to the earthquake in northern Italian chronicles. In many cases, however, while works we have examined agree in recognising the earthquake as a major event, they do not tell us what places were affected. Conventional expressions are often found:
"almost throughout the universe, the earth was shaken by a huge earthquake...", "terrible earthquakes in Italy and elsewhere", "there was a very great earthquake throughout the world..." etc. Expressions of this kind are repeated by various chroniclers and historians from the 14th century onwards, and also occur in late local historiography.
There is a short Notula in the Andreas ma. Monastery of Zooskos Pigi 88 (in Scheunert 1977, p.613, no.49, previously published in Lamos 1919, p.144, no.75), which may derive from the above chronicle (as is suggested by the wrong dating to 6989: Scheunert 1977, p.218), or more likely, from a more extensive common source: "Then (after a devastating typhoon on 6 August 6989 = 1385) frequent terrible earthquakes occurred, and the rest of the city (of Mitylene) collapsed, falling on most of the inhabitants".

The story of how Francesco Guttiello's son was saved is not only related in Pietro Gazzara's chronicle, but also mentioned in the diary of a Spanish ambassador, Bay Gonzales de Claviio, who stopped at Mitylene at the beginning of October 1403, during a long journey which took him from Cadiz (in Spain) to the court of Tannerk at Samarkand (in present-day Uzbekistan). Claviio writes:

"The inhabitants of the island are Greek, and were once subject to the empire of Constantinople, but now in 1403 they are ruled by a Genovese called messer Giovanni Guttiello, whose father married a daughter of the emperor. We heard a extraordinary story about the present lord of the island, according to which, about twenty years ago, while he and his father, mother and two brothers were sleeping in a castle building, the island was shaken by an earthquake. The building collapsed and everyone was killed, except for Giovanni, who was protected by his cradle. Amazingly, he was found the next day, safe and sound, in a vineyard below the castle, at the foot of a very high clifft".

é la gente desta isla es Grie, és solian ser del Imperio de Constantinopla, è agora es de un Genovés que ha nombré Juan de Castelar, è su padre era canado con una filha del Emperador de Constantinopla, e de que [despues] agora es Señor desta isla
This earthquake is unknown to Italian seismic catalogues. On 17 March 1386, Naples was struck by an earthquake described as "very great" (magnus). In our present state of knowledge, the only available source is the contemporary Chronicon Siculum, which was written in the second half of the 14th century by an anonymous chronicler who was probably Neapolitan. The source does not directly state what damage was caused, but provides a qualitative assessment (magnus) of the event. In doing so it is following a common practice amongst medieval chroniclers. Such adjectives are all the more significant in texts as terse as those of medieval chronicles. By making comparisons as to the use of these terms in documentary or epigraphic texts, it has often transpired that an earthquake described as magnus was one which caused damage. We therefore think it likely that there was damage at Naples. The relevant text of the Chronicon Siculum (p.64) reads as follows: "In the same year [1386], in the same month [March], on 17 of that month, [...] there was a very great earthquake at the city of Naples." Eodem anno, eodem mense XVII eiusdem mensis [...] fuit maximus terremotus in civitate Neapoli.

### 1386 03 17 Naples [southern Italy]

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<td>40.51</td>
<td>14.36</td>
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### 1386 July 17 Cairo [Egypt]

| Sources 1 | al-Maqrizi, al-Sulak, HK 2, p.546, Ibn Hajar, Ishaq, I, p.331; al-Jawhari, Nastash, I, p.334 |
| Sources 2 | al-Suyuti, Kashf, p.56, al-Suyuti, Humayun, II, p.307 |
| Sources 3 | Tahiri (1979) |
| Catalogue | "Ambrus sowie al. (1994) |

On 17 July 1386, a slight earthquake shock was felt in Cairo. Al Maqrizi (1364-1442) records it amongst the events of Jumada II in 788 (a 2 February 1386 - 21 January 1387): "On Tuesday 18 at the fourth hour, new Cairo shook in a slight earthquake shock."

On 18 June 1387, the treatise D alla tercium fuerint in Jesus terrae molent. This earthquake is listed in the Kepalic catalogue (1991-92) and recorded in the parametric catalogue of Shobelin et al. (1974), but studies are still at a preliminary stage. The review carried out by Albin (2004) considers the single source currently known to record it. All our information about this and another four earthquakes felt at Jadera (present-day Zadar) in the late 14th and early 15th century (see entries (234), (250), (234), (261)) in this catalogue come from the sole contemporary author to record them, namely Paolo de Paolo. He lived at Zadar and wrote a chronicle recording events at the city between 1371 and 1407. However, no manuscript copies or critical editions of Paolo de Paolo's work survive, and we have is a 1668 edition published by Giovanni Lucio, and we do not know whether it is complete and/or revised. In Thomas Traister's republished edition of 1758, Paolo de Paolo's text is shorter than in Lucio's 1668 edition, so it is difficult to assess this "lost" source. On 5 March 1387, between 5:00 and 6:00 UT (during the third hour), in canonical time there was an earthquake at Zadar, described as "great" (magnus). Since Paolo de Paolo does not provide further information about effects, any intensity estimate for this earthquake is based solely on the term "great". Paolo de Paolo's text, as published by Lucio (1668, p.424) is the following: "In the same year, on 5 March, at the third hour, there was a great earthquake at Zadar."

### 1387 July 17 Zadar

In the month of Jumada II, the earth shook slightly.

Finally, the report is also taken up by al-Suyuti (1445-1505) in two different works: in Humayun (II, p.307), he writes: "in the year 788, in the month of Jumada II, the earth was shaken by a slight earthquake."

And in Kashf (66): "On 18 Jumada II, there was a slight earthquake."

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1386-1387