CONCISE GLOSSARY OF GEOLOGY

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SCIENTIFIC PUBLISHERS (INDIA)
P.O. BOX 91 JODHPUR

Published by :
Pawan Kumar Sharma
Scientific Publishers (India)
5-A, New Pali Road. P.O. Box 91
E-mail : info@scientificpub.com
www.scientificpub.com

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ISBN: 81-7233-461-3
eISBN: 978-93-87307-48-3

Lasertype set: Rajesh Ojha
Printed in India

TO THE REVERED MEMORY OF

PROFESSOR D.K. CHAKRAVARTI

WHO WAS A WALKING
CYCLOPAEDIA OF GEOLOGY

"Every other author may aspire to praise; the lexicographer can only hope to escape reproach.

— Samuel Johnson (1709-84)

PREFACE

There has been a great upsurge in the teaching and practice of Geology in India during the last few decades mainly because of development of mineral and petroleum industries. Soon after Independence, there were few universities teaching this subject, but thereafter, there has been an upsurge and now there are geology departments in most universities, and their numbers are growing. There is, however, a great dearth of Indian text and reference books. This work is designed as a much-needed aid to students, teachers and professionals alike.

Like any modern science, the science of Geology has its own nomenclature and terminology. Since it is an interdisciplinary science it has taken to its bosom terms also derived from physical, chemical and biological sciences—relevant words from these also find a place, as also words from peripheral disciplines. The aim of this work is to cover all essential terms used in different branches of the science and to provide concise but adequate definitions and information for each. Descriptions of only basic mineral groups and species are given, for there are more than 3700 minerals known. Similarly, the number of rock types runs into hundreds, and only the main groups are defined. Also avoided are stage names and names of Indian and other stratigraphic units which would have made the volume unwieldy. The basic stratigraphic units, system/period and above, and their nomenclature, classification and ages, are however listed, and follow the latest *International Stratigraphic*

Chart 2004 of the International Commission on Stratigraphy of the International Union of Geological Sciences. The International stratigraphic column is given as an Annexure. The evolving concepts of stratigraphic classification and nomenclature are reflected in the relevant definitions. In addition, some stratigraphic unit names found in geological literature or proposed elsewhere have also been included.

My grateful thanks are due to Messrs Aditya Agarwal and Ashutosh Agrawala for their assistance in procuring literature, to my daughter Archana for help with the computer, and to Mr. Vikram Rai for helping me with meticulous proof correction.

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NOTES ON USAGE

- Cross-references are indicated by an asterisk (*). Cross-references are not given to certain frequently occurring terms, like various rock or mineral types (igneous, quartz, etc.) and stratigraphical hierarchical terms (system, epoch, etc.).

- Synonym and terms for comparison are in **bold** face.

- Alternative spelling of terms are in round brackets **( )**.

- Alternative terms in an entry are separated by a slash (/).

- Various types of features or structures are described after the main heading, like different types of metamorphism and folds are itemised after the main heading of **Metamorphism** or **Fold**.

- Words having once-ligatured dipthongs, such as 'ae' are given in both the British and American usage, but some terms use only the American form where 'a' is omitted.

- The qualifier 'about' before numerical dates indicate that there is a very small factor of error (±) in the value given which is not mentioned. But in the Annexure the full numerical values as mentioned in the original ICS – 2004 are given.

ABBREVIATIONS

Cf.	=	Compare with (L. *confer*)
GTS	=	*A Geologic Time scale 1989* (Cambridge University Press)
ICS	=	International Commission on Stratigraphy of IUGS
IUGS	=	International Union of Geological Sciences
Ma	=	Million years (*maga-annum*, 10^6 years)
Pl.	=	Plural
Sing.	=	Singular
Sp. gr.	=	Specific gravity
Syn.	=	Synonym