

## Preface

# *Set in Stone: The work of the North American Commission on Stratigraphic Nomenclature*

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The North American Stratigraphic Code did not strike me as light reading when it was handed out in my undergraduate stratigraphy class, but our professor brought it to life by linking the articles and sections in the Code to outcrops we visited on field trips. In this way, the Code became basic to the way I thought about geology. When I went to work at the U.S. Geological Survey, concentrating on the geology of the Central Appalachians and the Ozark Plateaus, I had opportunities not only to do geologic mapping but also to prepare studies on structural geology, karst geology, biostratigraphy, and lithostratigraphy. To communicate all the varied details across this range of special aspects requires a consistent nomenclature, and that is where the Code has served me well. I have to admit, however, that never in my wildest dreams would I have imagined that I would eventually come to serve on the science team behind the Code — the North American Commission on Stratigraphic Nomenclature. I was in college when the 1983 Code was published, and my worn reprint with notes and faded yellow highlights still sits on my shelf. These days, however, it is more a souvenir than a resource, because in 2005 the Commission updated the 1983 Code, a project in which I was proud to have been a part. This special volume of *Stratigraphy* is an attempt to put this recent continent-wide effort into perspective — to look back at its origins and development, to show how it applies today, and to look forward to its use by new generations of students.

The Code is only a document. It is the people behind the words that make the document come alive. The North American Stratigraphic Code is first of all a history of stratigraphers and geologists of all disciplines who developed the concepts behind the Code over a century of discussions and deliberations. Their story is told in the article by Robert Jordan, which honors all those who were instrumental in the Commission from its beginnings. The Commission's most recent major achievement, the 2005 Code, can be found on the internet at [http://ngmdb.usgs.gov/Info/NACSN/05\\_1547.pdf](http://ngmdb.usgs.gov/Info/NACSN/05_1547.pdf) as printed in AAPG Bulletin. A comprehensive, in-depth "user's manual" prepared by Donald Owen is included in this issue. Ismael Ferrusquía-Villafranca, Michael Easton, and Donald Owen, representing the three nations that join in the Commission, review how changes in the 2005 Code affect the way geologists across the continent describe the rock record, as new terms and concepts are introduced and others become obsolete. On the other hand the treatment of terminology in this paper, as well as in the contributions on the Precambrian by Easton, and on time terms by Marie-Pierre Aubry, and by Aubry et al., all point to

the continuing vital role of the "time-rock" concept as embodied in the Code.

This issue includes a North American geological time scale published by the USGS in 2007 and recently modified to reflect changes in nomenclature and time boundaries. Geologists have, from the beginning, found it is more effective to talk about time with named divisions, in a hierarchy of increasingly important intervals — epochs forming systems, and systems forming eras — rather than in enumerated metrics of age without personality. Over the past five years, there has been an international controversy over certain time intervals, particularly divisions of the Cenozoic Era. The section on "Divisions of Geologic Time" in this volume includes most of the names and calibrations used by the International Commission on Stratigraphy's 2004 geologic time scale. The primary exception concerns the divisions of the Cenozoic, and in particular the definitions of the Quaternary and Pleistocene. Until these issues are resolved, the U.S. Geological Survey Geologic Names Committee has decided to leave this aspect *in status quo ante*.

Some say that the time of the Commission's usefulness has passed, and that the North American Code is superfluous, if not outdated. On the contrary, the goal of promoting uniformity in stratigraphic nomenclature throughout North America is as important today as it was when the Commission was formed in 1946. Consistent communication in geoscience is a must, not only for basic science and development of geologic maps, but also for the applied science related to energy, mineral, and water resources, and environmental protection. The Code, as the consensus of a Commission that represents the geologists of the world's best studied and most actively served continent, is a resource with significance for the entire profession as it absorbs new technologies and as concepts are tested and clarified in practice. It is a living document, in that any geoscientist may submit proposals at any time to the Commission for suggested changes or additions, which the Commission is required to take very seriously. As I hope this volume makes clear, effective communication within the geosciences depends on documents such as the North American Stratigraphic Code and therefore on the unstinting effort and superlative skills of my fellow Commissioners, past and present.

I speak for the Commission in expressing our gratitude to the American Association of Petroleum Geologists for releasing copyright to the 2005 North American Stratigraphic Code.

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