

**Catalogue of Tsunamis in the Eastern Mediterranean  
from Antiquity to Present Times**

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**ABSTRACT**

This paper presents a systematic compilation of all data pertaining to tsunamis observed or recorded in the Eastern Mediterranean from antiquity to present times (1500 b.C. to 1980 a.D.). The first catalogue has been published by Prof. N.N. Ambraseys in the "Bulletin of the Seismological Society of America" (Vol. 52, No 4, October 1962) and this has formed the skeleton of this paper. All of the available information has been compiled from historical accounts, newspaper archives, other reports, and recent mareographic data. The earthquake data have been extracted from the Seismological Institute of Athens and relative bibliography. Most of the events listed are associated with earthquakes, but some are the result of volcanic activity. Many of the tsunamis have been generated along the coast of Greece, Albania, South Yugoslavia, Turkey, Syria and Israel. There is little doubt that the large conjugate fault system along the west coast of Greece, Crete and Rodos till the south coast of Turkey is often responsible for the earthquakes in this area and most of tsunamis in the Eastern Mediterranean.

## RIASSUNTO

In questo lavoro è stata fatta una raccolta sistematica di tutti i dati relativi agli tsunamis osservati o registrati nel Mediterraneo orientale dall'antichità ad oggi (1500 a.C. al 1980 d.C.). Il primo catalogo è stato pubblicato dal Prof. N.N. Ambraseys nel « Bollettino della Società Americana » (Vol. 52, n. 4, ottobre 1962), sulla ossatura di quest'ultimo è stato costruito l'attuale lavoro. Sono state raccolte tutte le informazioni utili da resoconti storici, archivi di giornali, altre notizie, e dati mareografici recenti. I dati relativi ai terremoti sono stati estratti da quelli forniti dall'Istituto Sismologico di Atene con la relativa bibliografia. La maggior parte degli eventi in elenco, è associata a terremoti, mentre alcuni sono il risultato di attività vulcanica. Molti degli tsunamis hanno avuto origine lungo le coste della Grecia, Albania, Jugoslavia meridionale, Turchia, Siria ed Israele. Si ipotizza che il grande sistema di faglie coniugate, la costa occidentale della Grecia, Creta e Rodi fino alla costa meridionale della Turchia, sia spesso responsabile dei terremoti in questa zona e della maggior parte degli tsunamis nel Mediterraneo orientale.

## 1. INTRODUCTION

between 31°-44° N and 18°-36° E excluding Black Sea and the Italian coasts of the Adriatic Sea is the object of the present paper.

The first catalogue has published by N. Ambraseys in "Bulletin of the Seismological Society of America" (Vol. 52, No. 4, p.p. 895-913, October 1962) and this has formed the skeleton of this paper.

In this catalogue we have compiled and thus rendered available the mass of interesting information about seismic sea-waves which lies buried in many Greek, Byzantine, Arabic and Latin textes. As will be seen from the references, the material, both printed and manuscript, are ample. We are convinced that a systematic and scholarly investigation into so many of the manuscripts and textes which we were unqualified to render and which we left out, could easily double the entries and clarify many points in our catalogue.

Some feu of the Byzantine and Arabic sources we quote

have, it is true, been read in whole or in part by few authors of earthquake catalogues; but as far as we are aware, for one reason or another, practically none of the information supplied in these catalogues is absolutely correct or complete. Some authors erred in rendering Muslim or Byzantine chronologies with the result to date in their catalogues scores of events by as much as six centuries too early (Ambraseys, 1961). Others, owing to errors resulting from transcribing events and toponyms from Latin translations of Greek or Arabic texts, or owing to differences in chronology resulting thereof, repeat in their catalogues the same event two or more times, or enter non-existent events. In some instances also they treat the seismicity of a whole year for a given region collectively and enter it as one earthquake. The most critical of these errors where they affect our catalogue are pointed out in their appropriate place in the paper.

Actual harm has been done to the science of seismology by premature conclusions from fragmentary data, and particularly from data repeated from publication to publication with a constantly increasing number of inaccuracies with no reference to the original source of information. Under such circumstances one can hardly be unjust to those who maintain that the observations of seismic phenomena of old date are scientifically inadequate.

In preparing our catalogue we were fully aware that its outcome would be more suggestive than definitive. Also we were aware of the fact that the older historical accounts of seismic phenomena rarely include much useful information other than reports of damage and casualties. These we considered worthwhile our labours.

## 2. KEY TO CATALOGUE

The catalogue is arranged in the following manner.

Dates are given in headlines in the new style (Gregorian). They are followed by the name of the region in which the seismic sea-wave was felt. This is followed by the name of cities, towns

or areas which were particularly affected. The intensity, *m*, of the wave is given in small roman numerals and it refers to Sieberg's modified intensity scale where the height of the wave on land or the distance which it flooded inland is known and is inticated as (*H*=) and (*L*=) respectively in meters. Near the geographical coordinates of the epicentre of the main earthquake shock, when known are given together with the intensity of the shock (*I*=in the modified Mercalli scale), magnitude (*M*=after Gutenberg) and the focal depth (*d*=, *s*:shallow, *n*:normal, *i*:intermediate). This is followed by the references consulted which are pertinent to the Phenomenon itself, to the accompanying earthquake, and to the information necessary for the dating of the event. Numerals outside the parentheses refer to references in the Bibliography. In the parentheses, roman numerals refer to the book (liber) and the following numbers to the chapter and line respectively of the text. *P* : refers to a standard system of pagination while *p* : indicates the page. Folio is indicated by *f*. Page references to an authority is not given when the material in that authority is arranged chronologically. Entries marked with an asterisk are doubtful events quoted mostly by modern writers, which have been included for the sake of completeness.

Place names mentioned in the original suffered many changes during historical and recent times. When these differ from those of today, the former are shown in brackets where they first occur, and the modern name is used thereafter. Modern places are spelt after Lippincott.

In what follows the headlines more information is given mainly about the events from 1500 BC to 1650 AD and some of them up to the present time. For all the other events only a bare outline is given.

With so many dates, controversial points, so many foreign names and such a multitude of references as crowd this paper; though we have done our best to be as accurate as possible, many errors must necessarily have crept in. We shall feel most grateful to those who will point these out to us.

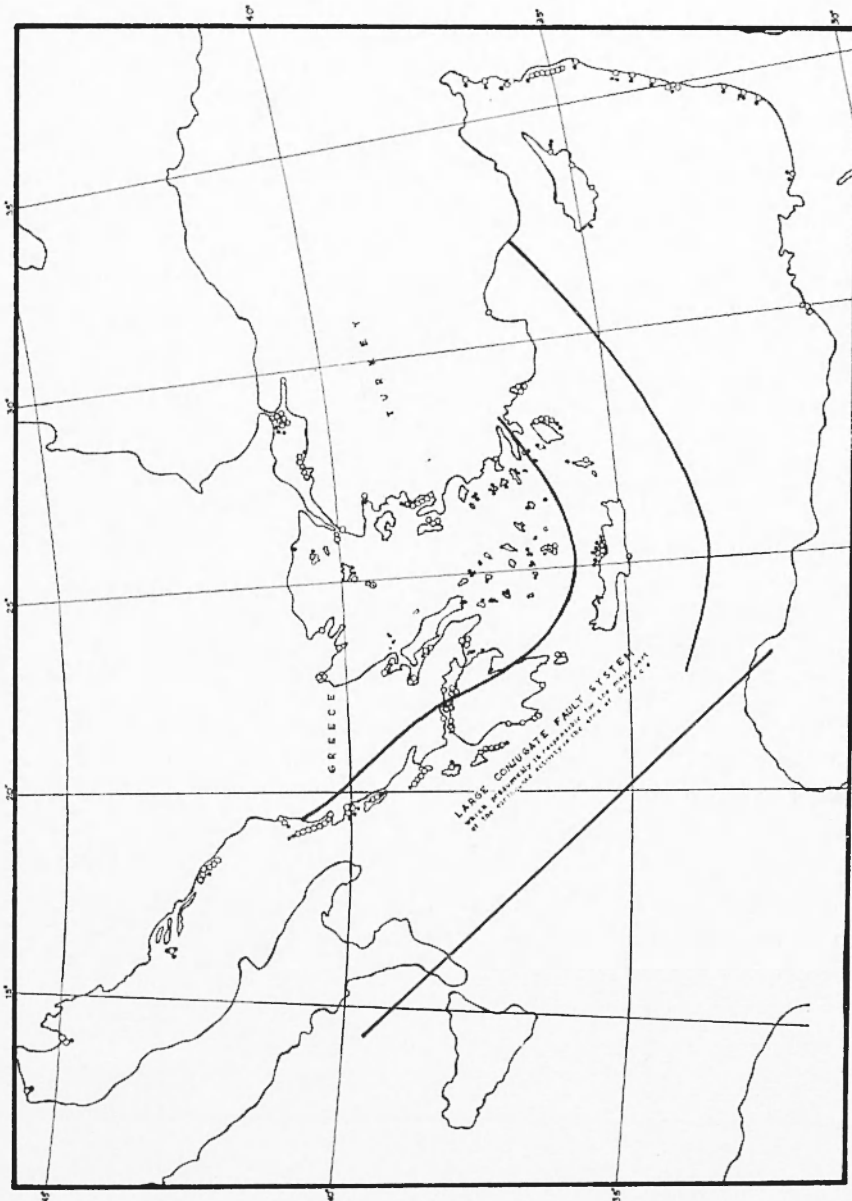


Fig. 1 - Tsunamis in the Eastern Mediterranean from 1500 BC to 1980 A.D.

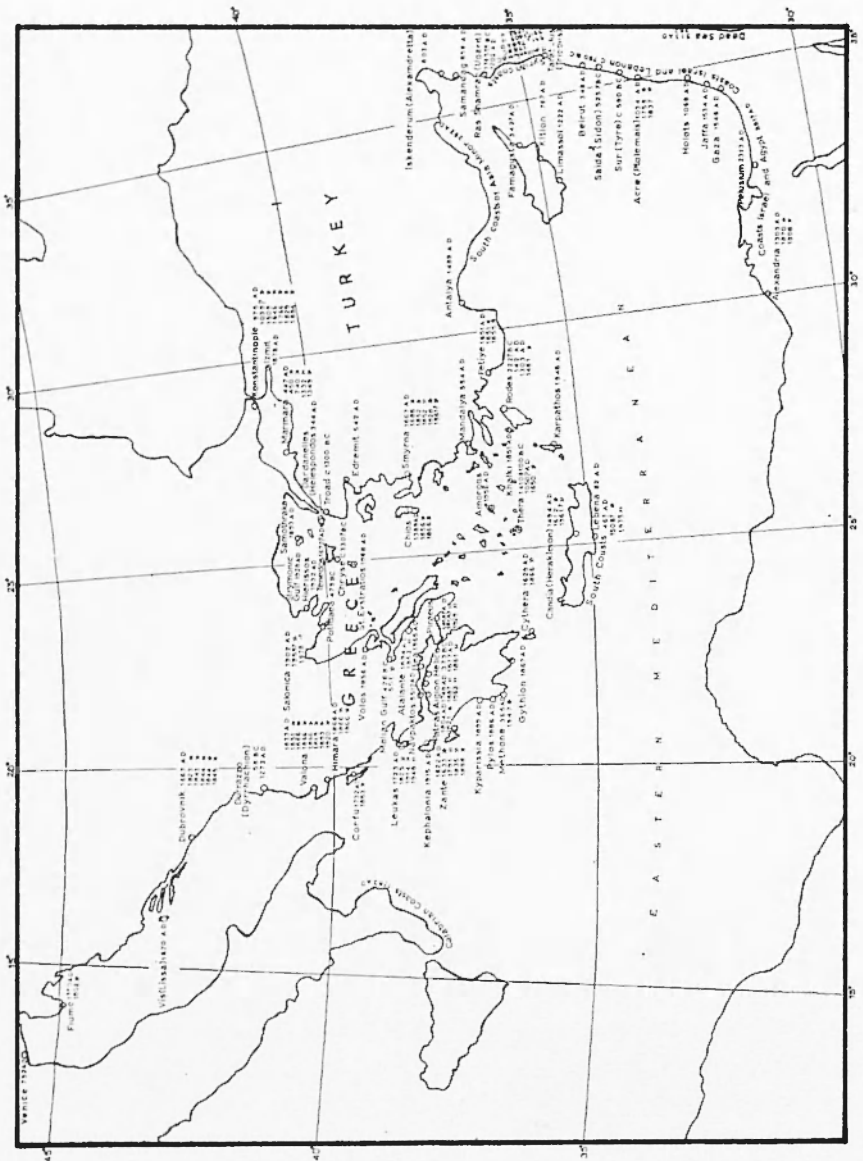


Fig. 2 - o = sources of tsunamis;  
 o = region in which the tsunamis was felt.

C A T A L O G U E

| N°  | DATE              | TSUNAMI DATA  |          |          |          | EARTHQUAKE DATA |          |                          |                       | REFERENCES          |
|-----|-------------------|---|----------|----------|----------|-----------------|----------|--------------------------|-----------------------|---------------------|
|     |                   | Area of origin<br>observation place of  | <i>m</i> | <i>H</i> | <i>L</i> | <i>M</i>        | <i>I</i> | <i>s,n,i</i><br><i>r</i> | Latitude<br>Longitude |                     |
| 1.  | II millenium B.C. | Syrian coasts   | VI       |          |          |                 | X        |                          | 36°½N—25°½E           | 13.                 |
| 2.  | 1410 ± 100        | North coast of Crete. Grecian Archipelago                                       | VI       |          |          |                 | XII      |                          |                       | 13, 23, 25, 34, 35  |
| 3.  | 1365 ± 5          | Syrian coasts. Ugarit near Minet-el-Beida                                       | VI       |          |          |                 |          |                          |                       | 13.                 |
| 4.  | c. 1300           | Ionian coasts and towns in Asia Minor, Troad                                    | V        |          |          |                 |          |                          |                       | 13.                 |
| 5.  | c. 760            | Coasts of Israel, and Lebanon   |          |          |          |                 |          |                          |                       | 13.                 |
| 6.  | c. 590            | Coasts of Lebanon. Sur (Tyre)   | VI       |          |          |                 |          |                          |                       | 13, 38.             |
| 7.  | c. 525*           | Coasts of Lebanon. Saida (Sidon)  |          |          |          |                 |          |                          |                       | 5, 6, 13, 38, 39.   |
| 8.  | 479 Winter        | Chalcidice. Isthmus of Kassandra, Potidaea                                      | III      |          |          |                 | IX       |                          | 40°¼N—23°½E           | 2, 13.              |
| 9.  | 426 Summer        | Euboean and Malian Gulfs, Phthiotian coasts, Euboean coasts, Island of Skopelos | V—       |          |          |                 | X        |                          | 38°¾N—22°¾E           | 6, 7, 13.           |
| 10. | 373 Winter        | Gulf of Corinth. Helice   | V        |          |          |                 | XI       |                          | 38°¼N—22°¼E           | 1α, 1β, 3, 5, 6, 13 |
| 11. | c. 330*           | Eastern Sporades Islands. Island of Chryse.                                     |          |          |          |                 | IX       |                          | 40°N—25°E             | 3, 13, 31, 38.      |
| 12. | 222. *            | Island of Rhodes. City of Rhodes.   |          |          |          |                 | X        |                          | 36°½N—28°E            | 3, 6, 13.           |
| 13. | 138.              | Coasts of Israel and Lebanon. Between Acre (Ptolemais) and Sur                  | IV       |          |          |                 |          |                          |                       | 6, 13, 35.          |
| 14. | 58.               | Albanian coasts. Durazzo (Dyrrhachion)  | II       |          |          |                 |          |                          |                       | 4, 13.              |
| 15. | 23 ± 3            | Egyptian coasts between Alexandria and Pelusium,                                | III      |          |          |                 | IX       |                          | 38°¼N—22°¼E           | 6, 13, 31.          |
| 16. | 46* A.D.          | South Coasts of Crete.  |          |          |          |                 | VII      |                          | 36°¼N—25°¼E           | 13, 38.             |

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|-----|---------------|---|------|--|--|--|--|--|--|--|------|---|-------------|-----------------|
| 17. | 62            | South coasts of Crete. Lebena   | III  |  |  |  |  |  |  |  | IX   |   | 35°½N—25°½E | 13.             |
| 18. | 76*           | Cyprus. Kition, Paphos and Salamis.   |      |  |  |  |  |  |  |  |      |   |             | 13, 37, 39.     |
| 19. | 142           | Island of Rhodes. Rhodes (IV), Islands of Kos, Seriphos and Syme  | IV   |  |  |  |  |  |  |  | VIII | i | 36°N—28°E   | 3, 13.          |
| 20. | 262           | South coasts of Asia Minor  | IV   |  |  |  |  |  |  |  |      |   |             | 13.             |
| 21. | 315           | Dead Sea  | III  |  |  |  |  |  |  |  |      |   |             | 13;             |
| 22. | 342*          | Cyprus. <b>Famagusta.</b>   |      |  |  |  |  |  |  |  |      |   |             | 18, 13, 37, 38. |
| 23. | 344           | Dardanelles (Hellespontos) and Niksar (Neocaesaria), Thracian Coasts  | IV   |  |  |  |  |  |  |  | IX   |   | 36°N—28°E   | 8, 13.          |
| 24. | 348           | Syrian coasts. Beirut, Arwad Islands.   | III  |  |  |  |  |  |  |  |      |   |             | 13, 38.         |
| 25. | 362           | Dead Sea, Jordanian coasts.   | III  |  |  |  |  |  |  |  |      |   |             | 13, 38, 39.     |
| 26. | 365 July 21   | Eastern Mediterranean. Methone, Epidauros, Crete, Beotian coasts, Adriatic coasts, Epirus, Alexandria, Sicily | IV   |  |  |  |  |  |  |  | X    | i | 35°N—23°E   | 8, 9, 13, 29.   |
| 27. | 447 November  | Sea of Marmara. Marmara Islands, Dardanelles, and the coasts of Marmara, Constantinople                       | IV—  |  |  |  |  |  |  |  |      |   |             | 13.             |
| 28. | 450 January   | Sea of Marmara, Constantinople.   | III  |  |  |  |  |  |  |  |      |   |             | 13.             |
| 29. | 542 Winter    | Sea of Marmara. Thracian coasts and Gulf of Edremit   | IV   |  |  |  |  |  |  |  |      |   |             | 8, 9, 13.       |
| 30. | 551 Spring    | Malian Gulf. Achinos, Tarphe  |      |  |  |  |  |  |  |  |      |   |             | 13.             |
| 31. | 551* July 7   | Etolia, Nafpaktos   |      |  |  |  |  |  |  |  | XI   |   | 38°½N—22°½E | 13, 29.         |
| 32. | 551 July 9    | Syrian coasts. Votrys near Jubel (Byblos), Tarabulus (Tripolis), Beirut                                       | +III |  |  |  |  |  |  |  |      |   |             | 8, 9, 13, 31.   |
| 33. | 551 August 15 | Southwest coasts of Asia Minor, Mandalya Bay, Island of Kos, Sporades Isls                                    | IV—  |  |  |  |  |  |  |  | XI   |   | 36°½N—27°½E | 8, 9, 13.       |

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|-----|------------------|--|------|--|--|--|--|--|--|--|---|---|-------------|---|
| 34. | 740 October 26   | Sea of Marmara, Izmit, Iznik Lake, Thracian coasts of Marmara                        | III  |  |  |  |  |  |  |  |   |   |             | 8, 13.                                  |
| 35. | 746 January 18   | Syrian and Egyptian coasts.  | III— |  |  |  |  |  |  |  |   |   |             | 10 <sub>α</sub> , 13.                   |
| 36. | 792              | Gulf of Venice, coasts of Istria and Jugoslavian coasts of the Adriatic sea          | IV   |  |  |  |  |  |  |  |   |   |             | 13.                                     |
| 37. | 803 December 19  | Gulf of Iskenderun. Masisa coast   | III  |  |  |  |  |  |  |  |   |   |             | 13.                                     |
| 38. | 859 November     | Syrian Coasts, near Samandag   | III  |  |  |  |  |  |  |  |   |   |             | 10 <sub>α</sub> , 10 <sub>β</sub> , 13. |
| 39. | 881*             | Coasts of Israel and Egypt, from Aere to Alexandria.                                 |      |  |  |  |  |  |  |  |   |   |             | 13, 38.                                 |
| 40. | 957              | Caspian Sea  | III  |  |  |  |  |  |  |  |   |   |             | 13.                                     |
| 41. | 975 October 26   | Constantinople and Thracian coasts   | III  |  |  |  |  |  |  |  |   |   |             | 13, 17.                                 |
| 42. | 991* April 5     | Coasts of Syria.   |      |  |  |  |  |  |  |  |   |   |             | 13, 38.                                 |
| 43. | 1034 January 4   | Coasts of Lebzanon and Israel Acre   | IV   |  |  |  |  |  |  |  |   |   |             | 13, 31.                                 |
| 44. | 1039* January    | Constantinople.  |      |  |  |  |  |  |  |  |   |   |             | 13, 17.                                 |
| 45. | <b>1050*</b>     | Grecian Archipelago. Thera (Santorini). Most probably a misprint for 1650            |      |  |  |  |  |  |  |  |   |   |             | 13.                                     |
| 46. | 1068 March 18    | Coasts of Israel at Holots Ashod and Yavne   | IV   |  |  |  |  |  |  |  |   |   |             | 13, 31.                                 |
| 47. | 1202 May 22      | Syrian coasts, Cyprus, Egypt   | IV   |  |  |  |  |  |  |  |   |   |             | 13.                                     |
| 48. | 1222 May. Cyprus | Limassol and Paphos  | IV   |  |  |  |  |  |  |  |   |   |             | 13.                                     |
| 49. | 1273 September   | Albanian coasts. Durazzo   | III  |  |  |  |  |  |  |  |   |   |             | 13.                                     |
| 50. | 1303 August 8    | Egyptian coasts, Syrian coasts Crete   | v—   |  |  |  |  |  |  |  | X | i | 36°½N—27°½E | 13.                                     |
| 51. | 1303 December    | Crete, Southwest coasts of Peloponnesus and Rhodes, Egyptian coasts and Adriatic Sea | IV   |  |  |  |  |  |  |  |   |   |             | 12, 13.                                 |
| 52. | 1332 February 12 | Sea of Marmara. Constantinople   | III+ |  |  |  |  |  |  |  |   |   |             | 13.                                     |



|     |                   |   |      |      |      |  |      |             |             |
|-----|-------------------|---|------|------|------|--|------|-------------|-------------|
| 53. | 1344 October 14   | Sea of Marmara. Thracian coasts   | IV   |      | 2000 |  |      |             | 13.         |
| 54. | 1389 March 20     | Island of Chios. In the Allatiano Codex   | III  |      |      |  | IX   | 38°¼N—26°¼E | 13.         |
| 55. | 1403 November 16  | Syrian coasts, Asia Minor south coasts  | III  |      |      |  |      |             | 13.         |
| 56. | 1481 May 3        | Rhodes  | III  | 1,80 | 60   |  | VIII | 36°N—28°E   | 13.         |
| 57. | 1489              | South coasts of Asia Minor. Antalya   | III  |      |      |  |      |             | 13.         |
| 58. | 1494 July 1       | Crete. Herakleion (Candia)  | II+  |      |      |  |      |             | 13.         |
| 59. | 1508 May 29       | South coasts of Crete north coasts  | III  |      |      |  | X    | i           | 35°½N—25°½E |
| 60. | 1509 September 14 | Constantinople  | III  |      |      |  |      |             | 13, 32.     |
| 61. | 1534              | Coasts of Israel. Jaffa. Not found in contemporary writers                          | III  |      |      |  |      |             | 13, 38.     |
| 62. | 1546 January 14   | Coasts of Israel and Lebanon. From Gaza to Jaffa.                                   | III+ |      |      |  | VII  |             | 38°¼N—26°¼E |
| 63. | 1612 November 8   | North coasts of Crete   | IV+  |      |      |  | VIII |             | 35°½N—25°½E |
| 64. | 1622 May 5        | Ionian Island. Zante  |      |      |      |  | X    |             | 37°½N—21°E  |
| 65. | 1629 March 9      | Islands of Cythera and Crete  | III  |      |      |  | VIII |             | 36°N—25°E   |
| 66. | 1633 November 5   | Zante, South coasts on the promontory of Agios Sostis.                              | III— |      |      |  | X    |             | 37°½N—21°E  |
| 67. | 1646 April 5      | Constantinople  | III  |      |      |  |      |             | 13, 31.     |
| 68. | 1650 October 9    | Thera, west coasts of Patmos, east coasts, Ios, Sikinos, Kea, Crete                 | v    | 30   |      |  | VIII |             | 36°½N—25°½E |
| 69. | 1667 April 6      | Dalmatian coasts. Dubrovnik (Ragusa)  | III+ |      |      |  |      |             | 13.         |
| 70. | 1667 November 30  | Asia Minor. Smyrna  | II   |      |      |  |      |             | 13.         |
| 71. | 1672*             | Kyklades. Thera (Santorini)   |      |      |      |  | IX   |             | 36°½N—25°½E |
| 72. | 1672* April       | Islet of Stanchio.  |      |      |      |  | VIII |             | 40°N—26°E   |
| 73. | 1688 July 10      | Asia Minor, Smyrna  | II   |      |      |  |      |             | 13, 31.     |
| 74. | 1723 February 21  | Ionian Islands, Leukas.   | III  |      |      |  | IX   |             | 38°½N—20°½E |
| 75. | 1732              | Ionian Islands. Corfu   | II—  |      |      |  |      |             | 13, 14.     |
| 76. | 1748 May 14       | North Peloponnesus. Aigion  | III  |      |      |  | IX   |             | 38°½N—22°¼E |
| 77. | 1750 September 17 | Adriatic Sea. Fiume   | IV   |      |      |  |      |             | 13.         |
| 78. | 1752 July 21      | Syrian coasts   | III  |      |      |  |      |             | 13.         |
| 79. | 1759 October 30   | Coasts of Israel and Lebanon. Acre  | IV—  | 2,4  |      |  |      |             | 13.         |
| 80. | 1766 May 22       | Constantinople  | II   |      |      |  |      |             | 13, 17      |
| 81. | 1791 November 2   | Ionian Islands. Between Zante and the mainland                                      | III— |      |      |  | X    |             | 37°¾N—21°E  |
| 82. | 1802 January 4    | Adriatic Sea. Fiume   | III  |      |      |  |      |             | 13.         |
| 83. | 1804 June 8       | Northwest coasts of Peloponnesus. Patras  | III  |      |      |  | IX   | "           | 38°¼N—21°¾E |
| 84. | 1817 August 23    | Gulf of Corinth. Aigion   | III  |      |      |  | X    | "           | 38°¼N—22°¼E |
| 85. | 1818* January     | Athens. Mallet mistakes the event before mentioned                                  |      |      |      |  |      |             | 13.         |
| 86. | 1821 January 6    | Gulf of Corinth. Alcyonic Sea   | IV   |      |      |  | X    | "           | 37°¾N—21°¼E |
| 87. | 1823 August 20    | Dalmatian coasts. Dubrovnik   | IV—  |      |      |  |      |             | 13.         |
| 88. | 1825 January 19   | Ionian Islands. Leukas, between the islet of Sessoula and east coasts of the island | III  |      |      |  | XI   | "           | 38°¾N—20°¾E |
| 89. | 1829 May 23       | Constantinople  | II   |      |      |  |      |             | 13, 17.     |
| 90. | 1833 January 19   | Albanian coasts. Valona and Saseno Isle   | IV—  |      |      |  |      |             | 13.         |
| 91. | 1835 July 12      | Ionian Islands. Zante   | II   |      |      |  |      |             | 13, 14.     |
| 92. | 1837 January 1    | Syrian and Israeli coasts of Tiberias   | IV   |      |      |  |      |             | 13.         |
| 93. | 1843 September 14 | Dalmatia. Dubrovnik, Gruz (Gravosa)   | IV   |      |      |  |      |             | 13.         |
| 94. | 1844 March 3      | Dalmatia. Dubrovnik   | III  |      |      |  |      |             | 13.         |

|      |                   |  |      |      |  |      |   |             |  |                 |
|------|-------------------|--|------|------|--|------|---|-------------|--|-----------------|
| 95.  | 1844 March 23     | Dalmatia. Dubrovnik  | II   |      |  |      |   |             |  | 13.             |
| 96.  | 1845 August 16    | Dalmatia. Dubrovnik, Gruz  | III  |      |  |      |   |             |  | 13.             |
| 97.  | 1851 February 28  | Asia Minor. Fetiye   | III  | 0,60 |  | IX   | n | 36°½N—28°¾E |  | 13, 26.         |
| 98.  | 1851 April 3      | Asia Minor. Fetiye   | III  | 1,80 |  |      |   |             |  | 13.             |
| 99.  | 1851 May 23       | Khalki Isle, Rhodes  | II   |      |  |      |   |             |  | 13.             |
| 100. | 1851 October 12   | Albanian, coasts, Valone   | III  | 0,60 |  |      |   |             |  | 13.             |
| 101. | 1852 May 12       | Asia Minor, Smyrna   | III  |      |  |      |   |             |  | 13.             |
| 102. | 1852 September 8  | Asia Minor, Smyrna   | III  |      |  |      |   |             |  | 13.             |
| 103. | 1853 August 18    | Euboean Gulf   | III+ |      |  | IX   | n | 38°¼N—23°½E |  | 13.             |
| 104. | 1855 February 13  | Asia Minor, Fetiye   | III  |      |  |      |   |             |  | 13.             |
| 105. | 1856 November 13  | Eastern Sporades. Chios  | III+ |      |  | IX   | n | 38°¼N—26°¼E |  | 13, 21.         |
| 106. | 1859* October 20  | Piraeus. Most probably a strong seiche.  | II—  |      |  |      |   |             |  | 13.             |
| 107. | 1861 December 26  | Corinth Gulf Northeast coasts<br>South coasts  | IV—  | 2,10 |  | XI   | n | 38°¼N—22°¼E |  | 13, 22, 27.     |
| 108. | 1866 January 2    | Albanian coasts. Valona, Himara  | IV   |      |  |      |   |             |  | 13.             |
| 109. | 1866 January 6    | Albanian coasts. Valona, Narta   | III  |      |  |      |   |             |  | 13.             |
| 110. | 1866 February 2   | Eastern Sporades, Chios  | III  |      |  | VIII | n | 38°¼N—26°¼E |  | 13.             |
| 111. | 1866 February 6   | South coasts of Peloponnesus. Island of Kythera  | IV   | 7,80 |  | VIII | n | 36°N—23°E   |  | 13, 22, 26, 27. |
| 112. | 1866 March 3      | Albanian coasts. Valona  | III  |      |  |      |   |             |  | 13.             |
| 113. | 1866 March 6      | Albanian coasts. Himara, Kanina  | IV   |      |  |      |   |             |  | 13.             |
| 114. | 1866 March 13     | Albanian coasts. Himara. Kanina  | III  |      |  |      |   |             |  | 13.             |
| 115. | 1867 September 20 | South coasts of Peloponnesus, Gythion, Crete, Herakleion, Jonian Islands, Syros, Southeast coasts of Italy | IV   |      |  | IX   | n | 36°½N—22°¼E |  | 13, 22, 27.     |
| 116. | 1869 December 28  | Albanian coasts. Valone  | III  |      |  | XI   | n | 38°¾N—20°¾E |  | 13, 20.         |

|      |                  |  |      |      |     |        |    |               |  |                 |
|------|------------------|--|------|------|-----|--------|----|---------------|--|-----------------|
| 117. | 1870 June 24     | Alexandria   | III  |      |     |        |    |               |  | 13.             |
| 118. | 1870 July 29     | Adriatic Sea. Island of Vis (Lissa)  | III  |      |     |        |    |               |  | 13.             |
| 119. | 1878 April 19    | Sea of Marmara. Izmid  | III  |      |     |        |    |               |  | 13, 22.         |
| 120. | 1883 June 27     | Ionian Island. Corfu   | III  |      |     | VI     | n  | 39°½N—20°E    |  | 13, 21, 26, 27. |
| 121. | 1886 August 27   | South coasts of Peloponnesus. Messenia, Pylos; Asia Minor, Smyrna              | III  |      |     | XI     | i  | 37°N—21°¼E    |  | 13, 21, 26, 27. |
| 122. | 1887 October 4   | Gulf of Corinth. South coasts, Xylokastro, between Xylokastro and Sykia        | III  | 20   |     | VIII   | n  | 38°¼N—22°¾E   |  | 13, 21, 26, 27. |
| 123. | 1893 February 9  | Sporades Islands. North coast of Samotrace, Alexandroupolis<br>Thracian coasts | III+ | 0,90 | 400 | IX     | n  | 40°½N—25°½E   |  | 13, 22, 26, 27. |
| 124. | 1893 June 14     | Albanian coasts. Valona, Himara  | III  |      |     |        |    |               |  | 13.             |
| 125. | 1894 April 27    | Euboean Gulf. Atalanta Bay, West and Northwest coasts of Euboean. Gulf         | IV   | 3,00 |     | XI     | n  | 38,7°N—23,1°E |  | 13.             |
| 126. | 1894 July 10     | Constantinople   | III  |      |     |        |    |               |  | 13, 17.         |
| 127. | 1897 December    | Ionian Island. Zante   | II—  |      |     |        |    |               |  | 13.             |
| 128. | 1898 Decembezr 3 | Ionian Island. Zante   | II+  |      |     | VII    | n  | 37°¾N—21°E    |  | 13, 26.         |
| 129. | 1899 January 22  | Messenia, Kyparissia, Marathos   | III  |      |     | IX     | n  | 37°¼N—21°¾E   |  | 13.             |
| 130. | 1902 July 5      | Salonika   | II—  |      |     | IX     | n  | 40°¼N—33°¼E   |  | 13.             |
| 131. | 1908 December 28 | Lybian Sea. 90 miles north of Alexandria, Egyptian coasts                      | v    |      |     | 4,6 XI | 10 | 38°N—15°½E    |  | 13.             |
| 132. | 1914 November 27 | Ionian Islands. Leukas   | IV+  | 3,30 |     | 6,2 X  | n  | 38°½N—20°½E   |  | 13, 20, 22.     |
| 133. | 1915 August 7    | Ionian Islands. Between Cephalonia and Leukas                                  | III+ |      |     | 4,9 IX | n  | 38°½N—20°½E   |  | 13, 22, 26, 27. |
| 134. | 1920 December 18 | Albanian coasts. Valone, Saseno  | v—   |      |     | 5,6 IX | n  | 40°½N—19°½E   |  | 13.             |
| 135. | 1928 March 31    | Asia Minor. Smyrna   | II   |      |     | 4,9    | n  | 38,1°N—27,1°E |  | 13.             |

|       |                   |   |      |      |     |      |     |                 |                 |
|-------|-------------------|---|------|------|-----|------|-----|-----------------|-----------------|
| 136.  | 1928 April 23-25  | Grecian Archipelago; Piraeus, Chalkis, Nauplion, Alexandroupolis, Crete, Chania, Karystos   | III+ | 2,10 | 4,6 | VI   | n   | 42,4°N—25,7°E   | 13.             |
| 137.  | 1928 May 3        | Eastern Greece. Strymonic Gulf  | II   |      | 4,3 | VII  | n   | 40,8°N—26,8°E   | 13.             |
| 138.  | 1932 September 26 | Gulf of Hierissos. Chalcidice   | II+  |      | 6,9 | X    | n   | 40°½N—23°¾E     | 13.             |
| 139.  | 1947 October 6    | South Peloponnesus. Methone in Messenia   | II+  |      | 6,9 | IX   | 28  | 36,9°N—22°E     | 13, 19, 27.     |
| 140.  | 1948 February 9   | Dodecanese. Island of Karpathos   | IV   | 1000 | 7,1 | IX   | 40  | 35°½N—27°E      | 13, 22, 26, 27. |
| 141.  | 1948 April 22     | Ionian Islands. Leukas  | IV—  | 0,90 | 6,4 | X    | n   | 38°½N—20°¼E     | 13, 22, 26, 27. |
| 142.  | 1949* February 9  | Dodecanese. Island of Karparhos   |      |      |     |      | n   |                 | 13, 30.         |
| 143.  | 1956 July 9       | Grecian Archipelago. Amorgos, Astipalaea, Pholegandros, Patmos, Kalimnos, Crete, Tinos  | V    | 30   | 7,8 | IX   | 20; | 36,9°N—26°E     | 13, 24, 26, 27. |
| 144.  | 1956 November 2   | Magnessia. Volos  | II+  | 1,20 | 3/4 | VII  | n   | 39°½N—23°E      | 13, 26, 28.     |
| 145.  | 1959* February 23 | North and west coasts of the Grecian Archipelago. Salonika, Sallamis, Leros, Crete. No earthquake shock was recorded. Most probably a seiche. | III  | 0,90 |     |      |     |                 | 13.             |
| 146.  | 1961* May 23      | Asia Minor. Sea of Marmara, Smyrna.   |      |      | 6,5 | VII  | n   |                 | 13.             |
| 147.  | 1961* June 6      | Grecian Archipelago. Crete, Volos, Leros. Probably strong seiche  | II   | 0,90 |     |      |     |                 | 13.             |
| 148.  | 1963 February 7   | Gulf of Korinth. Possidonia, Patras.  |      |      |     |      |     |                 | 13, 44.         |
| 149.  | 1965 July 6       | Gulf of Korinth. Itea bay.  | II+  |      | 6,9 | VIII |     | 38,4°N—22,3°E   | 13.             |
| 150.  | 1968 February 19  | Island St. Eustratios, Lemnos, Lesvos, Euboea.  | II+  | 1,20 | 6,7 | IX   | 31  | 39,5N—23,8°E    | 13.             |
| 151.* | 1978 June 20      | Salonica, Strymonic Gulf. Most probably a strong seiche.  | II—  | -    | 6,5 | =    | 16  | 40,75°N—23,26°E | 43, 45.         |
| 152.* | 1979 May 15       | South Coasts of Crete. Most probably a strong seiche.   | II—  | -    | 5,8 | -    | 58  | 34,62°N—24,08°E | 43, 45.         |

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