

Proceedings Of The Soil Forensics Special 6th European Academy Of Forensic Science Conference The Hague

This professionally edited and well organized book is the first in a series which will archive key presentations from the annual conferences sponsored by the Society of Environmental Forensics.

The field of forensic anthropology has evolved dramatically in the past 40 years, as technological advances have led to new research initiatives and extended applications. This robust, dynamic, and international field has grown to include interdisciplinary research, continually improving methodology, and globalization of training. Reflecting the di

First published in 1975 and updated in 1992, Forensic Geology by Raymond C. Murray and John C. F. Tedrow was a classic in its field. Now Murray has thoroughly revised and updated that earlier work to produce Evidence from the Earth: Forensic Geology and C

The third edition of Introduction to Environmental Forensics is a state-of-the-art reference for the practicing environmental forensics consultant, regulator, student, academic, and scientist, with topics including compound-specific isotope analysis (CSIA), advanced multivariate statistical techniques, surrogate approaches for contaminant source identification and age dating, dendroecology, hydrofracking, releases from underground storage tanks and piping, and contaminant-transport modeling for forensic applications. Recognized international forensic scientists were selected to author chapters in their specific areas of expertise and case studies are included to illustrate the application of these methods in actual environmental forensic investigations. This edition provides updates on advances in various techniques and introduces several new topics. Provides a comprehensive review of all aspects of environmental forensics Coverage ranges from emerging statistical methods to state-of-the-art analytical techniques, such as gas chromatography-combustion-isotope ratio mass spectrometry and polytopic vector analysis Numerous examples and case studies are provided to illustrate the application of these forensic techniques in environmental investigations

A Companion to Forensic Anthropology presents the most comprehensive assessment of the philosophy, goals, and practice of forensic anthropology currently available, with chapters by renowned international scholars and experts. Highlights the latest advances in forensic anthropology research, as well as the most effective practices and techniques used by professional forensic anthropologists in the field Illustrates the development of skeletal biological profiles and offers important new evidence on statistical validation of these analytical methods. Evaluates the goals and methods of forensic archaeology, including the preservation of context at surface-scattered remains, buried bodies and fatal fire scenes, and recovery and identification issues related to large-scale mass disaster scenes and mass grave excavation.

This publication includes peer-reviewed manuscripts from the 2011 International Network of Environmental Forensics (INEF) Conference held at St. John's College in Cambridge, UK. INEF is an organization founded by environmental forensic scientists for the express purpose of sharing and disseminating environmental forensic information to the international scientific community. Environmental forensic information presented at this conference included topics on contaminant age dating, the use of chemical and biological diagnostic markers for contaminant source identification, advancements in the use of petroleum hydrocarbon pattern recognition techniques, the availability of surrogate chemicals to identify the age of a contaminant release, the identification and application of chemical impurities for source identification and advancements in compound specific isotopic analysis, especially related to chlorinated solvent releases. All of these topics were presented in terms of their applications in contaminant releases throughout the world in terrestrial and marine environments. This professionally edited book is the second of a series of INEF conference publications chronicling the current state of the art in environmental forensics. The intent of this publication and subsequent INEF conference volumes is to capture the evolution of environmental forensic topics as a scientific discipline.

This book presents the forensic geoscience in general and, in particular, in Italy and their application to peculiar crimes. Italy is internationally relevant due to the presence of different kinds of “geo-crimes” (in the first place, environmental mafia), and is emblematic to understanding the best way to fight these crimes. This book will not only offer a new view point to comprehending these “geo-crimes”, but also fresh and updated results of the different methods applied to fight against these crimes. This book is unique in that it is not a collection of articles but an individual work with the same theme beginning with a state-of-the-art of these disciplines to their international value passing through several case studies.

[Proceedings of the International Symposium on Forensic Toxicology](#)

[Illustrated Pollen Terminology](#)

[Career Opportunities in Forensic Science](#)

[Developments in Soil Classification, Land Use Planning and Policy Implications](#)

[Advances in Theory and Practice](#)

[Particle Size Analysis 1985](#)

[An Introduction](#)

[Forensic Anthropology](#)

[Proceedings of the 2009 INEF Annual Conference](#)

[The Investigation of Failures : Proceedings of the Second International Conference on Forensic Engineering Organized by the Institution of Civil Engineers and Held in London, UK, on 12-13 November, 2001](#)

[The Utility of Arthropods in Legal Investigations, Second Edition](#)

[Science and the Criminal Law](#)

Soils have important roles to play in criminal and environmental forensic science. Since the initial concept of using soil in forensic investigations was mooted by Conan Doyle in his Sherlock Holmes stories prior to real-world applications, this branch of forensic science has become increasingly sophisticated and broad. New techniques in chemical, physical, biological, ecological and spatial analysis, coupled with informatics, are being applied to reducing areas of search by investigators, site identification, site comparison and measurement for the eventual use as evidence in court. Soils can provide intelligence, in assisting the determination of the provenance of samples from artifacts, victims or suspects, enabling their linkage to locations or other evidence. They also modulate change in surface or buried cadavers and hence affect the ability to estimate post-mortem or post-burial intervals, and locate clandestine graves. This interdisciplinary volume explores the conceptual and practical interplay of soil and geoforensics across the scientific, investigative and legal fields. Supported by reviews, case-studies from across the world, and reports of original research, it demonstrates the increasing convergence of a wide range of knowledge. It covers conceptual issues, evidence (from recovery to use in court), geoforensics, taphonomy, as well as leading-edge technologies. The application of the resultant soil forensics toolbox is leading to significant advances in improving crime detection, and environmental and national security.

Scores of talented and dedicated people serve the forensic science community, performing vitally important work. However, they are often constrained by lack of adequate resources, sound policies, and national support. It is clear that change and advancements, both systematic and scientific, are needed in a number of forensic science disciplines to ensure the reliability of work, establish enforceable standards, and promote best practices with consistent application. Strengthening Forensic Science in the United States: A Path Forward provides a detailed plan for addressing these needs and suggests the creation of a new government entity, the National Institute of Forensic Science, to establish and enforce standards within the forensic science community. The benefits of improving and regulating the forensic science disciplines are clear: assisting law enforcement officials, enhancing homeland security, and reducing the risk of wrongful conviction and exoneration. Strengthening Forensic Science in the United States gives a full account of what is needed to advance the forensic science disciplines, including upgrading of systems and organizational structures, better training, widespread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs. While this book provides an essential call-to-action for congress and policy makers, it also serves as a vital tool for law enforcement agencies, criminal prosecutors and attorneys, and forensic science educators.

A Practical Guide to Environmental Crime Scene InvestigationsReleasing contaminants into the environment-whether deliberate or unintentional-can be thought of as a crime against the environment. The role of environmental forensics is to identify and prevent environmental pollution, or crimes. Environmental Forensics Fundamentals: A Practical Guide

Environmental forensics is the application of scientific techniques for the purpose of identifying the source and age of a contaminant. Over the past several years, this study has been expanding as a course of study in academia, government and commercial markets. The US Environmental Protection Agency (EPA), Federal Bureau of Investigation (FBI), and Federal Emergency Management Agency (FEMA) are among the governmental agencies that utilize the study of environmental forensics to ensure national security and to ensure that companies are complying with standards. Even the International Network for Environmental Compliance and Enforcement (INECE), a group supported by the European Commission and the World Bank, utilizes the study of environmental forensics as it applies to terror threats. This title is a hands-on guide for environmental scientists, engineers, consultants and industrial scientists to identify the origin and age of a contaminant in the environment and the issues involved in the process. An expansion of the authors' first title with Academic Press, Introduction to Environmental Forensics, this is a state-of-the-art reference for those exploring the scientific techniques available. Up-to-date compendium for referencing forensic techniques unique to particular contaminants. International scientific unit system Contributors from around the world providing international examples and case studies.

The forensic potential of geological and soil evidence has been recognized for more than a century, but recently these types of evidence are used much more widely as an investigative intelligence tool and as evidence in court. There is, however, still a poor understanding of the potential value and the limitations of geological and soil evidence among the forensic science and wider legal communities. Geological and Soil Evidence: Forensic Applications provides an authoritative introduction to the nature and properties of geological and soil materials that may be used as trace evidence and the techniques used to analyze and evaluate them. It emphasizes the use of geoscience in forensic analyses, including geophysical, meteorological, and geomorphological data. This inclusive book covers material types and analytical strategies used in examining both the common components of geological evidence, such as rocks, dusts, minerals, spores, and microfossils, as well as anthropogenic particles like pottery and brick. It instructs on particle characterization based on physical, chemical, and mineralogical traits such as color, shape, density, and elemental and isotopic composition. It also explains sampling and handling procedures particular to criminalistics and introduces analysis, evaluation, and decision-making practices based on statistical significance and the weighing of different types of evidence. Discussions of basic principles are supported and enhanced with numerous case studies that lie methods of analysis to specific forensic applications. Examples are drawn from the author's own experience as well as the wider scientific literature. Accessible enough for readers with limited scientific knowledge and informative enough for scientists interested in forensic applications. Geological and Soil Evidence: Forensic Applications is a comprehensive reference for the current knowledge of forensic geology and soil science.

The proceedings of International Network of Environmental Forensics Cambridge Conference 2011 held at St John's College, Cambridge, UK on 25-27 July, 2011.

The first edition of Forensic Entomology: The Utility of Arthropods in Legal Investigations broke ground on all levels, from the caliber of information provided to the inclusion of copious color photographs. With over 100 additional color photographs, an expanded reference appendix, and updated information, the second edition has raised the bar for resources in this field, elucidating the basics on insects of forensic importance. New in the Second Edition: A chapter on insect identification that presents dichotomous keys Updates on DNA molecular techniques and genetic markers Coverage of new standardization in forensic entomological analysis Chapters on climatology and thermoregulation in insects 100 new color photographs, making available a total of 650 color photographs Goes Beyond Dramatics to the Nitty Gritty of Real Practice While many books, movies, and television shows have made forensic entomology popular, this book makes it real. Going beyond dramatics to the nitty gritty of actual practice, it covers what to search for when recovering entomological evidence, how to handle items found at the crime scene, and how to use entomological knowledge in legal investigations.

[Proceedings of the First International Conference on Forensic Activation Analysis](#)

[Forensic Microbiology](#)

[Environmental Forensics for Persistent Organic Pollutants](#)

[Forensic Geology and Criminal Investigation](#)

[Proceedings of the 2014 INEF Conference](#)

[Held September 19-21, 1966 at General Atomic Laboratories in San Diego, California](#)

[Forensic Evidence](#)

[A Path Forward](#)

[Chemical and Biological Effects of Buried Human Remains](#)

[Evidence from the Earth](#)

[Geological and Soil Evidence](#)

[Current Research and Future Trends](#)

This updated edition of a textbook universally hailed as an indispensable guide, is a complete introduction to the methods and means of forensic archaeology. Incorporating new advances in the field, new case studies, and charting the growth and development of the subject, Forensic Archaeology examines the four main fields of recovery, search, skeletal analysis and analytical science, and how the concepts and methods of traditional archaeology can be utilized within criminal investigations. The authors provide in-depth chapters that discuss: search and location the various constraints and issues posed by an increasingly complex legal environment the archaeology of individual and mass graves how the subject has evolved to include international investigations of human rights links with forensic anthropology forensic geophysical survey. This is an invaluable resource that will provide students, researchers, academics and the general reader alike with a fascinating introduction to this complex and crucial subject.

Microbial Forensics, Third Edition, serves as a complete reference on the discipline, describing the advances, challenges and opportunities that are integral in applying science to help solve future biocrimes. New chapters include: Microbial Source Tracking, Clinical Recognition, Bioinformatics, and Quality Assurance. This book is intended for a wide audience, but will be indispensable to forensic scientists and researchers interested in contributing to the growing field of microbial forensics. Biologists and microbiologists, the legal and judicial system, and the international community involved with Biological Weapons Treaties will also find this volume invaluable. Presents new and expanded content that includes a statistical analysis of forensic data, legal admissibility and standards of evidence Discusses actual cases of forensic bioterrorism Includes contributions from editors and authors who are leading experts in the field, with primary experience in the application of this fast-growing discipline

This book will present the most advanced research on forensic archaeology presented during the annual European meetings in the last 3 years. Thanks to the broad nature of the chapters presented, this book will show not only different approaches and different crime scenes around Europe, but also how every single European law enforcement has faced forensic investigations. This book shows forensic archaeology as practiced in this legal context, emerging and solidifying in many European countries, differing in some respects because of differences in legal systems but ultimately sharing common grounds. Differently from similar books, this will be not only a collection of research and case studies in which forensic practitioners demonstrate the extent and complexity of the various aspects of forensic archaeology, but also it will show the necessity of co-operation as a condition for any work in forensic archaeology among scientists of different disciplines and law enforcers.

This book provides a fully illustrated compendium of key terms and basic principles in the field of palynology, making it an indispensable tool for all palynologists. It is a revised and extended edition of “Pollen Terminology, An Illustrated Handbook,” released in 2009. This second edition offers additional insights into new and stunning aspects of palynology. Accordingly, the general chapters have been critically revised, expanded and restructured. The chapter “Misinterpretations in Palynology” has been extended to include new research data and additional ambiguous terms, e.g., polyads vs. massulae. The chapter “Methods in Palynology” has been extensively enhanced with illustrated protocols showing most methods and techniques used to study recent and fossil pollen with LM, SEM and TEM. Moreover, additional information on describing and publishing pollen data is provided in the chapter “How to Describe and Illustrate Pollen Grains.” Various other parts of the general chapters have been updated and/or extended with more comprehensive textual passages and new illustrations. The chapter “Illustrated Pollen Terms” now includes new and more appropriate examples of each term, including additional LM micrographs. Where necessary, the entries on pollen terms have been improved with new definitions, illustrations and micrographs. Also, new terms have been added, e.g. “suprasculpture” and the prefix “nano-“ for ornamental features. In turn, the chapter “Illustrated Pollen Terms” is the main part of the book and comprises more than 300 widely used terms illustrated with over 1,000 high-quality images. It provides a detailed survey of the manifold ornamentations and structures of pollen, and offers revealing insights into their stunning beauty.

Introduction to Veterinary and Comparative Forensic Medicine is a ground-breaking book in an emerging new speciality. It reflects the increasing demand for expert opinion by veterinarians and others in courts of law and elsewhere on such matters as: ·wildlife conservation, ·welfare of, and alleged cruelty to, animals, ·insurance, certification and malpractice ·the identification of live and dead species or their derivatives. It also discusses and analyses current concern over possible links between domestic violence and abuse of animals. Throughout the book the emphasis is on the need for a systematic and thorough approach to forensic work. A particular feature is practical advice, with protocols on dealing with common problems, together with case studies, various appendices and an extensive bibliography. A vital reference for members of the veterinary profession, lawyers, enforcement bodies and welfare and conservation organisations. The comparative aspects provide an important source of information for those working in human forensic medicine and the biological sciences.

*Environmental Forensics for Persistent Organic Pollutants represents the state-of-the-art in environmental forensics in relation to persistent organic pollutants (POPs). The book is a complete reference for practitioners and students, covering a range of topics from new analytical techniques to regulatory and legal status in the global community. Through case studies from leading international experts, real-world issues — including the allocation of responsibility for release into the environment — are resolved through the application of advanced analytical and scientific techniques. This book introduces and assesses the development of new techniques and technologies to trace the source and fate of newly emerging and classic POPs (perfluoroalkyl substances, brominated flame retardants, organochlorine pesticides, perfluorinated chemicals, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls) in environmental media, including atmospheric, marine, freshwater, and urban environments. Real-world case studies show the application of advanced analytical and scientific techniques Discussion of GC*GC provides an introduction and assessment of a novel technique from leaders in the field Introduces the development of new analytical techniques (such as 2-D GC*GC and LC*LC) to trace the source and fate Raises awareness about the health and environmental impact of persistent organic pollutants (POPs) Outlines the development of international measures to control POPs so that chemists can understand the legal issues*

Forensic Evidence: Science and the Criminal Law is a comprehensive analysis of the most recent state and federal court decisions addressing the use of forensic science in the investigation and trial of criminal cases. Each case provides a complete overview and analysis of the relevant scientific issues debated by the court in that particular case.

[Forensic Ecogenomics](#)

[Criminal and Environmental Soil Forensics](#)

[Proceedings of the IWS Kamakura 2002 Conference, Japan, 10-12 April 2002](#)

[A Practical Guide](#)

[Environmental Forensics](#)

[Geoforensics](#)

[Foundation Design Codes and Soil Investigation in View of International Harmonization and Performance Based Design](#)

[Forensic Archaeology](#)

[Environmental and Criminal Geoforensics](#)

[Proceedings of the 2011 INEF Conference](#)

[Topics discussed during the European Meetings on Forensic Archaeology \(EMFA\)](#)

[The Application of Microbial Ecology Analyses in Forensic Contexts](#)

The contributions contained in these proceedings are divided into three main sections: theme lectures presented during the pre-workshop lecture series; keynote lectures and other contributed papers; and a translation of the Japanese geotechnical design code.

This introductory volume to a new series on Soil Forensics gives a kaleidoscopic view of a developing forensic expertise. Forensic practitioners and academic researchers demonstrate, by their joint contributions, the extent and complexity of soil forensics. Their reports exemplify the broad range of sciences and techniques applied in all stages of forensic soil examinations, from investigations at crime scenes to providing evidence that can be used in court proceedings. Moreover the necessity is depicted of co-operation as a condition for any work in soil forensics between scientists of different disciplines, but no less between scientists and law enforcers. Soils play a role in environmental crimes and liability, as trace evidence in criminal investigations and, when searching for and evaluating, buried human remains. This book shows soil forensics as practiced in this legal context, emerging and solidifying in many countries all over the world, differing in some respects because of differences in legal systems but ultimately sharing common grounds.

Estimation of the Time Since Death is a current comprehensive work on the methods and research advances into the time since death and human decomposition. This work provides practitioners a starting point for research and practice to assist with the identification and analysis of human remains. It contains a collection of the latest scientific research, various estimation methods, and includes case studies, to highlight methodological application to real cases. This reference first provides an introduction, including the early postmortem period, biochemical methods, and the value of entomology in estimating the time since death, along with other factors affecting the decomposition process. Further coverage explores importance of microbial communities in estimating time since death. Separate chapters on aquatic environments, carbon 14 dating and amino acid racemization, and total body scoring will round out the reference. The final chapter ties together the various themes in the context of the longest running human decomposition facility in the world and outlines future research directions. Provides the first comprehensive reference to bring together all aspects of knowledge relating to the estimation of the post-mortem interval in decomposed human bodies Contains real case studies that underscore key estimation concepts Demonstrates the changing role of technology and advances in the estimation of time since death

This publication is based on peer-reviewed manuscripts from the 2014 International Network of Environmental Forensics (INEF) Conference held at St John's College, Cambridge. INEF is an organization founded by environmental forensic scientists for the express purpose of sharing and disseminating environmental forensic information to the international scientific community. Providing a wide range of up to date topics on the advancement and refinement of environmental forensic techniques, this book ensures the reader gets a good understanding of the scope of environmental forensics. Aimed at scientists, regulators, academics and consultants throughout the world, this professionally edited book is the fourth of a series of INEF conference publications chronicling the current state of the art in environmental forensics. Priced at £125.00 US\$200.00 €156.25

Forensic engineering encompasses any engineering discipline that has the potential to be used for the technical investigation of failures. This volume presents papers from leading experts on how to learn from failures of constructed environments (from serviceability to catastrophic), and on the implications for construction professionals.

Geological techniques are widely used in two aspects of serious criminal investigations: (1) the search for clandestine burial sites, based on near-surface geophysics or through the detection of decomposition signals and (2) the analysis of trace evidence to identify its source location or test the possible association between the trace evidence and a known location of an offence. Although geoforensics is used in such investigations world-wide there are still considerable gaps in the published literature. In addition, there is increasing concern regarding the illegal release of wastes either into the atmosphere, water courses or on to the land surface, and a growing realization that the techniques used in criminal forensics are equally useful in the investigation of environmental crime. This book bridges the gap between environmental and criminal geoforensics with conceptual, methodological and case study contributions. This demonstrates the significant potential that geoforensics holds for investigating and regulatory officers.

Forensic Ecogenomics: The Application of Microbial Ecology Analyses in Forensic Contexts provides intelligence on important topics, including environmental sample provenance, how to indicate the body decomposition timeline to support postmortem interval (PMI) and postmortem submersion interval (PMSI) estimates, and how to enhance identification of clandestine and transit grave locations. A diverse group of international experts have come together to present a clear perspective of forensic ecogenomics that encapsulates cutting-edge, topical and relevant cross-disciplinary approaches vital to the field. Considers the effects of decomposition on bacterial, fungal and mesofaunal populations in pristine ecosystems Examines the role of the microbiome, necrobiome and thanatomiobiome in postmortem interval estimations Focuses on the application of different analytical techniques across forensics to enhance/expand the crime scene investigation toolkit Written by a wide range of international experts in their respective fields

[Proceedings of the Fifth Partical Size Analysis Conference, University of Bradford, Yorkshire, UK, 16-19th September 1985](#)

[Estimation of the Time since Death](#)

[Journal of Forensic sciences](#)

[Proceedings of the Soil Forensics Special, 6th European Academy of Forensic Science Conference, The Hague](#)

[Forensic Applications](#)

[Environmental Forensics Fundamentals](#)

[Soil Analysis in Forensic Taphonomy](#)

[Introduction to Veterinary and Comparative Forensic Medicine](#)

[Introduction to Environmental Forensics](#)

[Strengthening Forensic Science in the United States](#)

[A Companion to Forensic Anthropology](#)

[Innovative Thinking of Soil Inventory for Land Use Planning and Management of Land Resources](#)

As the world's population continues to expand, maintaining and indeed increasing agricultural productivity is more important than ever, though it is also more difficult than ever in the face of changing weather patterns that in some cases are leading to aridity and desertification. The absence of scientific soil inventories, especially in arid areas, leads to mistaken decisions about soil use that, in the end, reduce a region's capacity to feed its population, or to guarantee a clean water supply. Greater efficiency in soil use is possible when these resources are properly classified using international standards. Focusing on arid regions, this volume details soil classification from many countries. It is only once this information is properly assimilated by policymakers it becomes a foundation for informed decisions in land use planning for rational and sustainable uses.

13.4 Tools for the forensic classification of the built environment microbiome

Forensic geology is the application of geology to aid the investigation of crime. A Guide to Forensic Geology was written by the International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG), which was established to promote and develop forensic geology around the world. This book presents the first practical guide for forensic geologists in search and geological trace evidence analysis. Guidance is provided on using geological methods during search operations. This developed following international case work experiences and research over the last 25 years for homicide graves, burials associated with serious and organised crime and counter terrorism. With expertise gained in over 300 serious crime investigations, the guidance also considers geological trace evidence, including the examination of crime scenes, geological evidence recovery and analysis from exhibits and the reporting of results. The book also considers the judicial system, reporting and requirements for presenting evidence in court. Included are emerging applications of geology to police and law enforcement: illegal and illicit mining, conflict minerals, substitution, adulteration, fraud and fakery.

This book is a comprehensive introduction to the application of geoscience to criminal investigations. Clearly structured throughout, the text follows a path from the large-scale application of remote sensing, landforms and geophysics in the first half to the increasingly small-scale examination of rock and soils to trace amounts of material. The two scales of investigation are linked by geoscience applications to forensics that can be applied at a range of dimensions. These include the use of topographic mapping, x-ray imaging, geophysics and remote sensing in assessing whether sediment, rocks or concrete may have hidden or buried materials inside for example, drugs, weapons, bodies. This book describes the wider application of many different geoscience-based methods in assisting law enforcers with investigations such as international and national crimes of genocide and pollution, terrorism and domestic crime as well as accident investigation. The text makes a clear link to the increasingly important aspects of the spatial distribution of geoscience materials (be it soil sampling or the distribution of mud-spatter on clothing), Geographic Information Science and geostatistics. A comprehensive introduction to the application of geoscience to criminal investigation Examples taken from an environmental and humanitarian perspective in addition to the terrorist and domestic criminal cases more regularly discussed A chapter on the use of GIS in criminalistics and information on unusual applications and methods - for example underwater scene mapping and extraterrestrial applications Material on how geoscience methods and applications are used at a crime scene Accompanying website including key images and references to further material An invaluable text for both undergraduate and postgraduate students taking general forensic science degrees or geoscience courses "The whole book is peppered with useful and appropriate examples from the authors' wide experiences and also from the wider literature... an essential purchase for any forensic science department as well as for any law enforcement organisation." Lorna Dawson, Macaulay Institute

Provides job profiles in the field of forensic science; includes education and training resources, certification program listings, professional associations, and more.

A burial environment is a complex and dynamic system. It plays host to an abundance of interdependent chemical, physical, and biological processes, which are greatly influenced by the inclusion of a body and its subsequent decay. However, while taphonomy continues to emerge as a valuable forensic tool, until now most of the attention has been on the cadaver rather than the grave itself. Soil Analysis in Forensic Taphonomy: Chemical and Biological Effects of Buried Human Remains is the first book to concentrate entirely on the telling impact of soil and its components on the postmortem fate of human remains. Examining the basic physicochemical composition of the soil as it relates to forensic science and taphonomy, leading experts from across the world— · Offer an introduction to the nature, distribution, and origin of soil materials in forensic comparisons · Discuss the action of biological soil components, including invertebrates, fungi, and bacteria · Address rates and processes of decomposition and time of death estimates · Detail methods for characterizing and fingerprinting soils · Provide extensive information on the decomposition of hair Edited by Mark Tibbett, a soil microbiologist and David Carter, a forensic scientist, this unique resource provides an up-to-date overview of fundamental scientific principles and methods used in forensic taphonomy from a soils-based perspective. It provides an understanding of the processes at work, as well as practical methods and advice for those involved with active investigation.

In this edited volume on advances in forensic geotechnical engineering, a number of technical contributions by experts and professionals in this area are included. The work is the outcome of deliberations at various conferences in the area conducted by Prof. G.L. Sivakumar Babu and Dr. V.V.S. Rao as secretary and Chairman of Technical Committee on Forensic Geotechnical Engineering of International Society for Soil Mechanics and Foundation Engineering (ISSMGE). This volume contains papers on topics such as guidelines, evidence/data collection, distress characterization, use of diagnostic tests (laboratory and field tests), back analysis, failure hypothesis formulation, role of instrumentation and sensor-based technologies, risk analysis, technical shortcomings. This volume will prove useful to researchers and practitioners alike.

[Forensic Engineering](#)

[Contaminant Specific Guide](#)

[Geoscientists at Crime Scenes](#)

[Microbial Forensics](#)

[A Guide to Forensic Geology](#)

[Multidisciplinary Approaches to Forensic Archaeology](#)

[A Companion to Forensic Geoscience](#)

[Soil in Criminal and Environmental Forensics](#)

[Proceedings of the Canadian Society of Forensic Science](#)

[Forensic Entomology](#)

[Forensic Geotechnical Engineering](#)