

# Preface

This study is the culmination of several decades of work. Our involvement in the region has grown over the years as more information and different types of analysis have become available.

We have developed and improved our own techniques in earthquake location, determination of size and the analysis of felt effects throughout this period, and because of this sometimes take the opportunity in the text of reviewing techniques previously used by others, and of tracing the development of these analyses. Modern workers do not always realise the limitations imposed on their early colleagues by inadequate instrumentation, the paucity of knowledge of basic earth structure and sometimes lack of appreciation of the physical bases of the parameters they were seeking. An example is our full discussion of the development of the magnitude scales, and of our own use of  $M_S$ . Similarly, our location of early events by using the travel time of the maximum of the surface wave train has proved most useful.

Better information is continually becoming available, enabling earlier work to be reassessed. We were helped in our final analysis by the late availability of the catalogue of Engdahl *et al.* (1998), which applies improved location techniques to the larger events in the ISC catalogues since 1964, producing much more reliable estimates of focal depth.

The most substantial parts of this work are the appendices containing the catalogue of earthquake parameters, including about 1,800 events, and the detailed description of macroseismic effects of major earthquakes and those of special interest. The earlier part of the text is intended to help in the understanding of these sections and to explain the methods used in their compilation.

We have made use of work of many previous workers, some of which we criticise and in which we find errors. Naturally we hope that our work is an improvement, but it would be presumptuous to assume that it is error free. For these errors we offer apologies, and hope that others will be able to carry out further improvements. We believe, however, that this work is the most reliable and complete compilation of earthquake activity in Central America that is currently available, and hope that it will serve as a basis for fuller investigations of seismicity.