Petrogenesis Of Metamorphic Rocks Wordpress

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Textbook of Engineering Geology - Kesavulu 2009-02
Textbook of Engineering Geology presents study of geology comprehensively from a civil engineering point of view. The author contends that mere technical perfection cannot ensure the safety and success of large-scale civil engineering constructions such a

An Introduction to Igneous and Metamorphic Petrology - John DuNann Winter 2001
Providing enough background to be rigorous, "without" being exhaustive, it gives readers good preparation in the techniques of modern petrology; a clear and organized review of the

classification, textures, and approach to petrologic study; and then applies these concepts to the real occurrences of the rocks themselves. Requires only a working knowledge of algebra, and makes extensive use of spreadsheets. Includes an accompanying diskette of programs and data files. This book offers unique, comprehensive, up-to-date coverage of both igneous "and" metamorphic petrology "in a single volume" and provides the quantitative and technical background required to critically evaluate igneous and metamorphic phenomena. For anyone interested in petrology.

Principles of Engineering Geology - P.B. Attewell 2012-12-06

'Engineering geology' is one of those terms that invite definition. The American Geological Institute, for example, has expanded the term to mean 'the application of the geological sciences to engineering practice for the purpose of assuring that the geological factors affecting the location, design, construction, operation and mainten ance of engineering works are recognized and adequately provided for'. It has also been defined by W. R. Judd in the McGraw-Hill Encyclopaedia of Science and Technology as 'the application of education and experience in geology and other geosciences to solve geological problems posed by civil engineering structures'. Judd goes on to specify those branches of the geological or geo-sciences as surface (or surficial) geology, structural/fabric geology, geohydro logy, geophysics, soil and rock mechanics. Soil mechanics is firmly included as a geological science in spite of the perhaps rather unfortunate trends over the years (now happily being reversed) towards purely mechanistic analyses which may well provide acceptable solutions for only the simplest geology. Many subjects evolve through their subject areas from an interdisciplinary background and it is just such instances that pose the greatest

difficulties of definition. Since the form of educational development experienced by the practitioners of the subject ulti mately bears quite strongly upon the corporate concept of the term 'engineering geology', it is useful briefly to consider that educational background.

The Rare Earth Elements - J.H.L. Voncken 2015-12-24

This book deals with the rare earth elements (REE), which are a series of 17 transition metals: scandium, yttrium and the lanthanide series of elements (lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium and lutetium). They are relatively unknown to the wider public, despite their numerous applications and their critical role in many high-tech applications, such as high-temperature superconductors, phosphors (for energy-saving lamps, flat-screen monitors and flat-screen televisions), rechargeable batteries (household and automotive), very strong permanent magnets (used for instance in wind turbines and hard-disk drives), or even in a medical MRI application. This book describes the history of their discovery, the major REE ore minerals and the major ore deposits that are presently being exploited (or are planned to be exploited in the very near future), the physical and chemical properties of REEs, the mineral processing of REE concentrates and their extractive metallurgy, the applications of these elements, their economic aspects and the influential economical role of China, and finally the recycling of the REE, which is an emerging field.

Metamorphic Petrology - Akiho Miyashiro 1994-01-21

A major international text for intermediate and advanced students of metamorphic petrology.

Geology of Karnataka - B. P. Radhakrishna 1997

Earth's Oldest Rocks - Martin J. van Kranendonk 2007-10-26

Earth’s Oldest Rocks provides

a comprehensive overview of all aspects of early Earth, from planetary accretion through to development of protocratons with depleted lithospheric keels by c. 3.2 Ga, in a series of papers written by over 50 of the world's leading experts. The book is divided into two chapters on early Earth history, ten chapters on the geology of specific cratons, and two chapters on early Earth analogues and the tectonic framework of early Earth. Individual contributions address topics that range from planetary accretion, a review of Earth meteorites, significance and composition of Hadean protocrust, composition of Archaean mantle and deep crust, all aspects of the geology of Paleoarchean cratons, composition of Archean oceans and hydrothermal environments, evidence and geological settings of early life, early Earth analogues from Venus and New Zealand, and a tectonic framework for early Earth. * Contains comprehensive reviews of areas of ancient lithosphere on Earth, of planetary accretion processes, and of meteorites * Focuses on specific aspects of early Earth, including oldest putative life forms, evidence of the composition of the ancient atmosphere-hydrosphere, and the oldest evidence for subduction-accretion * Presents an overview of geological processes and model of the tectonic framework on early Earth

Tectonic Evolution, Collision, and Seismicity of Southwest Asia - Rasoul B. Sorkhabi 2018

Igneous Rocks and Processes - Robin Gill 2011-09-20

This book is for geoscience students taking introductory or intermediate-level courses in igneous petrology, to help develop key skills (and confidence) in identifying igneous minerals, interpreting and allocating appropriate names to unknown rocks presented to them. The book thus serves, uniquely, both as a conventional course text and as a practical laboratory manual. Following an introduction

reviewing igneous nomenclature, each chapter addresses a specific compositional category of magmatic rocks, covering definition, mineralogy, eruption/ emplacement processes, textures and crystallization processes, geotectonic distribution, geochemistry, and aspects of magma genesis. One chapter is devoted to phase equilibrium experiments and magma evolution; another introduces pyroclastic volcanology. Each chapter concludes with exercises, with the answers being provided at the end of the book. Appendices provide a summary of techniques and optical data for microscope mineral identification, an introduction to petrographic calculations, a glossary of petrological terms, and a list of symbols and units. The book is richly illustrated with line drawings, monochrome pictures and colour plates. Additional resources for this book can be found at: http://www.wiley.com/go/gill/igneous.

Amphiboles in Soapstone Ridge, Ga - Rolland Laws Blake 1982

Tracing Pottery-Making Recipes in the Prehistoric Balkans 6th–4th Millennia BC - Silvia Amicone 2019-07-31
Balkan ceramic studies is an emerging field within archaeology. This book brings together diverse studies by leading researchers and upcoming scholars, capturing the variety of current archaeological, ethnographic, experimental and scientific studies on Balkan ceramic production, distribution and use.

Global Tectonics - Philip Kearey 2013-05-28
The third edition of this widely acclaimed textbook provides acomprehensive introduction to all aspects of global tectonics, andincludes major revisions to reflect the most significant recentadvances in the field. A fully revised third edition of this highly acclaimed textwritten by eminent authors including one of the pioneers of platetectonic theory Major

revisions to this new edition reflect the mostsignificant recent advances in the field, including new andexpanded chapters on Precambrian tectonics and the supercontinentcycle and the implications of plate tectonics for environmentalchange Combines a historical approach with process science to providea careful balance between geological and geophysical material inboth continental and oceanic regimes Dedicated website available at ahref="http://www.blackwellpublishing.com/kearey/"www.blackwellpublishing.com/kearey//a

Metamorphic Textures - Alan Spry 2013-10-22
Metamorphic Textures provides definitions, descriptions and illustrations of metamorphic textures, as well as the fundamental processes involved in textural development. This book is composed of 11 chapters and begins with a presentation of the metamorphic processes and the production of metamorphic minerals. The subsequent chapters describe the structural classification of grain boundaries, the metamorphic reactions, mineral transformations, and the crystallization and recrystallization of metamorphic rocks. These topics are followed by the texture examination of thermal metamorphic rocks and minerals and the preferred orientations of these rocks, particularly the dimensional and lattice preferred orientation. Other chapters survey the textures of rocks under dynamic and shock metamorphism. The final chapters describe the textures of regional and polymetamorphism. This book will be of great use to petrologists, physicists, and graduate and undergraduate petrology students.

Low Temperature Metamorphism - Martin Frey 1987

Kimberlites - Roger H. Mitchell 2013-06-29
This is a book about the petrology of kimberlites. It is

not about upper mantle xenoliths, diamonds, or prospecting for kimberlites. The object of the book is to provide a comprehensive survey and critique of the advances which have been made in kimberlite studies over the last twenty-five years. Kimberlites are rare rock types; however, their relative obscurity is overriden by their economic and petrological importance to a degree which is not shared with the commoner varieties of igneous rocks. Kimberlites are consequently of interest to a diverse group of earth scientists, ranging from isotope g~ochemists concerned with the evolution of the mantle, to volcanologists pondering the origins of diatremes, to exploration geologists seeking new occurrences of the diamondiferous varieties. A common factor essential to all of these activities is a thorough understanding of the characteristics of kimberlites. For the petrologist, kimberlites are exciting and challenging objects for study. Their petrographic diversity, complex mineralogy and geochemistry, and unusual style of intrusion provide endless opportunities for stimulating hypothesis and conjecture concerning their origin and evolution. Kimberlites are a part of a wide spectrum of continental intra-cratonic magmatism. Only by understanding all of the parts of this activity in detail may we make progress in our understanding of the whole.

Metamorphism and Metamorphic Belts - Akiho Miyashiro 2012-12-06

My book Metamorphic Rocks and Metamorphic Belts (in Japanese) was published by Iwanami Shoten, Publishers, in Tokyo in 1965. A few years later, Mr D. Lynch-Blosse of George Allen & Unwin Ltd contacted me to explore the possibility of translating it into English. Thus, translation accompanied by rewriting of substantial parts of the book was made in subsequent years, resulting in the present book Metamorphism and Metamorphic Belts. This title was chosen to emphasize the

tectonic Significance of metamorphic belts. Metamorphic geology has a long history. The microscopic description and classification of metamorphic rocks began in the late nineteenth century. The theory of equilibrium mineral assemblages began in the first half of the twentieth century. Detailed mineralogical studies and the experimental determination of the pressure-temperature conditions of metamorphism began in the 1950s. The importance of metamorphic petrology in our understanding of the tectonic processes has been realized only in the past decade. This book is intended to synthesize the mineralogic, petrologic" and tectonic aspects of metamorphism. Advanced treatment of the thermodynamic and structural aspects is not intended.

Tectonics of the Indonesian Region - Warren Bell Hamilton 1979

Petrology of Igneous and Metamorphic Rocks - Donald W. Hyndman 1985

Migmatites and the Origin of Granitic Rocks - Karl Richard Mehnert 1968

Essentials of Geology - Stephen Marshak 2019-01-16

A hands-on, visual learning experience for physical geology

Mineral Resources of Mongolia - Ochir Gerel 2021-12-04

This book provides a brief geology, tectonic structure and metallogeny of Mongolia, central part of the giant Central Asian Orogenic Belt, and broad overview of major metallic (copper, gold, rare metals and rare earths, iron, lead and zinc, silver and platinum group), non-metallic (phosphorite and fluorspar) and fuel (uranium and coal) mineral deposits and occurrences, covering their tectonic position, metallogeny and deposit types, geological characteristics and origin, including newly found deposits and occurrences based on authors research data and a large information obtained during geological exploration work. The book is intended for professional economic

geologists, for earth science students and practicing geologists.

Slate as Dimension Stone - Jörn Wichert 2020-02-20

This book offers a comprehensive review devoted exclusively to slate as dimension stone. Beginning with a description of the slate as dimension stone, the book describes the origin of slate and related geological phenomena. It thoroughly explains key data acquisition methods and techniques, which are accompanied by extensive data. In turn, slate standards are introduced and compared with regard to their importance for product quality. The book covers in detail the specific petrographical, fabric, strength, physical properties and weathering behaviour of slates. The chapter on mining and production provides an overview of the different forms of exploitation and related geotechnical aspects, together with production and workflow design, from the beginning to the final product. The second part comprises a thorough description of worldwide slate deposits and their geology, properties and appearance as well as a brief introduction of the history. Given its scope and accessible format, the book represents an essential guide for scientists, engineers, and professionals in geology, conservation science, architecture, and mining, as well as readers who are active in the slate industry.

Sustainable Energy and Environment - Sandeep Narayan Kundu 2019-09-20

Here is a comprehensive introductory discussion of Earth, energy, and the environment in an integrated manner that will lead to an appreciation of our complex planet. The book looks at Earth from the perspective of a livable planet and elaborates on the surface and subsurface processes and the various energy cycles where energy is transformed and stored in the planet's various spheres. The chapters discuss the interactions between the different parts of Earth—how energy is exchanged between

the atmosphere, hydrosphere, biosphere, and geosphere, and how they impact the environment in which we live.

Applied Mining Geology - Marat Abzalov 2016-08-10

This book provides a detailed overview of the operational principles of modern mining geology, which are presented as a good mix of theory and practice, allowing use by a broad range of specialists, from students to lecturers and experienced geologists. The book includes comprehensive descriptions of mining geology techniques, including conventional methods and new approaches. The attributes presented in the book can be used as a reference and as a guide by mining industry specialists developing mining projects and for optimizing mining geology procedures. Applications of the methods are explained using case studies and are facilitated by the computer scripts added to the book as Electronic Supplementary Material.

Low-Grade Metamorphism - M. Frey 2009-07-15

Low-Grade Metamorphism explores processes and transformations in rocks during the early stages of metamorphic recrystallization. There has been little analysis and documentation of this widespread phenomenon, especially of the substantial and exciting advances that have taken place in the subject over the last decade. This book rectifies that shortfall, building on the foundations of Low-Temperature Metamorphism by Martin Frey (1987). The editors have invited contributions from an internationally acknowledged team of experts, who have aimed the book at advanced undergraduate and graduate students as well as researchers in the field. Contributions from internationally acknowledged experts. Documents the substantial and exciting advances that have taken place in the subject over the last decade.

A Pictorial Guide to Metamorphic Rocks in the Field - Kurt Hollocher 2014-11-21

This book is an illustrative introduction to metamorphic rocks as seen in the field, designed for advanced high school to graduate-level earth science and geology students to jump-start their observational skills. In addition to photographs of rocks in the field, there are numerous line diagrams and examples of metamorphic features shown in thin se

Geoheritage and Geotourism Resources - Nicoletta Santangelo 2021-01-20

This Special Issue outlines the role of geoheritage and geotourism as potential touristic resources of a region. The term “geoheritage” refers to a particular type of natural resources represented by sites of special geological significance, rarity or beauty that are representative of a region and of its geological history, events, and processes. These sites are also known as “geosites” and, as well as archaeological, architectonic, and historical sites, can be considered as part of the cultural estate of a country. “Geotourism” is an emerging type of sustainable tourism, which concentrates on geosites, focusing on visitor knowledge, environmental education, and amusement. Geotourism may be very useful for geological sciences divulgation and may provide additional opportunities for the development of rural areas, generally not included among the main touristic attractions. The collected papers focused on these main topics with different methods and approaches and can be grouped as follows: i) papers dealing with geosite promotion and valorization in protected areas; ii) papers dealing with geosite promotion and valorization in non-protected areas; iii) papers dealing with geosite promotion by exhibition, remote sensing analysis, and apps; iv) papers investigating geotourism and geoheritage from tourists’ perspectives.

Metamorphic Phase Equilibria and Pressure-temperature-time Paths -

Frank S. Spear 1993

California Geology - Deborah Reid Harden 1998
Introducing basic principles, this book presents a picture of Californian geology. With California plate tectonics as a central theme, it contains examples of catastrophic natural disasters, excerpts from Californian history and mining methods, and the societal impacts of geologic processes.

Petrogenesis of Metamorphic Rocks - Kurt Bucher 2013-04-17
Metamorphic rocks are one of the three classes of rocks. Seen on a global scale they constitute the dominant material of the Earth. The understanding of the petrogenesis and significance of metamorphic of geological education. rocks is, therefore, a fundamental topic There are, of course, many different possible ways to lecture on this theme. This book addresses rock metamorphism from a relatively pragmatic view point. It has been written for the senior undergrad uate or graduate student who needs practical knowledge of how to interpret various groups of minerals found in metamorphic rocks. The book is also of interest for the non-specialist and non-petrolo gist professional who is interested in learning more about the geolo gical messages that metamorphic mineral assemblages are sending, as well as pressure and temperature conditions of formation. The book is organized into two parts. The first part introduces the different types of metamorphism, defines some names, terms and graphs used to describe metamorphic rocks, and discusses principal aspects of metamorphic processes. Part I introduces the causes of metamorphism on various scales in time and space, and some principles of chemical reactions in rocks that accompany metamorphism, but without treating these principles in detail, and presenting the thermodynamic basis for quantitative analysis

of reactions and their equilibria in metamorphism. Part I also presents concepts of metamorphic grade or intensity of metamorphism, such as the metamorphic-facies concept.

Applied Mineralogy - Swapna Mukherjee 2012-03-05

This book covers the entire spectrum of mineralogy and consolidates its applications in different fields. Part I starts with the very basic concept of mineralogy describing in detail the implications of the various aspects of mineral chemistry, crystallographic structures and their effects producing different mineral properties. Part II of the book describes different aspects of mineralogy like geothermobarometry, mineral thermodynamics and phase diagrams, mineral exploration and analysis, and marine minerals. Finally Part III handles the applications in industrial, medicinal and environmental mineralogy along with precious and semiprecious stone studies. The various analytical techniques and their significance in handling specific types of mineralogical problems are also covered.

The Worldwide List of Alternative Theories and Critics - Jean de Climont 2020-11-01

This list (only avalailable in english language) includes scientists involved in scientific fields. The 2021 issue of this directory includes the scientists found in the Internet. The scientists of the directory are only those involved in physics (natural philosophy). The list includes about 10 000 names of scientists (doctors or diplome engineers for more than 70%). Their position is shortly presented together with their proposed alternative theory when applicable. There are more than 2500 authors of such theories, all amazingly very different from one another. Ce répertoire, exclusivement disponible en langue anglaise, inclut les scientifiques, exclusivement dans le domaine de la physique. L'édition 2021 de cette liste comporte près de 10 000 noms de scientifiques, (docteurs ou ingénieurs à plus

de 70%). Elle précise leur position de manière succincte et expose, le cas échéant, les lignes directrices de la solution alternative qu'ils proposent. Il y a ainsi plus de 2500 auteurs de telles théories, toutes remarquablement différentes.

Low-Temperature Thermochronology: - Peter W. Reiners 2018-12-17

Volume 58 of Reviews in Mineralogy and Geochemistry presents 22 chapters covering many of the important modern aspects of thermochronology. The coverage of the chapters ranges widely, including historical perspective, analytical techniques, kinetics and calibrations, modeling approaches, and interpretational methods. In general, the chapters focus on intermediate- to low-temperature thermochronometry, though some chapters cover higher temperature methods such as monazite U/Pb closure profiles, and the same theory and approaches used in low-temperature thermochronometry are generally applicable to higher temperature systems. The widely used low- to medium-temperature thermochronometric systems are reviewed in detail in these chapters, but while there are numerous chapters reviewing various aspects of the apatite (U-Th)/He system, there is no chapter singularly devoted to it, partly because of several previous reviews recently published on this topic.

Petrogenesis of Metamorphic Rocks - Helmut G.F. Winkler 2012-12-06

The last fifteen years have witnessed an amazing development of petrology. During this time it became readily feasible to investigate reactions at high temperatures and pressures. The new experimental techniques were immediately applied in the fields of mineralogy and petrology and, at present, research activity continues unabated. The aim of these in vestigations is the elucidation of the origin of magmatic and, particularly, of metamorphic rocks. Only a few years ago,

the second editions of the well-known textbooks by TURNER and VERHOOGEN (1960) and by BARTH (1962) were published. But even since that time, our knowledge of metamorphic petrology has been augmented by numerous experimental investigations and by new petrographic observa tions as well. Such rapid growth warrents an evaluation of the accumulated knowledge bearing on the origin of meta morphic rocks. With this thought in mind, the present book was written. The treatment purposely stresses the mineral ogical-chemical aspects of metamorphism. The discussion is mainly concerned with the reactions, which transform the mineralogical composition of a rock, when subjected to meta morphic conditions within the earth's crust. "The question of the general relationship between the minerals and the mineral associations, on the one hand, and temperature and pressure, on the other, is the real core of the study of metamorphic rocks" (BARTH, 1962).

Petrofabric analysis of metamorphic rocks is not discussed, because this is a special field of study.

Petrochronology - Matthew J. Kohn 2018-03-27

Petrochronology is a rapidly emerging branch of Earth science that links time (ages or rates) with specific rock-forming processes and their physical conditions. It is founded in petrology and geochemistry, which define a petrogenetic context or delimit a specific process, to which chronometric data are then linked. This combination informs Earth’s petrogenetic processes better than petrology or geochronology alone. This volume and the accompanying short courses address three broad categories of inquiry. Conceptual approaches chapters include petrologic modeling of multi-component chemical and mineralogic systems, and development of methods that include diffusive alteration of mineral chemistry. Methods chapters address four main analytical techniques,

specifically EPMA, LA-ICP-MS, SIMS and TIMS. Mineral-specific chapters explore applications to a wide range of minerals, including zircon (metamorphic, igneous, and detrital/Hadean), baddeleyite, REE minerals (monazite, allanite, xenotime and apatite), titanite, rutile, garnet, and major igneous minerals (olivine, plagioclase and pyroxenes). These applications mainly focus on metamorphic, igneous, or tectonic processes, but additionally elucidate fundamental transdisciplinary progress in addressing mechanisms of crystal growth, the chemical consequences of mineral growth kinetics, and how chemical transport and deformation affect chemically complex mineral composites. Most chapters further recommend areas of future research.

Introduction to Optical Mineralogy - William D. Nesse 1991

This is an ideal textbook for both advanced undergraduates and graduate students. It contains valuable coverage of the optical properties of minerals, as well as up-to-date descriptions of common rock-forming minerals. The chapters on optical theory include discussions of the nature and properties of light, the petrographic microscope, and the behavior of light in isotropic materials and in uniaxial and biaxial anisotropic materials. Thoroughly revised to include recent developments in the field, the book includes step-by-step procedures to guide students through the determination of all optical properties by which minerals are routinely identified with a petrographic microscope. Readers will find descriptive information on over 125 common rock forming minerals, and many photomicrographs and illustrations. The book also includes a flow sheet to guide students through the process of identifying an unknown mineral.

Igneous and Metamorphic Petrology - Myron G. Best 2013-05-20

Igneous and metamorphic

petrology has over the last twenty years expanded rapidly into a broad, multifaceted and increasingly quantitative science. Advances in geochemistry, geochronology, and geophysics, as well as the appearance of new analytical tools, have all contributed to new ways of thinking about the origin and evolution of magmas, and the processes driving metamorphism. This book is designed to give students a balanced and comprehensive coverage of these new advances, as well as a firm grounding in the classical aspects of igneous and metamorphic petrology. The emphasis throughout is on the processes controlling petrogenesis, but care is taken to present the important descriptive information so crucial to interpretation. One of the most up-to-date synthesis of igneous and metamorphic petrology available. Emphasis throughout on latest experimental and field data. Igneous and metamorphic sections can be used independently if necessary.

Volcanic Unrest - Joachim Gottsmann 2018-12-18
This open access book summarizes the findings of the VUELCO project, a multi-disciplinary and cross-boundary research funded by the European Commission's 7th framework program. It comprises four broad topics: 1. The global significance of volcanic unrest 2. Geophysical and geochemical fingerprints of unrest and precursory activity 3. Magma dynamics leading to unrest phenomena 4. Bridging the gap between science and decision-making Volcanic unrest is a complex multi-hazard phenomenon. The fact that unrest may, or may not lead to an imminent eruption contributes significant uncertainty to short-term volcanic hazard and risk assessment. Although it is reasonable to assume that all eruptions are associated with precursory activity of some sort, the understanding of the causative links between subsurface processes, resulting unrest signals and imminent eruption is incomplete. When a

volcano evolves from dormancy into a phase of unrest, important scientific, political and social questions need to be addressed. This book is aimed at graduate students, researchers of volcanic phenomena, professionals in volcanic hazard and risk assessment, observatory personnel, as well as emergency managers who wish to learn about the complex nature of volcanic unrest and how to utilize new findings to deal with unrest phenomena at scientific and emergency managing levels. This book is open access under a CC BY license.

Elements of Geochemistry, Geochemical Exploration and Medical Geology - K. R. Randive 2013

Berryessa Snow Mountain National Monument - Eldridge M. Moores 2020-05

"Exploring the Berryessa Region tells the story of a landscape, just west of Sacramento and north of San Francisco, born through plate tectonic forces. The Berryessa Region anchors the southern end of the Berryessa Snow Mountain National Monument and holds geologic wonders including subduction zones, thrust faults, ophiolites, turbidites, mud volcanoes, and pull apart basins. These features nurture world-renowned biological diversity which, over time, has fostered a rich history of human cultures--including Native Americans. Today recreational opportunities draw new visitors with hiking, camping, birding, botanizing, horse riding, boating, and managed off-highway vehicle use. Regional ecosystem services include water, forests, and ranchlands. Full of rich details, this book helps visitors explore this fascinating region by car and discover how regional diversity developed. Readers can use the mile by mile descriptions as a field guide to explore these geological, ecological, and historical features for themselves."--Back cover.