FOREWORD

Last year, we were invited to propose a field trip for the International Subcommission on Cambrian Stratigraphy (IUGS - UNESCO). We were aware of the little knowledge that some of our outcrops had (compared to other parts of the world), but we also knew the very interesting things that we have to show in the Andes of Argentina. Fortunately, our proposal was accepted on the meeting held in Utah ("Laurentia 99"), so with this field guide we welcome all participants of the field meeting and hope you enjoy your stay with us. In this way, The Field Meeting Argentina 2000 of the ISCS, was programmed to be held in August 18 to 24, so, this is the first time Cambrian specialists meet in an international gathering in South America, and in a country exhibiting either remnats of the Laurentia (Cambrian of Precordillera) as well as the Gondwana (Cambrian of the Eastem Cordillera). Despite a lower attendance and a lesser representation from different countries of the world, there are nevertheless a most varied technical program, with much new data presented, which is reflected in the range of contributions submitted.

In a general sense, two Cambrian basins should be recognized within Argentina: a carbonate dominated one, and a typical clastic "Gondwanan" type:

- The first one is characterized by the highly fossiliferous limestones and dolostones of the Precordillera of western Argentina. It can be subdivided finto two different regions, one with typical shelf facies (eastern and central Precordillera of La Rioja and San Juan Provinces), where the stratigraphic sequence comprises, from the base upwards, La Laja Formation (Lower to Middle Cambrian), Zonda Formation (Middle Cambrian), La Flecha Formation (Upper Cambrian), and La Silla Formation (Uppermost Cambrian to Tremadoc), which is succeeded by the limestone of the Early Ordovician San Juan Formation, which include interbedded K-bentonite levels. The other regions are located at the Western Precordillera of San Juan and Precordillera of province of Mendoza, where the Cambrian deposits involves basin and slope facies. The significant affinities between the Cambrian faunas of the Precordillera with that of the Appalachian region from Laurentia, and the K-bentonite beds appearing in the upper part of the San Juan Formation and in the Gualcamayo Formation, allowed a strong relationship between them, to consider the Precordillera as a continental fragment rifted from Laurentia.

- The second basan, in north-west and eastern Argentina is not highly fossiliferous, and was developed in the Puna, Eastem Ranges, Subandean Ranges, Famatina and the somehow disconnected Southern Buenos Aires Ranges. In Northwest Argentina, they are characterized by over 1000 m of siliciclastic rocks that start with low grade metamorphic rocks with trace fossils (Puncoviscana Formation), being followed by almost unfossiliferous sandstones and quartzites (Mesón Group) and finishing with the fossiliferous sandstones and shales that bear the transition to the Ordovician System (lower part of Santa Victoria Group).

As an addition to the latter, intracratonic basins, open shelves, continental active margine and the cratonized areas are the framework where sediments were deposited during the Cambrian. Finally, deformation and metamorphic events, as well as a large amount of igneous processes are also recorded during the Cambrian. The purpose of the field trips is to give to all the participants a general overview of the Cambrian rocks from Argentina, and to generate field discussions on different aspects of our Cambrian units. A better general understanding of the sedimentary

sequences is needed, to interpret the particular mosaic that we have in the Andean margin of South America.

The Cambrian Period is one of the more significant and conspicuous in the Precordillera of Western Argentina and has many distinctive charácteristics, such as its geotectonic, paleogeographic and biostratigraphic features. The Cambrian sedimentary sequence of the Precordillera includes, up to.date, the only carbonate deposits known from South America, within the so-called Gondwana continent. In this way, this sequence represent a widespread development of carbonate platform on a Grenvillian basement, known from Laurentia continent. In order to review current research and develop strategies for future studies and international collaboration, the Field Meeting Argentina 2000 "Precordillera and Eastern Cordillera of Western Argentina" of the International Subcommission on Cambrian Stratigraphy (ISCS), has been scheduled in the provinces of San Juan, Salta and Jujuy respectively, where the members of the Meeting will have the opportunity to discuss in the field, the different aspects related to Cambrian Period. The present volume contains selected abstracts from the Meeting, and represent a prelude of the main volume which will include the full papers.

The precise recognition and definition of time in Stratigraphy is a continuing priority in geological research. This has been accentuated in recent years by the focus towards short-term geological and biological events in the stratigraphic record. An important thrust of the Meeting is therefore on chronostratigraphy, with particular reference to the definition of the Cambrian boundaries. In this volume, authors from Australia, Germany, Spain, Denmark, United States, Sweden, korea, China, Argentina, Brazil, among others, submitted papers contributing to the Cambrian Period knowledge. In this sense, part of this volume is devoted to recent advances in Cambrian paleontology and biostratigraphy. Emphasis is given on trilobite and conodont faunas, but ichnological, micropaleontological, structural and isotopic geochemistry studies are also included. The development of refined geochronological methods is particularly noteworthy and illustrates the potential for achieving and integrated, high precision chronostratigraphy and geochronology for the Cambrian in the near future. This method could be a valuable help in the precise correlation between basement rocks and Precordillera, providing significant data for the paleogeographic reconstruction involving Gondwana and Laurentia.

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