Rethinking Research Sites as Wilderness Activity Sites

Reframing Health, Safety, and Wellness in Archaeology

Becca Peixotto D, Carla Klehm D, and Kurt P. Eifling D

ABSTRACT

Field research requires careful preparation so as to protect the integrity of archaeological studies and ensure the health and wellness of our students and field crews. In this special issue, we hope to lay a foundation for securing health and wellness as elements of the ethical practice of archaeology fieldwork through discussions of common hazards and tools to prevent, prepare for, and address safety incidents in the field. Even as archaeology and other field sciences grapple with serious safety concerns such as sexual harassment and mental health, it can be tempting to view field sites as extensions of the classroom or office. But field research can be a high-risk endeavor where we are exposed to a range of hazards not typically encountered in a traditional learning or work environment. We reach across disciplinary boundaries toward outdoor leadership and backcountry medicine to introduce the concept of wilderness context to describe the remote—and not-so-remote—locations and conditions common to archaeology field research. These are places where small or unanticipated problems can quickly become serious incidents. By rethinking research sites as wilderness activity sites, we highlight how methodical preparation can help us craft more robust and ethical health and safety practices for all members of our teams.

Keywords: fieldwork, wellness, health and safety, wilderness context, emergency response, outdoor leadership, incident response

La investigación de campo requiere de una cuidadosa preparación para proteger la integridad de nuestros estudios y asegurar la salud y el bienestar de nuestros estudiantes y equipos de campo. En esta edición especial, esperamos sentar las bases para garantizar la salud y el bienestar en el trabajo de campo arqueológico, a través de discusiones sobre peligros comunes y herramientas para prevenir, preparar y abordar incidentes de seguridad en el campo. Aún cuando la arqueología y otras ciencias de campo luchan contra serios problemas de seguridad, como el acoso sexual y la salud mental, el entender los lugares de campo como extensión del aula o la oficina puede resultar tentador. Sin embargo, la investigación de campo suele ser una empresa arriesgada, ya que estamos expuestos a una variedad de peligros que normalmente no encontramos entre las cuatro paredes de un entorno de aprendizaje o trabajo tradicionales. Aquí, atravesamos los límites interdisciplinarios para llegar al liderazgo al aire libre, la medicina rural y presentar el concepto del contexto silvestre para describir las ubicaciones y condiciones remotas y no tan remotas, tan comunes en la investigación de campo arqueológica, donde los problemas tinados a actividades en la naturaleza, resaltamos cómo la preparación metódica puede ayudarnos a trabajar hacia prácticas de salud y seguridad más sólidas y éticas para todos los integrantes de nuestros equipos.

Palabras clave: trabajo de campo, bienestar, salud y la securidad, contexto silvestre, respuesta de emrgencia, liderazgo al aire libre, preparación metódica

A pair of undergraduate field students inform the graduate assistant that they are walking to the latrine. A few minutes later, the graduate assistant hears them blow an emergency whistle from the direction of the latrine and immediately runs toward it, leaping over a fallen tree.

In preparation for a day hike to visit archaeology sites in a nature preserve near the field school, the instructor suggested that students "dress appropriately and bring lunch." When the weather turns in the afternoon, several students who had dressed in jeans and had not brought coats begin experiencing symptoms of hypothermia.

The field crew is in the process of removing tarps from excavation units when one crew member is apparently stung by a bee. That crew member's EpiPen is back at the truck with their lunch.

Many of us have tales like these from our time in the field—moments only tangentially related to archaeological research in which our own health and safety, as well as that of our colleagues or our

Advances in Archaeological Practice 9(1), 2021, pp. 1-9

Copyright © The Author(s), 2021. Published by Cambridge University Press on behalf of Society for American Archaeology. DOI:10.1017/aap.2020.50

1

students, were at risk. It can be tempting to dismiss these incidents and near misses as isolated lapses in judgment, cases of unclear instructions, or simple mistakes especially when no one is injured and everything turns out alright in the end. But suppose the students whistling from the latrine had lost the trail and the TA had tripped on the log and twisted a knee on landing, the coleader had not brought along a thermos of hot drink and an emergency shelter, or the truck and EpiPen were not a five-minute walk but a 30-minute walk away. Who on the field crew knows the emergency response plan? Who makes that most important field diagnosis of "serious" or "not serious" (Isaac and Johnson 2013) to determine whether we need to set in motion an immediate evacuation or whether the injured person can remain on site with the crew? How do we describe our location to dispatch if we do have to call emergency services?

These are questions that field directors and crew chiefs hope they have thought through, and that field crews hope their supervisors have thought through, prior to any occurrence of an incident. Every field-season leader needs a plan to protect the physical and mental well-being of the group. Although risk management policies, safety officers, and legal concern for liability are common among academic institutions, methodology for field wellness planning is rarely included in course offerings. More commonly, it is a tacit curriculum, learned through experience.

Along with the other articles in this special issue on health and wellness, we hope to lay a foundation for securing health and wellness as elements of the ethical practice of archaeology fieldwork and help prevent, prepare for, and address incidents in the field. This issue contains resources for improving one's health and wellness education. These include an emergency preparedness exercise, first aid kit recommendations, a primer on how to handle preexisting conditions in the field, and a guide to relevant wilderness medicine courses. A set of recommendations for dealing with arsenic exposure provides an example of the kind of thorough preparation and planning that helps to address and mitigate sitespecific and other atypical hazards. We offer policy advice on topics especially relevant to field archaeology, such as field schools and graduate student training, and we consider how academic archaeology may benefit from a closer examination of cultural resource management (CRM) approaches to health and safety. We also cover the often overlooked topic of mental health in the field-an emerging concern that not only impacts field wellness (and the health, safety, and experience of the field crew) but also has a lasting impact long beyond season's end. Throughout the issue, we incorporate concepts and advice developed in the fields of outdoors education and wilderness medicine. The goal is to offer archaeological researchers approaches to improve their medical preparation and resilience, regardless of their geographic setting. The intended audience is archaeologists at all career stages: students seeking additional guidance on how to run their first field camp, seasoned archaeologists taking the time to reflect on their field readiness, and field directors striving to improve the experience of their crew while preventing incidents from occurring.

ARCHAEOLOGY AND THE TRADITION OF OUTDOOR FIELDWORK PROGRAMS

Work in remote locations is not unique to archaeology, and our counterparts in geology, biology, primatology, paleontology, and

other fields must tackle many of the same issues as archaeologists in organizing and executing field seasons. Field seasons with dual goals of research and student training, such as field schools, have an added layer of complexity when it comes to planning. But even when fieldwork will only involve a seasoned researcher or a lead researcher and an experienced, nonstudent crew, safety and risk management concerns associated with work in remote locations remain, and insights from studies of field school safety may be applicable.

Field schools for archaeology and other fieldwork-oriented disciplines can be grouped as outdoor fieldwork programs (OFW), which share "the purposeful use of an outdoor environment to achieve educational objectives" (Munge et al. 2018:40). A 2018 literature-based SWOT (strength, weakness, opportunity, threat) analysis of biology, outdoor and environmental education, archaeology, and geosciences OFWs in higher education identified themes that many of us will recognize about our own field experiences, with or without students. SWOT analysis is a strategic planning tool used to assess an organization's operations in internal and external environments, and when coupled with micro-, meso-, and macro-level lenses, it can illuminate how the various levels of an organization interact with one another (Munge et al. 2018). OFWs in archaeology and these allied fields provide students with an opportunity to integrate theory and practice, learn skills, and develop their professional identity (Munge et al. 2018). These learning outcomes are important "archaeological skills and knowledge applicable to the workplace" (Colley 2004:194) that are common to most archaeological field schools. Challenges such as variable—and, at times, outdated—pedagogies, lack of time, and difficulties establishing and maintaining standards (Munge et al. 2018) make it difficult for some OFWs to achieve those outcomes. Importantly for the present discussion, the SWOT analysis identified student safety and risk management as not only a common weakness of OFW programs but also a threat to their future (Munge et al. 2018). Regardless of whether researchers bring students into the field, issues of pedagogy, time, standards, crew safety, and risk management remain relevant.

A study of archaeology field schools in Australia found that "fieldwork hazards and [occupational health and safety] issues are a concern everywhere, and especially in more remote locations" (Colley 2012:65). However, a more recent 2018 survey of 134 archaeologists and biological anthropologists who were based in the United States but were conducting research globally found that only 51.4% of respondents chose "agree somewhat" or "strongly agree" to the question, "My team has a clear plan on how to respond to an emergency evacuation" (Eifling and Klehm 2020). Percentages of positive responses regarding plans for addressing acts of violence and sexual assault were even lower— 32.1% and 47.3%, respectively (Eifling and Klehm 2020).

Safety standards and policies vary widely across archaeological field sites and OFW programs more generally, for reasons ranging from institutional appetite for oversight to local laws, and from location of research to discipline- or site-specific traditions. More research has been conducted on risk management in the outdoor and environmental education sector of OFWs than on archaeology field programs, in part because of the emphasis placed on student safety, risk management, and incident reporting by large outdoor education programs including the National Outdoor Leadership School (NOLS) and Outward Bound (OBUSA).

Together with the Student Conservation Association (SCA), NOLS and OBUSA convene the annual Wilderness Risk Management Conference. This is one venue where outdoor education professionals share research, techniques, and training, including workshops that teach risk management philosophy and practice fundamentals to a diverse audience ranging from youth camp leaders to collegiate study-abroad officials. A 2017 study of risk management strategies of a variety of U.S.-based public, private, and academic outdoor education programs found correlations between the number of risk management strategies an organization employed and factors such as the size of the organization, field staff experience in outdoor leadership, enrollment population, and the distance of field sites from assistance (Meerts-Brandsma et al. 2017). Having fewer risk management strategies does not necessarily mean that a program has more safety incidents, but it may point toward less robust pre-field planning and a reduced capacity to respond effectively when incidents do occur. Prevention of and effective response to incidents not only affects the field crew but also can impact the quality and quantity of research possible during a field season.

Reporting or tracking incidents and near misses is a risk management strategy employed by most outdoor education programs and some academic and commercial archaeology programs. Taking the time to report, analyze, and learn from near misses, like the examples presented at the beginning of this article, can help leaders (principal investigators, graduate assistants, field directors) share information about and increase awareness of risk management as an important concern while in the field (Bartram and Rabinowitz 2019).

"WILDERNESS" AND ARCHAEOLOGY

Throughout this issue, authors refer to "wilderness medicine," "wilderness context," and "wilderness settings." "Wilderness" can be a fraught term in archaeology. For archaeologists working on federal land in the United States, the word denotes specific areas designated under the 1964 Wilderness Act to be preserved and protected "in their natural condition" (11 U.S.C. § 1131 [a], https://www.law.cornell.edu/uscode/text/16/1131). Yet, the fact that archaeologists tasked with investigating the human history of a locale work in these areas challenges the notion that "wilderness" is "where the earth and its community of life are untrammeled by man" (11 U.S.C. § 1131[c]). Similar Eurocentric discourses that gloss geographical spaces as "unmanaged, unoccupied, terra nullius" (Suchet 2002:147) contradict the more historically grounded, nuanced understandings of landscapes archaeologists try to access. These discourses erase-or at the very least, diminish-the lives, histories, and ways of knowing of Indigenous and other marginalized peoples, as well as their relationships with the space throughout history. Scholars of colonialism, frontiers, and marronage, for example, must contend with conflicting notions and implications of the word "wilderness." The heavily managed landscapes around some eighteenth-century homes even included constructed "wilderness." For different groups of people in the past, for stakeholders in the present, and for archaeologists seeking permits, "wilderness" can mean many things.

In this issue, we invoke the specific, nonarchaeological definition of "wilderness" used by colleagues in emergency and backcountry medicine. One wilderness first aid textbook defines

"wilderness context" as "a situation where access to definitive medical care is delayed by distance, logistics, or danger" (Isaac and Johnson 2013:215). In a wilderness context, the environment itself and the logistics of getting away from the site are as important factors as whatever physical or psychological emergency is at hand (Isaac and Johnson 2013). These are situations in which dialing 911 (or the appropriate emergency services number for any given location) will not result in the prompt arrival of a well-equipped and well-staffed ambulance. We may be excavating in the Great Dismal Swamp, an hour's travel off trail to our vehicle and an additional 45-minute drive to the first paved road. We might be surveying along a power corridor in northern New England, with spotty cell-phone coverage, and the nearest volunteer ambulance service based in the neighboring state. We may be conducting an urban archaeology project in a metropolis where traffic is snarled from a major accident. Under this definition, a wilderness context can be a remote village, a federally designated wilderness area, an abandoned mining community, a cave, or an urban site. Regardless of our actual geographic location, these situations where we do not have immediate access to a hospital, or even prehospital advanced life support, require "flexibility, innovation, and a certain amount of courage . . . to cope with the varied and constantly evolving nature of medical care in the wild or remote setting" (Isaac and Johnson 2013:6). Unexpected events, sometimes resulting in injury or a critical incident, will occur whether a field site is in an urban context or a wilderness context. Pre-field preparation is important for both, but for the latter, well-understood safety and risk management plans are crucial.

Archaeology Field Sites as Wilderness Activity Sites

Thinking of archaeology field sites as wilderness activity sites using this backcountry medicine definition of "wilderness" should create an increased sense of urgency around safety and risk management. Whether it is our first or fiftieth field season, if we anticipate that outside assistance might not be forthcoming should an emergency occur, we (as individual leaders and as field crews) may put more effort into identifying and educating ourselves and our crew about potential hazards, mitigating risks, and planning for different scenarios. The other articles in this issue offer specific tools for mental health emergencies in the field, health and wellness education, and implementing better policies.

An expansion of the frame of archaeology fieldwork—whether in an educational context such as a field school, or ongoing academic research, or CRM-from a field site to a wilderness activity site also invites us into different conversations about leadership, pedagogy, and student and crew management as components of a systematic approach to field wellness, impactful learning, and effective use of field research time. We can draw on the research and expertise of both emergency medical professionals and outdoor educators whose focus is on leading safe technical learning experiences in remote locations. Certifications in wilderness medicine are one of the "foundational qualifications," and they represent a minimal level of training for outdoor leaders working with campus-based education or recreation programs, or extended expeditions (Marchand et al. 2019). But outdoor leadership competency includes not just technical skills and safety but also organization, ethics, instruction and facilitation skills, leadership

style, and experience-based judgment (Marchand et al. 2019)—a list of topics that mirrors what is identified as desired learning outcomes of some archaeology field schools (Colley 2004). Given the emphasis that many field schools place on technical learning, skills such as teamwork and the ability to work through the conflicts that arise when a group is isolated at a remote field site may seem like by-products of the field school experience (Perry 2004) rather than expected and important elements of a field crew's individual and group development (Outward Bound 2008). Whether or not training is an explicit component of your field season, the crew cohesiveness, or lack thereof, in wilderness activity settings can be a factor in a group's safety and wellness.

A transdisciplinary approach to the underlying mechanisms of field research need not diminish the important research and skills-training objectives around which our field seasons are oriented. For field schools, it may help create space for a more holistic learning environment in which students gain awareness of safety and workplace issues, interpersonal skills, and professionalism (Colley 2004) at the same time as they refine their trowel technique, projectile-point identification skills, or proficiency with the total station. For nonstudent field crews, it may create a more positive and ultimately safer field experience.

Other areas of intersection between archaeology and other OFWs and outdoor education extend beyond certain practical skills, such as effectively teaching magnetic declination with a compass (Wilson 2015), to topics of significant concern and research, such as creating inclusive field cultures. The experiences, research findings, and approaches of women in outdoor leadership professions—a traditionally white, male-dominated field—may ring especially true for women in field archaeology (Allen-Craig et al. 2020). Similarly, work within the outdoor education and leadership field to (1) understand and address barriers to participation and (2) to create inclusive environments for both staff and students who identify as LGBTQ people and people of color may shed light on corresponding concerns within archaeology training and fieldwork (see, for example, Herraiz 2019; Schwartz and Corkery 2011; Warren 2002; see also Blackmore et al. 2016).

The pernicious distinction between and expectations of who should excel in so-called hard versus soft skills (teaching how to set up the total station versus writing the risk management plan, for example), technical versus interpretative skills (digging test pits versus giving a site tour to a visiting school group), and strength versus nuance (backfilling versus organizing field paperwork) reflect a hidden, gendered curriculum (Allen-Craig et al. 2020) that remains present in some outdoor programs and some archaeological field programs (e.g., Heath-Stout 2019; Jalbert 2019; Moser 2007). Our colleagues who teach in wilderness settings call attention to the same subtle (and not so subtle) cues that lead to gender imbalances in lab or field activities and to gender disparities in confidence in building rock anchors or navigating off trail. Drawing on broad and field-specific feminist traditions, a number of pedagogic and student management approaches both within archaeology and beyond have been developed to mitigate and address these issues in the field setting (Allen-Craig et al. 2020; Cobb and Croucher 2016; Colaninno et al. 2020b; Gray et al. 2020). Ultimately, these approaches can contribute to the wellness of all students and field crew by fostering a more equitable and inclusive learning and working environment.

STRUCTURE OF THE "HEALTH AND WELLNESS" ISSUE

To be clear, the values of equity and inclusion arise repeatedly in this issue not because of any exalted or lofty dream of the authors, but as a testament to the gritty service of these ideals as a bedrock to any healthy, diverse, interdependent team. We believe that team members who feel heard will be thoughtful when they speak. Those who feel seen will behave in ways consistent with the team's core values. And those who feel most bonded will do best at looking out for their teammates' well-being. The values of equity and inclusion serve as natural stepping stones through the issue, first meeting the reader in this general discussion, followed by many subsequent examples on how to operationalize them to the benefit of the field team. The issue begins with a discussion of mental health in the field, followed by a series of articles about health and wellness education. The last group of authors turns our attention to implementing better policies.

Mental Health in the Field

The first section of this issue examines the complexity of mental and behavioral health in the field camp setting from the perspective and original research of a physician. Because this environment has not been systematically studied for its effects on the mental health of field researchers, the existing research on mental health applies most sensibly if several facets of the field camp environment are considered separately. Eifling (2021a) reframes the field camp serially as a wilderness activity site, a workplace, a place of study, and living quarters in order to apply mental health studies to the many roles of the field camp. After a description of the various components of the field research camp that serve as causes for change in mental health, there is a more familiar discussion of its effects, such as culture shock, stress injury, substance abuse, anxiety, and reintegration. By the end of this section, readers should understand how the field camp environment may paradoxically both support and threaten researchers' mental and behavioral health. In addition, they will have a framework for concrete steps they should take before, during, and after the field season that may help them protect their mental wellness and respond with greater confidence in case of crisis.

Health and Wellness Education

The second section orients the reader to current general topics of wilderness medical education, including first aid training, medical kits, chronic illness and injury management, and environmental hazards prevalent in archaeological contexts. Although these articles are intended to inform, they should not be regarded as a substitute for more comprehensive first aid training and medical advice.

Although the quantity of research on the risks and benefits of specific wilderness first aid practices applied by laypeople is not as vast as similar studies for professional hospital or emergency medical services (EMS; Schimelpfenig et al. 2017), leading educators, researchers, and practitioners of wilderness medicine do conduct systematic reviews of treatment recommendations based on peer-reviewed and gray literature from wilderness first aid, outdoor education, guiding, recreation, and emergency medical fields (see, for example, Schimelpfenig et al. 2017 and the December 2019 issue of the journal *Wilderness & Environmental Medicine*). These reviews inform regular updates to curricula for courses aimed at both laypeople and outdoor professionals. Hawkins and Simon (2021) address 10 common first aid myths, including those related to anaphylaxis, snakebites, spinal immobilization, tourniquets, and CPR. For each myth, they present evidence-based interventions appropriate to wilderness and remote medicine.

Emergencies and evacuation resulting from accidents or environmental conditions are a common focus of field wellness and safety plans. As Klehm and colleagues (2021) discuss, however, chronic disease and other preexisting (or even emerging) conditions such as asthma, diabetes, and depression are not only common among archaeologists but can evolve into major-even life-threateningissues in the field if ignored. Recognizing that fieldwork often brings unique challenges provides a foundation for those with preexisting conditions as well as field leaders, who should realize the high likelihood that their field crews have one or more chronic conditions-the Centers for Disease Control and Prevention (CDC) estimates that 6 in 10 people have at least one chronic disease and 7.6% of the population in the United States has had a depressive episode of more than two weeks within the last 12 months (CDC 2020; Center for Behavioral Health Statistics and Quality 2018). Many fieldwork-related problems can be anticipated, prepared for, and mitigated with adequate knowledge. The authors provide an accessible overview to each condition, review the risk factors that outdoor fieldwork brings, and present best practices for self- and group planning and management.

Many of the hazards archaeologists encounter in the field are common to most OFW situations: extreme heat or cold and other weather hazards, sharp objects, wildlife encounters, repetitive injuries, and interpersonal hazards. Certain excavation contexts, however, present unique hazards that few industries, much less OFW, face. Meyers and colleagues (2021) turn our attention from universal risks to the specific risk that arsenic poses to archaeologists excavating late nineteenth-century burials. Environmental regulations and standards have changed in the 20 years since the danger of arsenic in excavations was first raised (Konefes and McGee 1996). The authors explain how these changes, together with a more thorough understanding of the socioeconomic and demographic predictors of arsenic in burials, allow archaeologists to better assess the danger of arsenic embalming to excavators. Their recommended methodology is intended to mitigate that risk. Although many archaeologists may never encounter arsenic contamination, this discussion serves as a conceptual framework for the depth of health and wellness planning for site-specific hazards and broader risks alike that is advocated throughout this issue.

As Klehm and Eifling's (2020) 2018 CAMPS survey demonstrated, the desire for additional first aid and wellness training on topics such as field medical kits, wound management, heat exhaustion, and others is high among archaeological fieldworkers. Additional requested interventions include individual and group review of kits and critical incident planning, online wilderness medicine curriculum, and hands-on workshops. But which training is most appropriate for a given context? Hawkins and Winstead (2021) discuss four types of wilderness first aid certifications, ranging from weekend-long basic courses to in-depth courses of 72+ hours, with an emphasis on the needs of field scientists, program directors, and administrators.

Implementing Better Policies

The final section of this issue is devoted to implementing health and safety policies and protocols in different archaeological learning settings. For archaeology field camp leaders and administrators who wish to develop, implement, or advocate for appropriate health and safety policies for their programs, these articles offer guidelines, examples, and best practices.

Regardless of how well trained and vigilant a field crew and field director are, many field archaeologists will eventually experience an emergency event. Solid preparation enables field teams as a whole, and as individual team members, to anticipate and manage such risks. Eifling (2021b) employs frameworks developed from military field doctrines and business continuity to begin the process of risk management. In the context of a two-hour planning exercise, Eifling invites readers to complete a strategic overview of assets and vulnerabilities of their group, design a qualitative risk analysis, and build an actionable plan for managing risks in the field. Although developed for archaeologists of all experience levels, this exercise is also useful for researchers in related disciplines who have substantial outdoor fieldwork components (e.g., biological anthropology, paleoanthropology, geology, geography, and biology).

Archaeologists working in an academic setting are often forced to limit their field camps to just a few weeks or months each year to accommodate institutional calendars. Meanwhile, our colleagues in CRM may log many more field days per year in urban, rural, and remote settings. Field crew health and safety in CRM in the United States is typically subject to Occupational Health and Safety Administration (OSHA) guidelines, and there are corresponding regulations in other countries. And, organizations such as the American Cultural Resources Association (ACRA) advocate for ongoing health and wellness training in the industry (see, for example, ACRA 2020). White (2021) suggests that academic archaeologists can apply concepts and policies from CRM, OSHA, and university regulations to teach students best practices for field health and safety as well as expose them to the compliance systems they will likely encounter in their professional lives.

Field schools are unique learning opportunities where students gain valuable preprofessional experience. Effective safety, security, and equity policies help to create an environment that supports student learning. Emerson (2021) shares insights from three decades of field school participation and administration, and he suggests guidelines for field schools of varying lengths and goals. Directors, participants, support staff, and institutional managers all play various roles in ensuring fieldwork success. Emerson recommends detailed preparation; clear communications; pre-field role playing; team-based learning; formal and informal assessments; professionalism with a zero tolerance for discrimination, harassment, or assault; and a gender-balanced leadership team for a safe and equitable field school environment.

Finally, Davis and colleagues (2021) redirect our attention to one of the primary goals of archaeological field camps: the training of future archaeologists. As field camp leaders, they address graduate student training beyond the mechanics of fieldwork, archaeological methods, and theory, and they advocate for field safety and well-being becoming an integral and explicit part of this training. Developed through a collaboration at the University of Colorado Boulder between anthropology graduate students and faculty, Davis and colleagues identify seven key considerations for graduate student training: (1) finding safety-related information (trainings, resources, plans, etc.), (2) tailoring safety plans to crew demographics, (3) negotiating safety issues in diverse cultural contexts, (4) considering well-being and mental health in novel social contexts, (5) developing a code of conduct that addresses sexual harassment and assault and bullying, (6) incorporating legal considerations into a safety plan, and (7) addressing logistical concerns. They include several supplemental documents, such as field crew information packets and risk acknowledgment forms, that readers may find useful, as well as recommendations for other free online resources.

Sexual Harassment and Assault

Inherent in discussions about mental health, safety, and wellness in field archaeology is the issue of sexual harassment and assault (see especially Emerson 2021; see also Davis et al. 2021; Klehm et al. 2021). Although Clancy and colleagues were not the first to call attention to sexual harassment in science, their 2014 SAFE study should be credited for raising awareness about the ongoing prevalence and impacts of this very real threat to students and trainees during OFW (Clancy et al. 2014). Correspondingly, there has been an increase in archaeology-specific research about sexual harassment during fieldwork (see, for example, Meyers et al. 2018; Nakhai 2017; VanDerwarker et al. 2018), and relevant discussions are happening concurrently in many disciplines (see, for example, Jahren 2016; Marin-Spiotta et al. 2016).

In their follow-up to the SAFE study, Nelson and colleagues (2017) suggest specific tactics, policies, and procedures to mitigate the risk of sexual harassment during field experiences. Archaeology-specific recommendations for building safer, more inclusive field school environments can be found in the literature (Colaninno et al. 2020a, 2020b; Emerson 2021) and in archived online seminars available for free for SAA members (Colaninno et al. 2020a, 2020b; Meyers 2019).

Several of the major professional associations to which archaeologists belong now have explicit ethics or code-of-conduct statements related to sexual harassment in OFW settings (American Association of Physical Anthropologists [AAPA 2016]; Archaeological Institute of America [AIA 2019]; Register of Professional Archaeologists [RPA 2020]; Society for American Archaeology [SAA 2015a, 2015b]; Society for Historical Archaeology [SHA 2020]). The initial SAFE study prompted a 2015 statement by the SAA on sexual harassment and violence (SAA 2015a), which was published alongside a resource guide developed by the AAPA (SAA 2015b). As of July 2018, the American Anthropological Association requires field schools and research experiences listed through the organization to have a code of conduct as well as reporting mechanisms for sexual harassment and assault (AAA 2018). The RPA has also modified its certification for American-based field schools, stating that institutions "must provide for the health and safety of participants," which includes "maintaining an environment free of sexual harassment as defined by applicable federal, state, and local laws and regulations" and taking "steps necessary to prevent sexual harassment from occurring" (RPA 2020).

Most recently, in response to an incident involving a convicted sexual offender being allowed to attend the 2019 annual meeting,

the SAA convened a Task Force on Sexual and Anti-Harassment Policies and Procedures to draft revised policies, with member input, on how the SAA should handle the topic moving forward (Awesome Small Working Group 2019; Collective Change 2019; Hays-Gilpin et al. 2019). The finalized SAA policies complement those developed by the AIA for barring attendance, as well as procedures for reporting incidents before, during, and after meetings (AIA 2019; SAA 2020).

RECENT DEVELOPMENTS

This issue was under review during the spring and summer of 2020. In that time, the world changed dramatically with the onset of the COVID-19 pandemic. Health and wellness was already a dynamic topic-for example, evolving practices related to the spread of Lone Star ticks and the accompanying danger of acquiring alpha-gal syndrome from their bites, or climate change and emerging worker safety regulations for fieldwork in extreme heat (e.g., Kiefer et al. 2016, Schulte et al. 2016). In a few short months, COVID-19 sparked new fieldwork rules for social distancing, sanitation practices, and personal protective equipment (PPE), as well as a greater awareness of how racial and socioeconomic health disparities impact both the population at large and field archaeologists specifically. White (2021) notes new fieldwork protocols rapidly developed by some CRM companies. Between this issue's completion and its publication in February 2021, however, best practices for mitigating COVID-19 risks will likely continue to evolve. We remind readers who are planning fieldwork to seek out the most up-to-date information from reputable sources such as local and state public health departments and the CDC as well as to keep abreast of the latest applicable regulations and institutional risk management policies.

CONCLUSION

The content in this issue is not a substitute for formal training in first aid or wilderness medicine. Instead, we hope to (1) establish a framework for archaeologists to begin to think through the various challenges we face in the field, (2) provide guidance and references on health and safety hazards, (3) raise awareness of topics that even seasoned field researchers may not have considered, and (4) offer approaches and models that can be adapted to each team's needs.

Addressing standards for health and safety in archaeology fieldwork settings is a challenging task. Field locations span the globe. Environments range from frigid to sweltering, rural to urban, and forests to cemeteries. Teams may consist of students, seasoned researchers, volunteers, and/or local communities. Available medical infrastructure varies. What remains constant is the need to have a well-prepared leader to safeguard the team's medical and psychological well-being during a field season. "Challenging" does not mean "prohibitory." Efforts to protect the health, safety, and wellness of a field school crew may benefit from an acknowledgment of the differences in classroom- or lab-based training, field research with a highly experienced crew, and the foundational experience of an archaeology field school environment.

Over the years, the movement toward a more ethical archaeological practice has taken many forms: inclusion of Indigenous

peoples and perspectives (e.g., Colwell-Chanthaphonh et al. 2010; González-Ruibal 2018; Murray 2011; Watkins 2005); addressing discrimination based on race, gender, income, sexual orientation, and physical ability (e.g., Heath-Stout 2019; Phillips and Gilchrist 2012; Rutecki and Blackmore 2016); the prevalence of sexual harassment and assault (Hays-Gilpin et al. 2019; Meyers 2019; Meyers et al. 2018); and ongoing issues with diversity (e.g., Flewellan et al. 2020; White and Draycott 2020). Intertwined with many of these topics are the health and wellness of those who practice archaeology. A systematic approach to health, safety, and wellness is part of the ethics of doing archaeology. As integral to our practice as data collection and reporting, it is an essential component of fieldwork that should be expected and secured by the field and its practitioners.

Acknowledgments

We wish to thank all the panelists and participants in the Society for American Archaeology 2019 forum "Medical Needs of Archaeological Field Camps" for the robust, insightful discussion out of which this special issue emerged. Becca Peixotto extends thanks to Tom Prang, David Moon, Tom Polk, and Greg Heide for their insight as fellow archaeologists and Outward Bounders in the early stages of this article. Carla Klehm also thanks Duane Peter for input on health and wellness issues in the CRM world. As guest editors, we also thank each of the contributors to this volume for caring so deeply about the wellness of students and colleagues engaging in fieldwork. Thank you to the anonymous reviewers whose comments helped us strengthen this piece. We would like to include a special thank you to our professional translator, Eleana Velasco, who provided translations for most abstracts in the issue.

Data Availability Statement

No original data were used in this article.

REFERENCES CITED

AAA (American Anthropological Association)

2018 American Anthropological Association's Policy on Sexual Harassment and Sexual Assault. Electronic document, http://s3.amazonaws.com/rdcmsaaa/files/production/public/AAA_SH_Policy_2018.pdf, accessed April 25, 2020.

AAPA (American Association of Physical Anthropologists)

2016 American Association of Physical Anthropologists Statement on Sexual Harassment and Assault. Electronic document, https://physanth.org/about/ position-statements/sexual-and-other-harassment/, accessed April 25, 2020.

ACRA (American Cultural Resources Association)

- 2020 Safety and Human Resources for CRM during COVID-19. Webinar hosted by the American Cultural Resources Association, April 30, 2020. Hosted by Charity Touchette and Daniel Cassedy. Washington, DC. Video, https://vimeo.com/ondemand/acrapandemicsafety, accessed August 28, 2020.
- AIA (Archaeological Institute of America)
- 2019 Joint Harassment Policy. Electronic document, https://www.archaeological. org/programs/professionals/annual-meeting/joint-harassment-policy, accessed July 20, 2020.
- Allen-Craig, Sandy, Tonia Gray, Rylie Charles, Teresa Socha, Marg Cosgriff, Denise Mitten, and T. A. Loeffler

2020 Together We Have Impact: Exploring Gendered Experiences in Outdoor

Leadership. Journal of Outdoor Recreation, Education, and Leadership 12 (1):121–139. DOI:10.18666/JOREL-2020-V12-I1-9937.

Awesome Small Working Group

- 2019 Take Back the SAA: Member-Led Organizing and Action in the Wake of #SAA2019. SAA Archaeological Record 19(4):15–21.
- Bartram, Christopher J., and Erik Rabinowitz
- 2019 Benchmarking Standards of Incident Reporting in College and University Outdoor Programs. Journal of Outdoor Recreation, Education, and Leadership 11(1):70–78. DOI:10.18666/JOREL-2019-V11-I1-8910.
- Blackmore, Chelsea, Leslie Drane, Richard Baldwin, and David Ellis
- 2016 Queering Fieldwork: Difference and Identity in Archaeological Practice. SAA Archaeological Record 16(1):18–23.

CDC (Centers for Disease Control and Prevention)

2020 National Center for Chronic Disease Prevention and Health Promotion: Chronic Disease. Electronic document, https://www.cdc.gov/chronic disease/index.htm, accessed June 26, 2020.

Center for Behavioral Health Statistics and Quality

- 2018 2017 National Survey on Drug Use and Health: Methodological Summary and Definitions. Substance Abuse and Mental Health Services Administration, Rockville, Maryland. Electronic document, https://www. samhsa.gov/data/report/2017-methodological-summary-and-definitions, accessed June 26, 2020.
- Clancy, Kathryn B. H., Robin G. Nelson, Julienne N. Rutherford, and Katie Hinde 2014 Survey of Academic Field Experiences (SAFE): Trainees Report Harassment and Assault. *PLoS ONE* 9(7):e102172. DOI:10.1371/journal. pone.0102172.

Cobb, Hannah, and Karina Croucher

- 2016 Personal, Political, Pedagogic: Challenging the Binary Bind in Archaeological Teaching, Learning and Fieldwork. *Journal of Archaeological Method and Theory* 23:949–969.
- Colaninno, Carol, Shawn Lambert, Emily Beahm, and Carl Drexler 2020a Creating and Supporting a Harassment- and Assault-Free Field School. Advances in Archaeological Practice 8:111–122. DOI:10.1017/aap. 2020.8.
 - 2020b Recommendations for Developing Harassment and Assault Free Archaeological Field Schools. SAA Online Seminar, uploaded April 7, 2020. YouTube video, https://www.youtube.com/watch?

v=v9zMwBS6aOM&feature=youtu.be, accessed May 1, 2020.

Collective Change

- 2019 #Me Too in Archaeology. SAA Archaeological Record 19(4):12–15. Colley, Sarah
- 2004 University-Based Archaeology Teaching and Learning and Professionalism in Australia. *World Archaeology* 36:189–202. DOI:10.1080/ 0043824042000260979.
- 2012 Archaeological Field Schools and Fieldwork Practice in an Australian Context. In *Global Perspectives on Archaeological Field Schools: Constructions of Knowledge and Experience*, edited by Harold Mytum, pp. 61–81. Springer, New York.
- Colwell-Chanthaphonh, Chip, T. J. Ferguson, Dorothy Lippert, Randall McGuire, George P. Nicholas, Joe E. Watkins, and Larry J. Zimmerman
- 2010 The Premise and Promise of Indigenous Archaeology. American Antiquity 75:228–238.
- Davis, Kaitlyn E., Pascale Meehan, Carla Klehm, Sarah Kurnick, and Catherine Cameron
 - 2021 Recommendations for Safety Education and Training for Graduate Students Directing Field Projects. *Advances in Archaeological Practice* 9:74–80.
- Eifling, Kurt P.
 - 2021a Mental Health and the Field Research Team. Advances in Archaeological Practice 9:10–22.
 - 2021b How to Prepare Your Team for an Emergency: A Preseason Planning Exercise in Four Parts. *Advances in Archaeological Practice* 9:56–60.
- Eifling, Kurt P., and Carla E. Klehm
- 2020 CAMPS: Combined Anthropology Medical Preparation Survey, 2018. Current Anthropology 61:798–807. DOI:10.1086/712004.

Emerson, Matthew C.

2021 Toward a Safe Archaeology Field School: Insights into Policies,

Procedures, and Team-Based Learning. Advances in Archaeological Practice 9:66–73.

- Flewellen, Ayana, Maria Franklin, Justin Dunnavant, Alexandra Jones, Alicia Odewale, and Tsione Wolde-Michael
- 2020 Archaeology in the Time of Black Lives Matter. Video, https://archaeology. columbia.edu/2020/06/27/video-of-panel-on-archaeology-in-the-time-ofblack-lives-matter/, accessed July 28, 2020.
- González-Ruibal, Alfredo

2018 Ethics of Archaeology. *Annual Review of Anthropology* 47:345–360. Gray, Tonia, Denise Mitten, Tom Potter, and Jay Kennedy

2020 Reflexive Insight Toward Gender-Inclusive Outdoor Leadership. Journal of Outdoor Recreation, Education, and Leadership 12(1):102–120. DOI:10. 18666/JOREL-2020-V12-I1-9958.

Hawkins, Seth C., and R. Bryan Simon

2021 Ten Myths about Medical Emergencies and Medical Kits. Advances in Archaeological Practice 9:23–33.

Hawkins, Seth C., and Corey Winstead

2021 Wilderness Medicine Education: How to Choose the Right Resources for Archaeology Field Programs. Advances in Archaeological Practice 9:49–55.

Hays-Gilpin, Kelley, Meagan Thies-Sauder, Catherine Jalbert, Laura Heath-Stout, and Heather Thakar

- 2019 Changing Our Professional Culture of Apathy and Creating Safety in Archaeology: Progress Report from the SAA Task Force on Sexual and Anti-Harassment Policies and Procedures. SAA Archaeological Record 19(4):8–11. Heath-Stout, Laura
- 2019 Diversity, Identity, and Oppression in the Production of Archaeological Knowledge. PhD dissertation, Department of Anthropology, Boston University, Boston, Massachusetts. ProQuest (ATT 22585286). Herraiz, Bart Bloem
- 2019 Bodies out/in Place? Unmapping Trans People's Experience in Outdoor Activities. Master's thesis, Department of Cultural Sciences, University of Gothenburg, Sweden. Electronic document, https://gupea.ub.gu.se/ bitstream/2077/61669/1/gupea_2077_61669_1.pdf, accessed August 28, 2020.

Isaac, Jeffrey E., and David E. Johnson

2013 Wilderness and Rescue Medicine. 6th ed. Jones and Bartlett, Burlington, Massachusetts.

Jahren, Hope

2016 She Wanted to Do Her Research, He Wanted to Talk Feelings. New York Times, March 4. Electronic document, https://www.nytimes.com/2016/03/ 06/opinion/sunday/she-wanted-to-do-her-research-he-wanted-to-talkfeelings.html, accessed April 25, 2020.

Jalbert, Catherine L.

- 2019 Archaeology in Canada: An Analysis of Demographics and Working Conditions in the Discipline. PhD dissertation, Department of Archaeology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada. Electronic document, https://research.library.mun.ca/13879/, accessed August 28, 2020.
- Kiefer Max, Julietta Rodríguez-Guzmán, Joanna Watson, Berna van Wendel de Joode, Donna Mergler, and Agnes Soares da Silva
- 2016 Worker Health and Safety and Climate Change in the Americas: Issues and Research Needs. *Revista Panamericana de Salud Pública* 40(3):192–197. Klehm, Carla, Elisabeth Hildebrand, and Maureen S. Meyers

2021 Mitigating Chronic Diseases during Archaeological Fieldwork: Lessons from Managing Asthma, Diabetes, and Depression. Advances in Archaeological Practice 9:41–48.

Konefes, John L., and M. K. McGee

1996 Old Cemeteries, Arsenic, and Health Safety. *Cultural Resource* Management 9(10):15–18.

Marchand, Genevieve, Kelli McMahan, Hailey D. Hester, Patrick Lewis, Patrick, Philip Zook Friesen, and Will Hobbs

2019 Outdoor Industry Credential: Exploring Perspectives within the Profession. Journal of Outdoor Recreation, Education, and Leadership 11 (4):352–358. DOI:10.18666/JOREL-2019-V11-I4-9633.

Marín-Spiotta, Erika, Blair Schneider, and Mary Anne Holmes

2016 Steps to Building a No-Tolerance Culture for Sexual Harassment. Eos, January 28. https://eos.org/opinions/steps-to-building-a-no-toleranceculture-for-sexual-harassment, accessed December 22, 2020. Meerts-Brandsma, Lisa, Nate Furman, and Jim Sibthorp

2017 Benchmarking Outdoor Expeditionary Program Risk Management Strategies. Journal of Outdoor Recreation, Education, and Leadership 9(2):262–266. DOI:10.18666/JOREL-2017-V9-12-8267.

Meyers, Maureen S.

2019 The Context and Consequence of Sexual Harassment in Archaeology. SAA Online Seminar, uploaded April 6, 2020. YouTube video, https://www. youtube.com/watch?v=-tinHiNiFmA&feature=youtu.be, accessed May 1, 2020.

Meyers, Maureen S., David Breetzke, and Henry Holt

2021 Arsenic and Old Graves: A Method for Testing Arsenic Contamination in Historic Cemeteries. Advances in Archaeological Practice 9:34–40.

Meyers, Maureen S., Elizabeth T. Horton, Edmond A. Boudreaux, Stephen B. Carmody, Alice P. Wright, and Victoria G. Dekle

- 2018 The Context and Consequences of Sexual Harassment in Southeastern Archaeology. Advances in Archaeological Practice 6:275–287. DOI:10.1017/ aap.2018.23.
- Moser, Stephanie

2007 On Disciplinary Culture: Archaeology as Fieldwork and Its Gendered Associations. *Journal of Archaeological Method and Theory* 14:235–263. Munge, Brendon, Glyn Thomas, and Deborah Heck

2018 Outdoor Fieldwork in Higher Education: Learning from Multidisciplinary Experience. Journal of Experiential Education 41:39–53.

Murray, Tim

2011 Archaeologists and Indigenous People: A Maturing Relationship? Annual Review of Anthropology 40:363–378.

Nakhai, Beth Alpert

2017 Keeping Archaeological Field Work Safe from Sexual Harassment and Physical Violence. *Mar Shiprim* (International Association for Assyriology), July 17. https://iaassyriology.com/field-work-safe/, accessed August 28, 2020.

Nelson, Robin G., Julienne N. Rutherford, Katie Hinde, and Kathryn B. H. Clancy 2017 Signaling Safety: Characterizing Fieldwork Experiences and Their Implications for Career Trajectories. *American Anthropologist* 119:710–722. DOI:10.1111/aman.12929.

Outward Bound

- 2008 Outward Bound Staff Manual. Outward Bound, Golden, Colorado. Perry, Jennifer E.
- 2004 Authentic Learning in Field Schools: Preparing Future Members of the Archaeological Community. *World Archaeology* 36:236–260. DOI:10.1080/ 0043824042000261004.

Phillips, Tim, and Roberta Gilchrist

2012 Inclusive, Accessible Archaeology: Enabling Persons with Disabilities. In *The Oxford Handbook of Public Archaeology*, edited by Robin Skeates, Carol McDavid, and John Carmen, pp. 673–693. Oxford University Press, Oxford.

RPA (Register of Professional Archaeologists)

2020 The Register of Professional Archaeologists (RPA) Code of Conduct: Sexual Harassment. Electronic document, https://rpanet.org/statement-onsexual-harassment/, accessed July 20, 2020.

Rutecki, Dawn, and Chelsea Blackmore

2016 Towards an Inclusive Queer Archaeology: An Overview and Introduction. SAA Archaeological Record 16(1):9–11.

SAA (Society for American Archaeology)

2015a SAA Statement on Sexual Harassment and Violence (2015). Electronic document, https://www.saa.org/career-practice/saa-statements-guidelines/ statement-details/2015/11/01/saa-statement-on-sexual-harassment-and-violence, accessed May 1, 2020.

2015b SAA Background and Resource Guide for Addressing Harassment and Violence. Electronic document, https://documents.saa.org/container/docs/ default-source/doc-careerpractice/harassment_resource.pdf? sfvrsn=d5b7b7d8_4, accessed May 1, 2020.

- 2020 Society for American Archaeology Meeting Safety Policy and Code of Conduct at SAA Events. Electronic document, https://www.saa.org/annualmeeting/submissions/anti-harassment-policy, accessed May 1, 2020.
- Schimelpfenig, Tod, David E. Johnson, Grant S. Lipman, David H. McEvoy, and Brad L. Bennett

2017 Evidence-Based Review of Wilderness First Aid Practices Journal of

Outdoor Recreation, Education, and Leadership 9(2):217–239. DOI:10. 18666/JOREL-2017-V9-I2-8226.

Schulte, P. A., A. Bhattacharya, C. R. Butler, H. K. Chun, B. Jacklitsch, T. Jacobs, M. Kiefer, J. Lincoln, S. Pendergrass, J. Shire, J. Watson, and G. R. Wagner 2016 Advancing the Framework for Considering the Effects of Climate

Change on Worker Safety and Health. Journal of Occupational and Environmental Hygiene 13:847–865. DOI:10.1080/15459624.2016.1179388.

Schwartz, Alexander, and Megan Robertson Corkery 2011 Barriers to Participation among Underrepresented Populations in Outdoor Programs. *Recreational Sports Journal* 35:130–144.

SHA (Society for Historical Archaeology)

2020 SHA Sexual Harassment and Discrimination Policy. Electronic document, https://sha.org/about-us/sha-sexual-harassment-discrimination-policy/, accessed April 25, 2020.

Suchet, Sandie

2002 "Totally Wild"? Colonising Discourses, Indigenous Knowledges and Managing Wildlife. Australian Geographer 33:141–157. DOI:10.1080/ 00049180220150972.

VanDerwarker, Amber, Kaitlin Brown, Toni Gonzalez, and Hugh Radde

2018 The UCSB Gender Equity Project: Taking Stock of Mentorship, Equity, and Harassment in California Archaeology through Qualitative Survey Data. *California Archaeology* 10:131–158. DOI:10.1080/1947461X.2018.1535791. Warren, Karen

2002 Preparing the Next Generation: Social Justice in Outdoor Leadership Education and Training. *Journal of Experiential Education* 25:231–238. Watkins. Joe

2005 Through Wary Eyes: Indigenous Perspectives on Archaeology. Annual Review of Anthropology 34:429–449. White, William A., III

2021 Applying Risk Management Concepts from CRM and the Outdoor Recreation Industry to Academic Archaeology Projects. Advances in Archaeological Practice 9:61–65.

White, William, and Catherine Draycott

2020 Why the Whiteness of Archaeology Is a Problem. Sapiens, July 7. Electronic document, https://www.sapiens.org/archaeology/archaeologydiversity/, accessed July 28, 2020.

Wilson, Jackson D.

2015 Comparison of Methods to Teach Magnetic Declination. *Journal of Outdoor Recreation, Education, and Leadership* 7(2):158–165.

AUTHOR INFORMATION

Becca Peixotto ■ Center for the Exploration of the Human Journey, Perot Museum of Nature and Science, 2201 N. Field Street, Dallas, TX 75201, USA; Department of Anthropology, American University, 4400 Massachusetts Ave NW, Washington, DC 20016 USA (beccapeixotto@gmail.com, corresponding author)

Carla Klehm Spatial Archaeometry Research Collaborations, Center for Advanced Spatial Studies, University of Arkansas, 227 N. Harmon Avenue, JBHT 304, Fayetteville, AR 72701, USA

Kurt P. Eifling Department of Emergency Medicine, University of Arkansas for Medical Sciences, Northwest Campus College of Medicine, 1125 North College Avenue, Fayetteville, AR 72703, USA; Larner College of Medicine, University of Vermont, 111 Colchester Avenue, Main Campus, Burlington, VT 05401, USA