



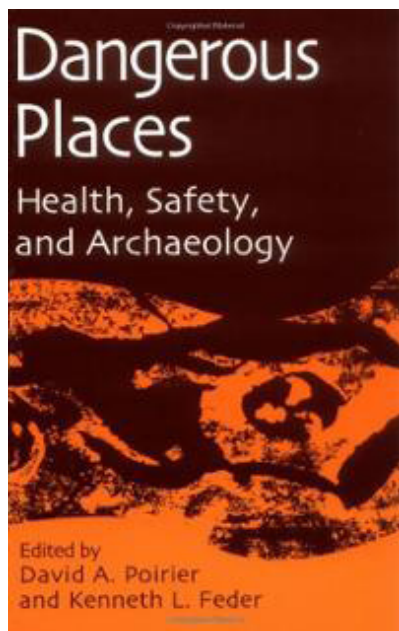
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REVIEWS



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Dangerous Places
Health, Safety and Archaeology
[Ed. David A. Poirier
& Kenneth L. Federer]

Bergin & Garvey
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264 pages

Safety is often taken too lightly; the recent death, in 2010, of Canadian archaeologist Mario Bergeron proves this. Thus, a book like *Dangerous Places: Healthy, Safety, and Archaeology* by David A. Poirier and Kenneth L. Federer, is a necessary text to be aware of the risks and implement practices for a safer work environment. The editors of this book have selected a group of papers which altogether constitute an important overview of unrecognized dangers in archaeology, providing an insight into develop the improvement of basic safety and health practices during field and laboratory work that will be of use to students, as well as of interest to professional archaeologists. The fifteen chapters in this volume have been clearly structured according to biological and chemical hazards, giving specific examples of the archaeological practices in North America from prehistoric and historical contexts.

I can assure that with this book many readers, as I did, will remember the times when they did not use the proper equipment. I remember that, during my work in Panama, in a rock shelter called "Cueva de los Vampiros" which was full of bats, an engineer, specialist

in occupational health and safety, rebuked me for not wearing a helmet and a mask to protect myself from a disease from guano. While I was an undergraduate student in archaeology or during my doctoral studies, I never had a class or seminar covering topics related to safety except recommendations from project directors each field season. This book was published in 2001 as a result of the lack of information related to occupational hazards associated with archaeological work. For Spanish-speaking countries, there is still little information related to occupational hazards; there is a tendency to borrow procedures and safety measures from the health, oil, and geology industries. Occupational hazards similar to those archaeologists face are described for conservators and curators at museums but these are unique environments (García et al 1994, Genoways and Ireland 2003).

Thanks to this book, the fundamental points are clearly stated in the introductory chapter by the editors and are not new: refuting the romantic view of archaeology and showing that, just as every other professional, archaeology students, academic archaeologists, CRM archaeologists and the public interested in heritage issues are exposed daily to dangers resulting from the nature of fieldwork and archaeological materials. Throughout the chapters, specific cases are explained and each author is extremely clear in making and supporting an example.

The first eight chapters of this book describe bio-hazards. Nicholas Bellantoni, using a case study of the lower Connecticut River valley, offers an introduction to tick-borne disorders of North America, in particular Lyme disease, and suggests some tips to prevent the illnesses caused by this insect. Morganti and Tart look closely at the issue of rabies virus: its meaning, transmission, vectors, symptoms, treatment, and prevention standards using statistical material from the United States.

Fink and Komatsu and their chapter on Valley Fever - Coccidioidomycosis- , Ferguson and his chapter on Hanta Virus, and Sledzik's chapter about molds, fungi and spores, show how archaeologists are being exposed through dust to fungal spores and viruses. These authors describe contexts where these pathogens are found, their symptomatology, and offer recommendations for prevention especially during fieldwork but also during activities at museums and laboratories. Leslie Hunt Driscoll introduces in her chapter many factors that contribute to the spread of parasitic diseases during fieldwork which are caused by the food and water that people use. Additionally,

she suggests specific precautions to be taken to prevent illness caused by worms, ticks, flies and mosquitoes.

The following chapters of the book are grouped in relation to the risks of archaeological work with chemical materials, especially in historical and industrial contexts. Konefes and McGee describe safety implications for archaeologists working at sites where arsenic is present due to burial and embalming practices. The authors suggest precautionary measures to be taken when working with remains that may contain toxic elements.

Furthermore, Hatheway in his chapter not only discusses how to conduct archaeological studies at abandoned industrial sites, but also includes health and safety considerations for working in sites with gas-production residuals. In the next chapter, Roberts outlines the risks that archaeologists face during fieldwork in urban settings, such as collapsing walls, bird-bone diseases, machine-related accidents, radiation, and chemical hazards. However, the emphasis of this chapter is placed on making archaeologists aware of the toxic by-products generated in historical factories that have contaminated the land.

In the next chapter, Linck and Van provide information that helps archaeologists who conduct investigations in areas with unexploded ordnance, mines, and arms. Not only do they inform us about the artefacts, the methodology for clearing the area with explosive devices and its limitations, but also they present the safety procedures that should be followed, in case of finding artefacts, during excavation and handling in the laboratory. Likewise, Reno, Bloyd, and Hardesty, and Saunders and Chandler, using as an example their archaeological work in a site on the Carson River (Nevada) and summarizing multiple cases respectively, illustrate hazardous conditions and toxic materials, mainly mercury, lead, and cyanide, common in ore-processing plants, as well as tools, paintings and currency used by prehistoric people. The authors not only explain the nature of the waste but also include symptomatology when somebody is brought into contact with the chemicals and the precautionary measures to be taken in order to avoid health risks.

The final chapter by James Garman sums up in a didactic way the issues presented in the previous chapters, the legislation, risks, symptoms and preventive measures when conducting field and laboratory work in archaeology. It is the educational intention of this book to develop a framework and knowledge which will provide archaeologists with

a safe working environment. As clearly stated in the paper, security concerns arose back in the 70s with the rise of contract archaeology. Contract archaeology meant that archaeologists interacted with other professionals and handled risk prevention procedures. In sum, there is a change in the nature of archaeological practice, not as an academic discipline but as a profession.

The participants in this book agree that the majority of risks associated with excavation and fieldwork can be alleviated, although not entirely avoided, with careful planning ahead. This preparation can help protect the health of all site personnel and also save time and money. Both authors and editors emphasize on the necessity to obtain information about previous uses of the land, which can be useful in order to prepare the project's safety and health plans.

The publication of this book raised awareness within the archaeological community, as it shared knowledge about the risks in the fieldwork, resulting in the development of health and safety booklets, standard procedures, and legislation for archaeological work, as already observed in Europe and the Americas (BAJR 2005, BCAPA 2009, FRCG 2011, UCL 2012). However, there are some limitations within the scope of this book, as it does not cover a number of issues because its main geographical focus is on North American case studies and some of the risks, such as skin cancer, wild animals or poisonous plants, can be prevented using common sense (Langley and Abbott 2000).

Although the many biological agents that are dangerous to archaeologists are discussed at great depth, the book lacks cases from other parts of the world. For example, diseases like malaria, cholera, dengue, and chagas, common in environments such as the tropical lowlands, are not fully discussed. Moreover, there is no mention of the preparation needed in case of natural disasters such as earthquakes, hurricanes or floods, particularly in fieldwork conducted in a remote location or working under extreme weather conditions, and safety considerations such as the Arctic and extremely cold environments (Langley and Abbott 2000, PWGSC 2012). Another issue that is not fully discussed are pesticides and fungicides, which are often applied to agricultural fields. These are also a risk factor during archaeological fieldwork and can have effects on both humans and the environment. Another hazard not covered by this book is the oxygen-deficient atmosphere in confined or enclosed spaces (FRCG 2011).

Furthermore, there is no discussion about ergonomic issues which archaeologists face day-to-day in the field, especially chronic illnesses, musculoskeletal disorders and cumulative trauma disorders (MacEachen2005). Many of us or our colleagues have localized pain syndromes from repetitive motion, including carpal tunnel, joint bursitis, back pain, and tension. Other safety topics not developed in this book but covered in depth by other specialists in forensic archaeology and underwater archaeology are pathogen hazards, excavation of trenches and test pits, the use of heavy equipment, and nitrogen narcosis which are similar to those occupational hazards for health practitioners, the general construction industry and divers (Bowsens 2009, Galloway and Snodgrass 1998, NIOSH 1993).

Surprisingly, this book does not discuss the use of alcohol or any recreational drug during fieldwork. Both can impair job performance, hinder labor relations, lead to health problems such as dependency and cause danger to others.

Finally, although there is a lot of work to do with regard to healthy and safe work environments, this is a seminal book that collects risk and prevention procedures in archaeological fieldwork. This text should be a required book in undergraduate archaeology courses and field schools for both students and professional archaeologists, to avoid taking a casual attitude towards the risks involved in fieldwork.

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