

**LIST OF RECORDED
EARTHQUAKES IN CALIFORNIA,
LOWER CALIFORNIA, OREGON,
AND WASHINGTON TERRITORY**

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List of Recorded Earthquakes in California, Lower California, Oregon, and Washington
Territory by Edward S. Holden

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EDWARD S. HOLDEN

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LIST OF RECORDED EARTHQUAKES

IN

CALIFORNIA, LOWER CALIFORNIA, OREGON,

AND

WASHINGTON TERRITORY.

COMPILED FROM PUBLISHED WORKS AND FROM PRIVATE INFORMATION.

By

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The Auction.

INTRODUCTION.

As the Lick Observatory, at Mount Hamilton, and the University of California, at Berkeley, have already begun accurate registration of earthquake shocks and tremors by means of delicate seismometers, it has seemed to be important to gather in one list all the various records of past shocks in the region west of the Sierras. The sources of information have been:

First—Printed lists of earthquake shocks in the scientific journals, such as the lists of MALLET, PERREY, ROCKWOOD, FUCHS, TRASK and others.

Second—Accounts of earthquakes in printed books, magazines and newspapers.

Third—Lists of shocks put at my disposition by various gentlemen, specially a list by Mr. THOS. TENNENT, of San Francisco; a list by Prof. H. G. HANKS; and a very extensive collection kindly furnished by Mr. H. H. BANCROFT from his manuscript records.

Fourth—Verbal accounts from various gentlemen.

I have to thank Professor ROCKWOOD, of Princeton College, for putting me in the way of gaining much of this information. I have also to express my great obligations to the Board of Directors of the Mechanics' Institute Library, to the Council of the California Academy of Sciences, and to the Librarians of the Mechanics' Institute, Mercantile and Academy of Science libraries in San Francisco, the University of California Library at Berkeley, and of the State Library at Sacramento, for exceptional facilities afforded me in the consultation of books. Mr. W. C. WINLOCK, of the U. S. Naval Observatory, has kindly consulted, in the Library of Congress, books which were not available in California. The various sources of information have been thoroughly examined, and the necessary data for a brief reference list, or index, have been extracted and set in order in the catalogue which follows. I wish also to express my grateful thanks to those who have kindly aided in this latter part of the work. The list of books and periodicals consulted is given in the following

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From the above sources of information the following catalogue has been derived.

For each shock there is given, when possible, *first*, the year, month and day; *second*, the hour. The hour is here given exactly as it is found in the original. Usually it is expressed in local civil time. In Dr. TRASK'S list it is intended to be astronomical time (0h. is noon, and 12h. midnight), though there are probably several errors in this datum. For the later lists it is usually Pacific standard time. In Mr. TENNENT'S observations it is San Francisco local mean time to and including March 25, 1884, and after that date Pacific standard time. Professor Rockwood's plan to avoid the danger of confounding A. M. and P. M. dates, is to adopt the system of numbering the hours in the civil day from 0 to 24 (0h. is midnight, 12h. is noon). I have not brought the hours to a single uniform standard, in order that I might avoid introducing mistakes in copying, and especially because very few of the times are really accurate. Mr. TENNENT'S list is probably quite the best in this regard. Since January 1, 1887, all the stations of the Southern Pacific Railroad, and since August, 1887, those of the Atlantic and Pacific Railway, receive a noon signal (Pacific standard time) from the Lick Observatory, and since this date, therefore, there is more likelihood that the times in this catalogue are accurate. *Third*, the place or places where the shock has been felt. Here the abbreviation "S. F." stands for San Francisco. When necessary the name of the county is added for more precision. *Fourth*, the intensity of the shock, expressed either in common language or in terms of some arbitrary scale. Professor Rockwood, in indicating the intensity, has used the adjectives: 1, very light; 2, light; 3, moderate; 4, strong; 5, severe; 6, destructive; but has added a Roman numeral to indicate the intensity, according to the ROSSI-FOREL scale, adopted by Swiss and Italian seismologists. In Professor Rockwood's papers, very light is II or III; light, IV; moderate, V or VI; strong, VI or VII; severe, VIII; destructive, IX or X.

I strongly recommend the use of the ROSSI-FOREL scale, on account of the definiteness of the classification and because of