

Chapter 1

Introduction

This work looks at the seismicity of Central America from the beginning of global instrumental recording in 1898 to the mid 1990s. Its main purpose is to produce a Catalogue of events, drawn from the best available sources. The Catalogue consists of a parametric listing of origin co-ordinates and estimates of size, and also a descriptive section giving details of macroseismic effects and comments on instrumental recordings. For many events we have re-evaluated the position and magnitude, using instrumental and macroseismic information, or a combination of both; otherwise we have chosen what we consider to be the best solution available from other sources.

Our area of concern is between latitudes 7°N and 17°N , and longitudes 93°W and 80°W . It comprises the whole of Central America, including the southeastern part of Mexico, parts of Panama and the Pacific Ocean and Caribbean Sea. This area is shown in Figure 1.1 We have already discussed the large-magnitude events in this region (Ambraseys and Adams, 1996) and the determination of magnitude there (Ambraseys, 1995). Our earlier studies were restricted to earthquakes of magnitude 7 or more; here we aim to reduce the threshold where possible by two orders of magnitude, to include events of magnitude greater than 5.

Naturally the availability of information varies with time. For the earliest part of our period we rely heavily on listings of the British Association for the Advancement of Science (BAAS), and standard catalogues such as those of Gutenberg (1958). There are also some events that we have identified and located from macroseismic information alone. Early instrumentally recorded events do not generally have magnitudes less than 6. Our Catalogue should contain all events in the region with magnitude more than 6, and those for which there are well-documented felt effects, even if their magnitude is small.

Several authors have made special studies of earthquakes in the region, often refining locations given by other agencies; these have been included. In recent years international listings include many events either with no magnitude specified, or given as less than 5. These have not been included unless they have been reported felt, but we have endeavoured to include all events for which the International

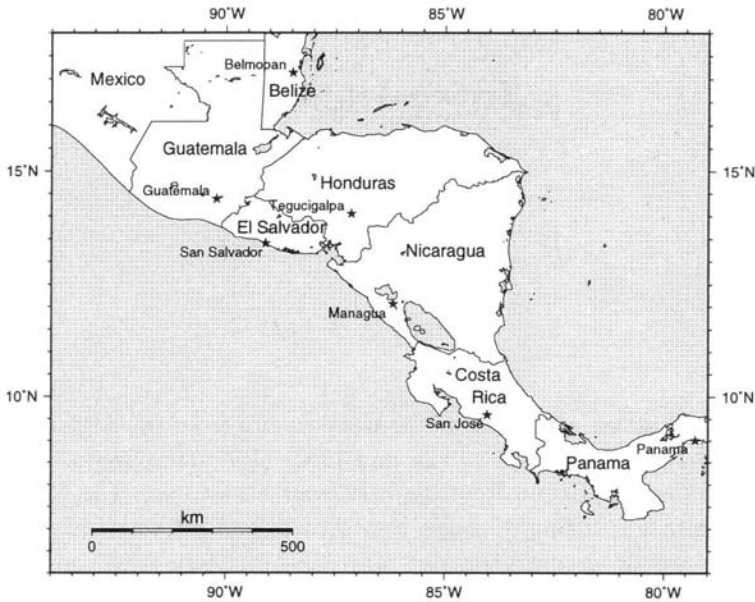


Fig. 1.1 Map of area of study, extending one degree in each direction beyond main area of interest.

Seismological Centre (ISC) gives a magnitude of 5 or more.

The information presented here should assist in the fuller understanding of the tectonic problems of the area, and in refining estimates of seismic hazard. It is not our intention to undertake an exhaustive analysis of these topics, but rather to provide a data base with which others can work. It is because of this that we sometimes give more detail in our Catalogue than might at first sight seem warranted.

1.1 Note on Transliteration

There is no accepted standard for the treatment of place names. Broadly speaking, our policy has been to leave uncompound names in their original forms, but to translate or adapt wherever possible the topographical appellatives of compound names. We cannot claim complete consistency; where consistency would have led us into absurdity, we have preferred inconsistency.

Where places are well known under English names, we have abandoned the local forms.

Many place names in the region have been officially changed, in some cases more than twice. We have decided not to use the latest name of places but rather retain as much as possible the contemporary names used in the references and maps at the time of the earthquake.