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Geoarchaeology in Action Interpretation of Micromorphological Features of Soils and Regoliths Soil Micromorphology Soil Micromorphology: Studies in Management and Genesis Interpretation of Micromorphological Features of Soils and Regoliths A Developmental, Phylogenetic and Taxonomic Study on the Moss Genus Taxithelium Mitt. (Pylaisiadelphaceae) Soil Micromorphology Archaeological Soil and Sediment Micromorphology Applied Soils and Micromorphology in Archaeology Microvascular Corrosion Casting in Scanning Electron Microscopy New Trends in Soil Micromorphology Soil Micromorphology Ecological, Morphological, Micromorphological and Molecular Analyses of the Species in the Hexastylis Heterophylla Complex Micromorphology of Soils Bibliography of Agriculture Studies of Micromorphology and Current Efficiency of Zinc Electrodeposited from Flowing Chloride Electrolytes Egyptian Journal of Soil Science Micro-morphological Studies of Soft Rot Fungi in Wood Soil Micromorphology and Soil Classification Studies on Morphology and Bio- Markers of Some Sudanese Acacia Seeds Soil Micromorphology Integrating Paleoclimate, Stratigraphy, Sedimentology & Paleontology in Human Evolution and

Dispersal Studies - from Early Hominins to the Holocene Sociobiology Functional Micromorphology of the Echinoderm Skeleton Guidelines for Analysis and Description of Soil and Regolith Thin Sections Teucrium Species: Biology and Applications Botany: An Introduction to Plant Biology Micromorphology of Soils Simple Methods to Study Pedology and Edaphology of Indian Tropical Soils The Soils of Turkey Encyclopedia of Soil Science Micromorphological Analysis of Activity Areas at the Early Bronze Age (EBA) Village of TAV Afragola in Southern Italy Past Glacial Environments SSSA Special Publication Series The Ancient Human Occupation of Britain The Soils of Georgia Soil Micromorphology Eurasian Soil Science Bulletin MICROMORPHOLOGY IN ARCHAEOLOGY: AN ANALYSIS OF EOLIAN AND ALLUVIAL SITE FORMATION PROCESSES IN THE MIDDLE RÍO NEGRO VALLEY, NORTHERN PATAGONIA, ARGENTINA.

Geoarchaeology in Action Dec 26 2022 First Published in 2002. Routledge is an imprint of Taylor & Francis, an informa company.

Micromorphology of Soils Aug 30 2020 One of the first major studies of weathering and soil formation was made by Harrison (1933) who used thin sections in association with other procedures to study the transformation of minerals in different kinds of rock under the tropical conditions of Guyana. However, Kubiena (1938) is regarded as pioneering thin section studies of soils and during the last two decades there has been a rapid increase in the number of publications devoted almost exclusively to the study of soils in thin sections. In addition to the rather straightforward examinations with the polarizing microscope, thin section techniques are being linked with X-ray diffraction, X-ray microprobe, transmission and scanning electron microscopy, microbiological and other procedures to obtain a fuller insight into the composition and genesis of soils. Thus the study

of thin sections of soils is now a major pedological technique for investigating small details in the nature, type and degree of organization of the soil fabric and structure. Thin sections reveal that particles of various sizes and composition react differently to pedological processes and become weathered or organized to form many specific patterns. This book is an attempt to give a comprehensive treatment of thin section studies of soils. Although primarily about the study of thin sections with optical microscopes a few transmission and scanning electron photomicro graphs are included to confirm the inferences based upon the studies made with the optical microscope.

SSSA Special Publication Series Feb 22 2020

Guidelines for Analysis and Description of Soil and Regolith Thin Sections Dec 02 2020 A revised guide to the study and of soil and regolith thin sections A specialized system of terms and concepts must be used to accurately and effectively distinguish and name the microscopic features of soils and regoliths. With a comprehensive, consistent terminology at their disposal, researchers may compare, store and discuss new data easily and with less risk of error. The second edition of Guidelines for Analysis and Description of Soil and Regolith Thin Sections has been assembled to address this need, offering a practical system of analysis and description to those working with soil and regolith materials. This essential resource includes: An introduction to micromorphology and its practice Guidelines for the study of thin sections Sections covering the various microscopic features of soils and regoliths Illustrative graphics and colour micrographs Suggested description schemes and data presentation tips By providing an economical, navigable system for the study and documentation of soils and regoliths, Guidelines for Analysis and Description of Soil and Regolith Thin Sections, second edition, offers invaluable guidance for soil scientists, geologists, ecologists, archaeologists and all those concerned with micromorphology.

Soil Micromorphology and Soil Classification Jun 08 2021 Micropedology and soil taxonomy. Micromorphology of alfisols. Microscopy of the cambic horizon. Micromorphology of selected mollic epipedons. Micromorphologycal characterization of histosols. Micromorphology of oxisols. Micromorphology of spodosols. Micromorphology of ultisols. Micromorphology of vertisols. Micromorphology of aridisols.

Soil Micromorphology Jun 20 2022

Eurasian Soil Science Oct 20 2019

Interpretation of Micromorphological Features of Soils and Regoliths Aug 22 2022 Interpretation of Micromorphological Features of Soils and Regoliths, Second Edition, provides researchers and students with a tool for interpreting features observed in soil thin sections and through submicroscopic studies. After an introduction and general overview, micromorphological aspects of regoliths (e.g., saprolites, transported materials) are highlighted, followed by a systematic and coherent discussion of the micromorphological expression of various pedogenic processes. The book is written by an international team of experts in the field, using a uniform set of concepts and terminology, making it a valuable interdisciplinary reference work. The following topics are treated: freeze-thaw features, redoximorphic features, calcareous and gypsiferous formations, textural features, spodic and oxic horizons, volcanic materials, organic matter, surface horizons, laterites, surface crusts, salt minerals, biogenic and pedogenic siliceous materials, other authigenic silicates, phosphates, sulphidic and sulphuric materials, and features related to faunal activity. The last chapters address anthropogenic features,archaeological materials and palaeosoils. Updates the first exhaustive publication on interpretation of micromorphological features, with some new chapters and with a larger number of additional references Covers related topics, making micromorphology

more attractive and accessible for geomorphologists, archaeologists and quaternary geologists Includes thematic treatment of a range of soil micromorphology fields and broadens its applications Features input from a multi-disciplinary team, ensuring thorough coverage of topics related to soil science, archaeology and geomorphology

MICROMORPHOLOGY IN ARCHAEOLOGY: AN ANALYSIS OF EOLIAN AND ALLUVIAL SITE FORMATION PROCESSES IN THE MIDDLE RÍO NEGRO VALLEY, NORTHERN PATAGONIA, ARGENTINA. Aug 18 2019 Based on the results of a previous geoarchaeological study that reconstructed the landscape history of the Middle Río Negro Valley in Northern Patagonia, Argentina, this thesis analyzes previously collected sediments to confirm their depositional context (i.e., eolian or alluvial processes, as well as their depositional forms: alluvial floodplain deposits, eolian loess mantle, or eolian dune), and assess the impacts of eolian and alluvial site formation processes on the preservation of the archaeological record. To determine if the samples are consistent with their previously proposed depositional context a micromorphological analysis was conducted to identify the main characteristics (e.g., mineralogy, texture, shape/rounding, sorting, presence of organic matter, etc.) observed in thin section. The results of this analysis have concluded that the samples are consistent with their previously proposed depositional context. Due to the highly dynamic processes present in the Middle Río Negro Valley, the preservation potential of Late Pleistocene to Middle Holocene archaeological sites is moderate and sites are likely to be located on the older alluvial terraces, either deeply buried by eolian dunes or in the alluvial floodplain deposits. The preservation potential of Late Holocene archaeological sites in the Middle Río Negro Valley is excellent and deposits are likely to be found in the eolian loess mantle and alluvial floodplain deposits. Large parts of the Río Negro Negro Valley have yet to be systematically

surveyed, providing a unique opportunity to further study these environments and to locate previously unidentified archaeological sites.

Micromorphology of Soils Nov 13 2021 One of the first major studies of weathering and soil formation was made by Harrison (1933) who used thin sections in association with other procedures to study the transformation of minerals in different kinds of rock under the tropical conditions of Guyana. However, Kubiena (1938) is regarded as pioneering thin section studies of soils and during the last two decades there has been a rapid increase in the number of publications devoted almost exclusively to the study of soils in thin sections. In addition to the rather straightforward examinations with the polarizing microscope, thin section techniques are being linked with X-ray diffraction, X-ray microprobe, transmission and scanning electron microscopy, microbiological and other procedures to obtain a fuller insight into the composition and genesis of soils. Thus the study of thin sections of soils is now a major pedological technique for investigating small details in the nature, type and degree of organization of the soil fabric and structure. Thin sections reveal that particles of various sizes and composition react differently to pedological processes and become weathered or organized to form many specific patterns. This book is an attempt to give a comprehensive treatment of thin section studies of soils. Although primarily about the study of thin sections with optical microscopes a few transmission and scanning electron photomicro graphs are included to confirm the inferences based upon the studies made with the optical microscope.

Encyclopedia of Soil Science May 27 2020 The Encyclopedia of Soil Science provides a comprehensive, alphabetical treatment of basic soil science in a single volume. It constitutes a wide ranging and authorative collection of some 160 academic articles covering the salient aspects of soil physics, chemistry, biology, fertility, technology, genesis, morphology, classification and

geomorphology. With increased usage of soil for world food production, building materials, and waste repositories, demand has grown for a better global understanding of soil and its processes. longer articles by leading authorities from around the world are supplemented by some 430 definitions of common terms in soil sciences.

Bibliography of Agriculture Oct 12 2021

Soil Micromorphology Apr 06 2021 The book includes selected papers from those presented at the International Working Meeting on Soil Micromorphology in San Antonio, Texas, July 1988. Each section of the book is introduced with an invited plenary paper followed by selected contributed manuscripts. The volume is intended to give the reader insight into the more recent research work involving soil micromorphology and an evaluation of the present day state of the science. New applications of micromorphology to both lunar pedology and archeology are presented. Recently developed methods for staining of microorganisms and thin section fluorescence microscopy are presented. The volume presents a summary of the research findings of the major practitioners of soil morphology and will give the reader insight as to the present state of the discipline. New methods and techniques will be made available to the reader. The book is intended for students, practicing micromorphologists, soil scientists, geologists, and geomorphologists.

Egyptian Journal of Soil Science Aug 10 2021

Functional Micromorphology of the Echinoderm Skeleton Jan 03 2021 Echinoderms elaborate a calcite skeleton composed of numerous plates with a distinct microstructure (stereom) that can be modelled into different shapes thanks to the use of a transient amorphous calcium carbonate (ACC) precursor phase and the incorporation of an intraorganic matrix during biomineralization. A variety of different types of stereom microarchitecture have been distinguished, each of them optimized for

a specific function. For instance, a regular, galleried stereom typically houses collagenous ligaments, whereas an irregular, fine labyrinthic stereom commonly bears muscles. Epithelial tissues, in turn, are usually associated with coarse and dense stereom microfabrics. Stereom can be preserved in fossil echinoderms and a wide array of investigating methods are available. As many case studies have shown, a great deal of important paleobiological and paleoecological information can be decoded by studying the stereom microstructure of extinct echinoderms.

Bulletin Sep 18 2019

Soil Micromorphology Jan 15 2022 Publication of ISSS, ISRIC and CAB

The Soils of Georgia Dec 22 2019 This book provides an extensive overview of the diversity of soils in Georgia. It highlights the soil-forming environment (climate, geology, geomorphology), the characterization of the physical, chemical and morphological (macro-, micro-) properties of soils, the history of soil research in Georgia, and the geographic distribution of different soil types. In addition to describing the soil cover, the book also zones and classifies the soils. Past and current land use issues, ecological properties and implications of soils, and many other aspects are elaborated on; special attention is paid to anthropogenic soil degradation due to the contamination and erosion of soils in Georgia. This comprehensive and richly illustrated book, which includes a wealth of pictures and soil maps, offers an essential field guide for soil scientists, geographers and researchers in related areas.

Botany: An Introduction to Plant Biology Sep 30 2020 Botany: An Introduction to Plant Biology, Seventh Edition provides a modern and comprehensive overview of the fundamentals of botany while retaining the important focus of natural selection, analysis of botanical phenomena, and diversity.

Soil Micromorphology Nov 20 2019 V.1. Techniques and applications -- v.2. Soil genesis.
A Developmental, Phylogenetic and Taxonomic Study on the Moss Genus Taxithelium Mitt. (Pylaisiadelphaceae) Jul 21 2022 Mosses are the second largest group of land plants. Hypnales, an order of pleurocarpous mosses, include ca. 50% of all mosses. The family Sematophyllaceae is probably the most diverse Hypnales in the tropics and one of the most complex and taxonomically confused. Traditionally variation in characters of the sporophyte have been used to distinguish genera and even species, but in this study characters of the gametophyte have been found to provide valuable distinctions. This thesis comprises three parts: 1, a micromorphological study of papilla development in Taxithelium and relatives; 2, a phylogenetic study of Taxithelium; and 3, a revision of Taxithelium subgenus Vernieri. 1. Micro-morphological studies on mosses are not common, but can illuminate the nature of taxonomic characters. I present data on the structure and development of leaf cell papillae in different Sematophyllaceae to assess their developmental similarity and also the congruence between papilla morphology and taxonomy. Two kinds of papillae are recognized. One is dome-shaped to conical tapering to a firmly rounded apex ("conical"), whereas the other presents a more flaccid, baggy appearance, and is often flat-topped and wider at the apex than at the base ("baggy"). The two types of papillae are also developmentally distinct: Conical papillae first appear as slight protrusions that gradually increase in height, whereas baggy papillae change shape as they develop. Conical papillae occur in most papillose taxa, whereas baggy papillae are present only on Taxithelium subgenus Taxithelium. 2. In order to test infrageneric classifications and species delimitation within Taxithelium, I constructed a molecular phylogeny using three chloroplast DNA loci (trnL, psbT and rps4), three mitochondrial DNA loci (rps3, nad5 and nad4-5) and a nuclear gene (ho1). Analyses of the loci separately and in various combinations all support the monophyly of

Taxithelium, which is probably of SE Asian origin. Two major clades corresponding to subgenera (see below) were resolved within the genus. The first clade is composed of at least four smaller clades, three of which include only SE Asian plants and one is from the Americas; the latter is nested within the SE Asian clades. The second clade appears to have a Southeast Asia origin and shows two dispersal events to America. Data show that T. merrillii, T. concavum, T. pluripunctatum, T. planissimum and T. isocladum are each demonstrably monophyletic units. On the other hand, T. planum, T. nepalense and T. instratum as circumscribed today are polyphyletic. Taxithelium lindbergii can be considered monophyletic only with the inclusion of T. alare. The ho1 nuclear locus is used for the first time in bryological studies, and with promising results. 3. Taxithelium is highly variable morphologically and includes plants with pluripapillose leaf cells as well as plants that lack papillae. Based on the results above Taxithelium is newly re-circumscribed and includes two subgenera, Taxithelium and Vernieri, that differ in papilla morphology. Detailed morphometric studies were carried out in subgenus Vernieri, individual analyses including different subsets of provisionally recognized groups. Based on these studies, eleven species could be recognized, one from Africa, two from the Americas, and the rest from Southeast Asia and Pacific Islands. A key to identify all the species recognized is provided, as well as full descriptions, nomenclature, distribution maps, etc., of each species. One species, T. damanhurianum, is new to science and is described from Seram, Indonesia.

Microvascular Corrosion Casting in Scanning Electron Microscopy Mar 17 2022 Several methods have been used to demonstrate the vasculature of different organs in man and other species. Many attempts to evaluate the precise microangioarchitecture of organ systems remained unproductive, others were controversial. The development of electron microscope in thirties opend new

perspectives in researching microvascular systems. Transmission electron microscopy provided a two-dimensional view on microcirculatory system at higher magnifications, however, its standardization was delayed unnecessarily. The use of methyl methacrylate and related compounds for obtaining replicas of vascular beds, and their study in scanning electron microscope opened a new window in micromorphological research. For the first time, a three-dimensional image analysis of the vascular system was possible. The microvascular corrosion casting method has meanwhile attracted the interest of many contemporary scientists. Its application to medical and biological problems justify it to be used as a routine method for microvascular investigations. The first investigators who used this method, focused either on methodological details or they dealt with the normal microanatomy of organs. The advantages of this method in demonstrating pathological microvascular patterns are also evident.

Applied Soils and Micromorphology in Archaeology Apr 18 2022 This book uniquely focuses on all aspects of archaeological soil micromorphology, based upon the authors' joint sixty years of worldwide studies.

Ecological, Morphological, Micromorphological and Molecular Analyses of the Species in the Hexastylis Heterophylla Complex Dec 14 2021

Micromorphological Analysis of Activity Areas at the Early Bronze Age (EBA) Village of TAV Afragola in Southern Italy Apr 25 2020

Sociobiology Feb 04 2021

Studies of Micromorphology and Current Efficiency of Zinc Electrodeposited from Flowing Chloride Electrolytes Sep 11 2021

Soil Micromorphology Oct 24 2022 The papers in this volume cover micromorphological studies of a

wide variety of topics, at various scales from ultramicro- to mesoscopic. Topics included are:soil management; soil structure; surface crusts; hardpans and cemented layers; soil biota; soil genesis; hydromorphic soils; paleosols; archeology; and general pedology. The range of papers reflects the growing use of soil micromorphology in understanding soil problems in land-use and the increasing use of quantitative techniques, together with more traditional applications in pedology. The book is well illustrated with micrographs and contains both author and keyword indices.

Past Glacial Environments Mar 25 2020 Past Glacial Environments, Second Edition, presents a revised and updated version of the very successful first edition of Menzies' book, covering a breadth of topics with a focus on the recognition and analysis of former glacial environments, including the pre-Quaternary glaciations. The book is made up of chapters written by various geological experts from across the world, with the editor's expertise and experience bringing the chapters together. This new and updated volume includes at least 45% new material, along with five new chapters that include a section on techniques and methods. Additionally, this new edition is presented in full color and features a large collection of photographs, line diagrams, and tables with examples of glacial environments and landscapes that are drawn from a worldwide perspective. Informative knowledge boxes and case studies are included, helping users better understand critical issues and ideas. Provides the most complete reference concerning the study of glacial processes and their geological, sedimentological, and geomorphological products Comprised of chapters written by various geological experts from across the world Includes specific case studies to alert readers to important ideas and issues Uses text boxes throughout to explain key concepts from glacial literature Presents full color photographs, line diagrams, and tables throughout

Archaeological Soil and Sediment Micromorphology May 19 2022 Archaeological Soil and

Sediment Micromorphology goes beyond a mere review of current literature and features the most up to date contributions from numerous scientists working in the field. The book represents a groundbreaking and comprehensive resource covering the plethora of applications of micromorphology in archaeology. Archaeological Soil and Sediment Micromorphology offers researchers, students and professionals a systematic tool for the interpretation of thin sections of archaeological contexts. This important resource is also designed to help stimulate the use of micromorphology in archaeology outside Europe, where the technique is less frequently employed. Moreover, the authors hope to strengthen the proper application of soil micromorphology in archaeology, by illustrating its possibilities and referring in several cases to more specialized publications (for instance in the field of plant remains, pottery and phytoliths). Written for anyone interested in the topic, this important text offers: Contributions from most of the world's leading authorities on soil micromorphology A series of chapters on the major topics selected among the most recurrent in literature about archaeological soil micromorphology Systematic descriptions of all important micromorphological features Special analytical tools employed on thin sections, such as SEM/EDS, image analysis, fluorescence microscopy, mass spectrometry, among others Numerous cross-references 400 illustrated full-colour plates The resource provides the most current and essential information for archaeologists, geoarchaeologists, soil scientists and sedimentologists. Comprehensive in scope, Archaeological Soil and Sediment Micromorphology offers professionals and students a much-needed tool for the interpretation of thin sections of archaeological contexts.
Soil Micromorphology: Studies in Management and Genesis Sep 23 2022 The papers in this volume cover micromorphological studies of a wide variety of topics, at various scales from ultramicro- to mesoscopic. Topics included are: soil management; soil structure; surface crusts; hardpans and

cemented layers; soil biota; soil genesis; hydromorphic soils; paleosols; archeology; and general pedology. The range of papers reflects the growing use of soil micromorphology in understanding soil problems in land-use and the increasing use of quantitative techniques, together with more traditional applications in pedology. The book is well illustrated with micrographs and contains both author and keyword indices.

The Ancient Human Occupation of Britain Jan 23 2020 The Ancient Human Occupation of Britain Project (AHOB) funded by the Leverhulme Trust began in 2001 and brought together researchers from a range of disciplines with the aim of investigating the record of human presence in Britain from the earliest occupation until the end of the last Ice Age, about 12,000 years ago. Study of changes in climate, landscape and biota over the last million years provides the environmental backdrop to understanding human presence and absence together with the development of new technologies. This book brings together the multidisciplinary work of the project. The chapters present the results of new fieldwork and research on old sites from museum collections using an array of new analytical techniques. Features an up-to-date treatment of the record of human presence in the British Isles during the Palaeolithic period (700,000 - 10,000 years before present) Takes multidisciplinary approach that includes archaeology, geochemistry, geochronology, stratigraphy and sedimentology Coincides with the culmination of the AHOB project in 2010, providing a benchmark statement on the record of human occupation in Britain that can be utilized and tested by future research

Teucrium Species: Biology and Applications Nov 01 2020 Teucrium species are an intersting object of research in the various aspects of science with multiple applications. With more than 300 species, Teucrium is one of the largest and well distributed genera of the Lamiaceae family. Known

medicinal Teucrium species have a long traditional use as well as different potential applications in pharmacy, food and beverage industry. Teucrium species are very rich in a variety of secondary metabolites with significant biological activities. Based on that, the book contains 15 chapters which discusses recent advances in exploring the unique features of Teucrium species including morphology, systematics, taxonomy, biogeography, ethnobotany, phytochemistry, biological activity such as genotoxic, antioxidant, antibacterial, antifungal, antiviral, anticancer, anticholinesterase, antidiabetic and anti-inflammatory activity of secondary metabolites as well as applications including current challenges and further perspectives. Some medicinal Teucrium species in excessive use can cause certain consequences. This phenomenon and precaution is also described. Whilst this book is primarily aimed at scientists, researchers, beginners in the investigations of Teucrium species, graduate and post-graduate students in biology, botany, biotechnology, agriculture, and pharmacy, as well as science enthusiasts and practitioners involved in medicinal plants applications. Book provides complete Teucrium species list, color photographs of selected Teucrium species on natural habitats, as well as up-to-date bibliography related to Teucrium genus.

The Soils of Turkey Jun 27 2020 This book compiles all available and relevant information concerning the soils of Turkey, including the soil survey studies conducted by universities and governmental institutes from the early 1950s until today. Recent findings and advances include the description and analyses of new profiles from some parts of the country by the chapter authors; reflecting the latest version of the World Reference Base (WRB) soil system, they produce a refined soil map. The book offers valuable guidance on soil management for planners of agricultural strategies, land management experts concerned with terrestrial carbon management (soil-sequestered and biomass carbon) and climate change mitigation, and educators concerned with

raising awareness for the long-neglected significance of Turkey's soils.

Integrating Paleoclimate, Stratigraphy, Sedimentology & Paleontology in Human Evolution and Dispersal Studies - from Early Hominins to the Holocene Mar 05 2021

Studies on Morphology and Bio- Markers of Some Sudanese Acacia Seeds May 07 2021 Taxonomy of Acacia gain much importance in systematics. Acacia face the problems in their identification due to confusion in some morphological (macromorphology) characters, but these problems can be overcomed by using classical and applied approaches of taxonomy. Classical approaches are morphology and anatomy whereas the applied approaches include their biochemical analysis. This book is a comprehensive treatment of the subject matter relating to the identification and taxonomy of some important Acacia trees in Sudan by using macro and micromorphology and biochemical markers of seeds.

Micro-morphological Studies of Soft Rot Fungi in Wood Jul 09 2021

Simple Methods to Study Pedology and Edaphology of Indian Tropical Soils Jul 29 2020 This book discusses how research efforts have established an organic link between pedology and edaphology of five pedogenetically important soil orders as Alfisols, Mollisols, Ultisols, Vertisols and Inceptisols of tropical Indian environments. The book highlights how this new knowledge was gained when research efforts were complemented by high resolution mineralogical, micro morphological and age-control tools. This advancement in basic and fundamental knowledge on Indian tropical soils makes it possible to develop several index soil properties as simple methods to study their pedology and edaphology. More than one-third of the world's soils are tropical soils. Thus the recent advances in developing simple and ingenuous methods to study pedology and edaphology of Indian tropical soils may also be adopted by both graduate students and young soil researchers to aid in the

development of a national soil information system to enhance crop productivity and maintain soil health in the 21st century.

New Trends in Soil Micromorphology Feb 16 2022 The soil water retention curve, the saturated hydraulic conductivity and the unsaturated hydraulic conductivity function are basic soil hydraulic functions and parameters. Ample apprehension of the soil hydraulic functions and parameters is required for a successful formulation of the principles leading to sustainable soil management, agricultural production and environmental protection. From these, all the other parameters, required in the solution of the practical tasks, are derived. The basic soil hydraulic functions are strongly dependent upon the soil porous system. The development of models is characteristic by the gradual transition from the simplest concepts up to the sophisticated approaches, which should correspond to the visual reality studied by soil micromorphology. 2 Soil Porous System and Soil Micromorphometry 2.1 An Overview on the Quantification of the Soil Porous System Quanti? cation of the soil porous system consists of classi? cation of soil pores, ch- acterization of the soil pores shapes and the estimation of the pore size distribution function. When the hydraulic functions of the soil pores are considered, the following laws of hydrostatics and hydrodynamics are applied as best ? tting to the classi? cation criteria of the size of the pores (Kutilek and Nielsen 1994, p. 20, Kutilek 2004): A. Submicroscopic pores that are so small that they preclude clusters of water molecules from forming ? uid particles or continuous water ? ow paths.

Interpretation of Micromorphological Features of Soils and Regoliths Nov 25 2022 Interpretation of Micromorphological Features of Soils and Regolith, 2nd edition, provides researchers and students with a global tool for interpretation of micromorphological features of regoliths and soils. After an introduction and general overview by the editors, micromorphological aspects of regoliths (e.g.

saprolites, unconsolidated sediments, transported materials) are highlighted, followed by a systematic and coherent discussion of the micromorphological expression of various pedogenic processes. This is done by discussing diagnostic horizons, materials and processes. The following topics are also treated: freeze-thaw features, redoximorphic features, calcareous and gypsiferous formations, textural features, spodic and oxic horizons, andic and volcanic materials, organic and surface horizons, laterites, surface crusts, salts, biogenic and inorganic siliceous materials, authigenic silicates, phosphates, thionic and derived materials, and features related to faunal activity. The last chapters address the impact of anthropic activities, with regard to archaeology and palaeopedology. Interpretation of Micromorphological Features of Soils and Regolith, 2nd edition, is written by a team of well-known, global experts in the field who all used a single set of concepts and terminology, making it a valuable interdisciplinary reference. The first exhaustive publication on interpretation of micromorphological features Covers related topics, making micromorphology more attractive and accessible for geographers, archaeologists and quaternary geologists Thematic treatment of a range of soil micromorphology fields broadens the content’s applications Authored by a multi-disciplinary team, ensuring thorough coverage of archaeological, geological, and earth science disciplines