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Enduring the Elements: Civil War Soldiers' Struggles Against the Weather

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ENDURING THE ELEMENTS: CIVIL WAR SOLDIERS' STRUGGLES AGAINST THE WEATHER

DISSERTATION

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of History in the College of Arts and Sciences at the University of Kentucky

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ABSTRACT OF DISSERTATION

ENDURING THE ELEMENTS:
CIVIL WAR SOLDIERS' STRUGGLES AGAINST
THE WEATHER

This dissertation is an environmental history that studies the variety of ways that soldiers in the American Civil War experienced the pressures of weather over the course of their military service. For the troops of the U.S. and Confederacy, the weather was more than simply a passive backdrop to their time in the military, but a central preoccupation. This dissertation analyzes how weather intersected with some of the most central experiences of soldiering – tent camping and winter quarters, marching, bivouacking, manning sentry posts and field fortifications, and fighting in battles. Life in Civil War armies consisted of all of these assorted activities, with most troops engaging in many, if not, all of them. These various facets of wartime service were nowhere near as exacting and challenging when they took place in mild weather, as they were in adverse conditions such as rain or heat.

Rank-and-file U.S. and Confederate troops accumulated knowledge and experience as they soldiered that shaped the ways that they perceived, reacted, and adjusted to the weather. Though their responses were conditioned by the different aspects of military service, men devised numerous methods, using any means available, to combat inclement weather and to alleviate its difficulties and hardships. Adapting to the environment turned out to be a critical element in how common soldiers became hardened veterans. But it was not only that. Federals and Confederates strove to adapt to the weather because they connected it to their identity as men. To these troops, successfully contending with human opponents as well as meteorological adversaries proved their manhood.

KEYWORDS: Civil War, Soldiers, Environment, Weather, Manhood

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Introduction

Moving through northern Virginia in late March 1862, Pvt. Wilbur Fisk and the 2nd Vermont Infantry camped in the vicinity of Fairfax while torrential rain fell. Already soaked to the skin and wearied from marching in the rain and mud, Fisk and his comrades pitched their small shelter tents, built up roaring campfires, and tried to make themselves as comfortable as possible for the night. These efforts took various forms. Writing home to a local Vermont newspaper, Fisk reported that some soldiers stood around their fires for most of the night, while others collected large quantities of pine boughs from the surrounding woods to carpet the floor of their tents and then spread their blankets on top as a bed. Even though water from the continued rainstorm ran swiftly under them in their tents, the men laid down in their drenched clothes to try to sleep. Fisk envied the soldiers who managed to sleep amid the difficult circumstances, as he himself "lay shivering most of the time in the sublimest misery."[1]

More than one year later, Fisk's regiment marched through Virginia as part of the Union army headed to battle at Gettysburg in the summer of 1863. Moving north on a very hot and dusty day, Fisk explained "The dry dirt seemed to be particularly adapted to draw the rays of the sun, and the blistering heat that the road reflected, seemed like the breath from a furnace, seven times heated." Marching amid such conditions with heavy knapsacks was too much for many soldiers, who fell out of the ranks and could be seen lining the roadway, prostrated by the heat and exhaustion. Those troops were the fortunate ones. Fisk described how "many fell dead in their tracks," with his corps losing

[1] Emil Rosenblatt and Ruth Rosenblatt, eds., *Hard Marching Every Day: The Civil War Letters of Private Wilbur Fisk, 1861-1865* (Lawrence: University Press of Kansas, 1983), 13-14.

nearly fifty men to heatstroke and others rumored to have lost even more. Fisk acknowledged that he had no means of knowing the exact number of soldiers who died that day, but he did "know that dead men lay along beside the road in sufficient numbers to prove that our marching strength was being pretty well tested."[2]

In February 1864, Fisk's unit performed several days of picket duty near Brandy Station in Virginia. Cold weather caused discomfort while Fisk was manning the forward posts, but conditions became much worse later when he was detailed to the reserve portion of the picket line. For Fisk's entire twenty-four hours on the reserve, it grew progressively colder and a relentless wind blew. The men had fires, but Fisk lamented that they did little good, since "The wind would blow the fire all about, and all over us, or it would blow it completely away from us, so that in reality, a fire was more of an annoyance than a benefit." With the brutal cold preventing sleep, Fisk's comrades put up their blankets to try to keep the wind off the fire. The fire was then built up until it was so hot that Fisk needed to cover his knees with newspapers and his face with a handkerchief to keep them from burning. Despite the incredibly hot fire, Fisk noted that there was little comfort because the icy wind pummeled the back portion of his body and occasionally shifted direction, showering the men with fire, smoke, and ashes. A soldier for over two years by that point, Fisk concluded, "That was the meanest experience I have ever had on picket."[3]

These examples are only a few of the detailed descriptions of interactions with the weather that fill the nearly 100 letters that Fisk wrote home to a local newspaper during

[2] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 105-106.
[3] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 193-194.

the war. Fisk clearly wanted readers to understand and visualize the struggles against the elements that were a regular feature of wartime life for soldiers. Fisk served for over three years throughout the Eastern Theater, living outside the entire time, and an overriding constant was his encounters with the weather. That was what he wanted everyone at home to understand.

This dissertation is an environmental history that studies the variety of ways that Civil War soldiers like Wilbur Fisk experienced the pressures of weather over the course of their military service. The common soldiers of the Civil War are a well-discussed historical subject, both academically and publicly. Historians have examined topics such as motivations for enlisting and fighting, thought processes and philosophies, attitudes toward slavery, life in the ranks of the wartime military, and actions on the battlefield.[4] Despite the many studies of soldiers, much of the discussion of them focuses on their position in an army, in a regiment – a cog in the military wheel – but not on their position

[4] Some of the main studies of Civil War soldiers are Bell Irvin Wiley, *The Life of Johnny Reb: The Common Soldier of the Confederacy* (Indianapolis: Bobbs-Merrill Company, 1943); Bell Irvin Wiley, *The Life of Billy Yank: The Common Soldier of the Union* (Indianapolis: Bobbs-Merrill Company, 1952); Gerald F. Linderman, *Embattled Courage: The Experience of Combat in the American Civil War* (New York: The Free Press, 1987); James M. McPherson, *For Cause and Comrades: Why Men Fought in the Civil War* (New York: Oxford University Press, 1997); Aaron Sheehan-Dean, editor, *The View from the Ground: Experiences of Civil War Soldiers* (Lexington: University Press of Kentucky, 2007); Chandra Manning, *What This Cruel War Was Over: Soldiers, Slavery, and the Civil War* (New York: Alfred A. Knopf, 2007); Lesley Gordon, *A Broken Regiment: The 16th Connecticut's Civil War* (Baton Rouge: Louisiana State University Press, 2014); Michael C.C. Adams, *Living Hell: The Dark Side of the Civil War* (Baltimore: John Hopkins University Press, 2014); Peter S. Carmichael, *The War for the Common Soldier: How Men Thought, Fought, and Survived in Civil War Armies* (Chapel Hill: University of North Carolina Press, 2018); Brian Matthew Jordan, *A Thousand May Fall: Life, Death, and Survival in the Union Army* (New York: Liveright Publishing Corporation, 2021).

in the natural world. As the above examples highlight, the interaction between soldiers and the natural environment was unavoidable, intimate, and constant. Soldering in the Civil War looks quite different when placing troops firmly within the natural world, living amid and struggling against a myriad of environmental challenges. Focusing on soldiers' relationship with the environment presents a more complete understanding of how the men lived, fought, survived, and perished in the conflict.

"Enduring the Elements" will focus on one aspect of the natural world in particular – the weather. The weather was the facet of the Civil War's environmental history most talked about by the men in the United States and Confederate armies. In the writings of soldiers, it is impossible to miss the continual references to the prominent role of weather conditions in influencing their daily lives. In fact, the majority of the conflict's combatants wrote about the weather in their letters, diaries, and memoirs – and sometimes page after page focused on their struggles to withstand the elements. For the soldiers of the U.S. and Confederacy, the weather was more than simply a passive backdrop to their time in the military, but a central preoccupation. While this could be said about most people in mid-nineteenth-century America, weather assumed a greater significance for Civil War soldiers for several reasons. First, the men had increased encounters with adverse conditions due to the irregular weather patterns of the war years. Second, and most importantly, service in the army necessitated much longer lasting exposure to the elements then life at home. One of the things that sets the soldier's experience apart from a civilian's encounter with the weather is that they got basically no break from it. They lived outside for three to four years at a time. This is a simple

observation – but one that is important to point out. Who else in American society in the 19th century lived outside continuously for years?

This dissertation analyzes how weather intersected with some of the most central experiences of soldiering – tent camping and winter quarters, marching, bivouacking, manning sentry posts and field fortifications, and fighting in battles. Life in Civil War armies consisted of all of these assorted activities, with most troops engaging in many, if not, all of them. These various facets of wartime service were nowhere near as exacting and challenging when they took place in mild weather, as they were in adverse conditions such as rain or heat. Most men understood that enduring the vagaries of the weather was a necessary part of war, one of the realities of soldiering, but most nevertheless believed that bad weather was extremely disagreeable to soldier in and made life in the military much more difficult.

Rank-and-file U.S. and Confederate troops accumulated knowledge and experience as they soldiered that shaped the ways that they perceived, reacted, and adjusted to the weather. Though their responses were conditioned by the different aspects of military service, men devised numerous methods, using any means available, to combat inclement weather and to alleviate its difficulties and hardships. It was the lower-ranked members of the armies – the enlisted men and junior officers – who endured the weather to the hardest degree, as they were the ones living in the most basic shelters, moving everywhere on foot, continually given outdoor duties and assignments, and fighting on the frontlines. Their unrelenting exposure to the weather made brutally clear and obvious how different the war experience was for men of different ranks. Adapting to

the environment turned out to be a critical element in how common soldiers became hardened veterans.

But it was not only that. Federals and Confederates strove to adapt to the weather because they connected it to their identity as men. To these troops, successfully contending with human opponents as well as meteorological adversaries would prove their manhood. Many declared that over time they could better endure weather-related challenges because they became tougher and more accustomed to exposure. While partly the result of the physiological and psychological processes of acclimatization, soldiers' beliefs and claims about toughening to the point that they could effectively stand the heat, cold, snow, and rain were manifestations of prevailing masculine ideals. And as it was the rank-and-file experiencing the bulk of the struggles against the elements, not generals and other high-ranking officers, the distinction was reserved for them alone. Furthermore, by differentiating between the ability of combatants and noncombatants to endure bad weather, troops perceived themselves as having reached a level of strength and hardiness that was unattainable for civilians, including themselves before serving in the army. In their opinion, true martial men were forged in the crucible of war, especially through the countless physical and mental battles against the weather.

"Enduring the Elements" joins other military studies that integrate war and environmental histories, a relatively new and growing area of focus. In the last twenty years or so, historians combining these methodologies have increasingly focused on the

American Civil War.[5] Scholars have underscored that the conflict depended on the dynamic interplay between humans and nature, and to ignore that is to overlook a significant portion of the wartime experience. Studying the relationships between humans and nature can, as Brian Allen Drake's notes, "locate and turn over new stones in the Civil War field as well as reposition some older ones."[6] Soldiers' incessant encounters with the weather is one of those new stones.

The existing scholarship has provided valuable insights into the interactions between humans and the environment in the Civil War, and the studies have also been

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[5] Environmental studies of the Civil War era include Ted Steinberg, *Down to Earth: Nature's Role in American History* (New York: Oxford University Press, 2002), 89–98; Mark Fiege, "Gettysburg and the Organic Nature of the American Civil War," in *Natural Enemy, Natural Ally: Toward an Environmental History of Warfare*, edited by Richard P. Tucker and Edmund Russell, 93-109 (Corvallis: Oregon State University Press, 2004); Andrew McIlwaine Bell, *Mosquito Soldiers: Malaria, Yellow Fever, and the Course of the American Civil War* (Baton Rouge: Louisiana State University Press, 2010); Amy M. Taylor, "How a Cold Snap in Kentucky Led to Freedom for Thousands: An Environmental Story of Emancipation," in Stephen Berry, ed., *Weirding the War: Stories from the Civil War's Ragged Edges* (Athens: University of Georgia Press, 2011); Lisa Brady, *War Upon the Land: Military Strategy and the Transformation of Southern Landscapes during the American Civil War* (Athens and London: University of Georgia Press, 2012); Megan Kate Nelson, *Ruin Nation: Destruction and the American Civil War* (Athens: University of Georgia Press, 2012); Kathryn Shively, *Nature's Civil War: Common Soldiers and the Environment in 1862 Virginia* (Chapel Hill: University of North Carolina Press, 2013); Brian Allen Drake, editor, *The Blue, the Gray, and the Green: Toward an Environmental History of the Civil War* (Athens: University of Georgia Press, 2015); Matthew M. Stith, *Extreme Civil War: Guerrilla Warfare, Environment, and Race on the Trans-Mississippi Frontier* (Baton Rouge: Louisiana State University Press, 2016); Erin Stewart Mauldin, *Unredeemed Land: An Environmental History of Civil War and Emancipation in the Cotton South* (New York: Oxford University Press, 2018); Adam Petty*, The Battle of the Wilderness in Myth and Memory: Reconsidering Virginia's Most Notorious Civil War Battlefield* (Baton Rouge: Louisiana State University Press, 2019); Judkin Browning and Timothy Silver, *An Environmental History of the Civil War* (Chapel Hill: University of North Carolina Press, 2020); Kenneth W. Noe, *The Howling Storm: Weather, Climate, and the American Civil War* (Baton Rouge: Louisiana State University Press, 2020).

[6] Drake, "Introduction," in *The Blue, the Gray, and the Green*, 3.

quite varied. Some historians such as Megan Kate Nelson and Erin Stewart Mauldin have examined how the conflict damaged natural and human-made environments as well as changed the way that many contemporary Americans used and perceived the land in the long term. Other scholars like Mark Fiege and Lisa Brady have investigated how humans exerting control over aspects of the natural world was part of the strategic considerations of both the U.S. and Confederate armies, and their ability to do so factored into the overall success or failure of their respective war efforts. Judkin Browning and Timothy Silver employ a broad approach to explore the wartime roles of environmental factors ranging from diseases and food to animals, weather, and landscapes. These two historians demonstrate that the Civil War was more than a military event, it was an "ecological event that not only affected people but also altered natural systems and reshaped the already complex interaction between humans, other organisms, and the physical environment."[7]

Furthermore, scholars have emphasized the active part played by the environment in shaping the events of the Civil War both on and off the battlefield. One of the central tenets of environmental history is that nature is an active nonhuman force in history, with a direct impact on human affairs. While not the sole determinant of events, historians incorporating environmental methodologies have shown that nature affects the course of history through its interaction with human beings. As Brady and Silver argue, "the natural world moves to its own peculiar rhythms and frequently shapes historical events

[7] Browning and Silver, *An Environmental History of the Civil War*, 4.

in ways that humans cannot anticipate."[8] Humans react to nature, nature reacts to human actions, and weather is no exception to this rule.

Historians including Browning and Silver, Kathryn Shively, Andrew McIlwaine Bell, and Kenneth Noe have embraced the notion of environmental agency in order to demonstrate that humans alone did not shape the course of the Civil War, particularly on the battlefronts. For example, Shively looked at how harsh environmental conditions in Virginia forced soldiers to fight to maintain their health in the Shenandoah Valley and Peninsula Campaigns of 1862.[9] In an expansive study, Noe analyzed the history of the conflict with a focus on how weather and climate affected the outcomes of battles and campaigns. "Weather shaped every campaign," Noe argues, "Ultimately, we cannot understand the battles unless we include that third player, the metaphorical 'Army of Weather.'"[10] This dissertation will build upon the works of Shively, Noe, and others to answer new and original questions regarding the experience of soldiering in the Civil War.

While studies such as Noe's address the role of weather in engagements and campaigns, my project specifically focuses on the totality of soldiers' lived experiences with the weather. Active operations were only one part of military service, and soldiers spent much of their time engaged in other activities such as bivouacking and sentry duty, all of which entailed continuous interactions with the elements. Positioning soldiers in the natural world makes it clear that encounters with the environment and the weather in

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[8] Lisa M. Brady and Timothy Silver, "Nature as Material Culture: Antietam National Battlefield," in Joan Cashin, ed., *War Matters: Material Culture in the Civil War Era* (Chapel Hill: University of North Carolina Press, 2018), 70.
[9] Shively, *Nature's Civil War*.
[10] Noe, *The Howling Storm*, 9.

particular were fundamental to military service in the Civil War. Scholars tend to focus on the human enemies – the way that the opposing army took men down – but, as it turns out, there was a natural enemy too, and men contended with it far more frequently. As the adaptions that soldiers made in response to adverse weather were crucial in helping them survive the war, this dissertation offers an understanding of how and why the death toll of this already deadly conflict was not higher. Additionally, "Enduring the Elements" examines aspects of the Civil War that have been excluded from previous environmental studies, particularly how mid-nineteenth century conceptions of manhood and gender in America factored into the relationship between soldiers and the weather.

Gender analysis is central to this dissertation, as it will consider how troops' position as men influenced how they thought about and responded to soldiering in inclement weather. Rather than a single ideal of masculinity, men in Civil War America combined a wide range of masculine values, qualities, and practices, with race often differentiating these standards of manhood. As historian Lorien Foote explains, "there was a diversity of models and patterns. Whether the process occurred consciously or subconsciously, men chose from a spectrum of options when they pieced together the component parts of their manly identities."[11] While men in both the North and South embraced contradictory and competing attributes of manhood, many adhered to aspects of the ideal known as martial manhood. One of the most prominent masculine ideals at the time of the Civil War, martial manhood connoted strength, aggression, and other

[11] Lorien Foote, *The Gentlemen and the Roughs: Violence, Honor, and Manhood in the Union Army* (New York: New York University Press, 2010), 4.

military qualities. When men became soldiers in the Union and Confederate armies, they sought to conform to components of martial manhood in numerous ways.[12] A primary one was overcoming the horrors of combat and performing well in battle, but as "Enduring the Elements" reveals, an additional way that troops could exhibit manly strength and fortitude was by withstanding the everyday trials and tribulations of life in an army at war. These difficulties included those imposed by the weather and the natural environment in general. Previous studies of gender and manhood in the Civil War have not examined the role of the environment in shaping soldiers' experiences. By delving into the dynamic between manhood and the natural world, this dissertation demonstrates how soldiers' efforts to prove their masculinity were intimately linked to their continual struggles against bad weather.[13]

Besides engaging with gender analysis, "Enduring the Elements" takes an interdisciplinary approach to Civil War soldiering by incorporating additional areas of

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[12] Studies of gender and masculinity in the Civil War era include Catherine Clinton and Nina Silber, eds., *Divided Houses: Gender and the Civil War* (New York: Oxford University Press, 1992); Amy S. Greenberg, *Manifest Manhood and the Antebellum American Empire* (New York: Cambridge University Press, 2005); Foote, *The Gentlemen and the Roughs*; Sarah Handley-Cousins, *Bodies in Blue: Disability in the Civil War North* (Athens: University of Georgia Press, 2019); James J. Broomall, *Private Confederacies: The Emotional Worlds of Southern Men as Citizens and Soldiers* (Chapel Hill: University of North Carolina Press, 2019).

[13] This dissertation draws gender and the environment together in a way that is similar to Carolyn Merchant, *The Death of Nature: Women, Ecology and the Scientific Revolution* (San Francisco: Harper San Francisco, 1990); Glenda Riley, *Women and Nature: Saving the "Wild" West* (Lincoln: University of Nebraska Press, 1999); Virginia J. Scharff, ed., *Seeing Nature Through Gender* (Lawrence: University Press of Kansas, 2003); Carolyn Merchant, *Ecological Revolutions: Nature, Gender, and Science in New England* (Chapel Hill: University of North Carolina Press, 2010); Nancy C. Unger, *Beyond Nature's Housekeepers: American Women in Environmental History* (New York: Oxford University Press, 2012). As most of these studies focus on women, this dissertation contributes new insights to the scholarship by looking at men.

study, including meteorology and climatology. As defined by the modern National Oceanic and Atmospheric Administration, weather is "the state of the atmosphere at a given point in time and geographic location, and includes daily temperatures, precipitation, wind, and clouds," while climate is the long-term and average weather pattern of an area.[14] Studies by meteorologists and climatologists have determined that the Civil War occurred during a period of uncommon and turbulent weather, featuring extremes of all types. This unusual wartime weather has been attributed to naturally reoccurring changes in Earth's climate, also known as climate oscillations, but there is no agreement among scientists or historians on the specific cause. Many posit that a La Niña phase of the El Niño Southern Oscillation (ENSO) was responsible for the irregular weather across the U.S. during the Civil War, some theorize that an El Niño phase of ENSO or the North Atlantic Oscillation (NAO) was the cause, while others have suggested that it was a combination of the different phenomena.[15] No matter the larger

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[14] "Weather and Atmosphere," *National Oceanic and Atmosphere Administration: Education Resources,* September 2021, https://www.noaa.gov/education/resource-collections/weather-atmosphere; "Climate," *National Oceanic and Atmosphere Administration: Education Resources*, May 2021, https://www.noaa.gov/education/resource-collections/climate.

[15] Edward R. Cook, R. D. D'Arrigo, and Michael E. Mann, "Well-Verified Winter North Atlantic Oscillation Index Reconstruction," IGBP PAGES / World Data Center for Paleoclimatology Data Contribution Series 2002-059, NOAA/NGDC Paleoclimatology Program, 2002, ftp://ftp.ncdc.noaa.gov/pub/data/paleo/treering/reconstructions/nao_cook2002.txt; "North Atlantic Oscillation (NAO) Index," Climate Data Archive. Joint Institute for the Study of the Atmosphere and Ocean (JISAO), February 2002, http://research.jisao.washington.edu/data_sets/nao/; Celine Herweijer, Richard Seager, and Edward R. Cook, "North American Droughts of the Mid to Late Nineteenth Century: A History Simulation and Implication for Mediaeval Drought," *Holocene* 16 (Feb. 2006): 159-171; Richard Grove and George Adamson, *El Niño in World History* (London: Palgrave Macmillan, 2018); Browning and Silver, *An Environmental History of the Civil War*; Noe, *The Howling Storm*.

climatic origin, the ultimate result for the men in the Union and Confederate armies was that they had to continually face a wide range of adverse weather conditions as part of their military service.

This project also brings in insights from human health sciences, particularly physiology and psychology. The former is used to better understand the manner in which the weather affected the physical health of the men serving in the Union and Confederate armies. The human body possesses specific mechanisms to help regulate a stable internal temperature amid intense heat or cold, while various afflictions such as heatstroke, dehydration, and hypothermia are all caused by exposure to harsh weather. Wartime encounters with the elements did not only involve physical interactions, but mental as well. Psychology is important in recognizing how meteorological conditions influenced the mood and morale of troops, and also how men attempted to cope with the pressures. Complementing human health sciences, "Enduring the Elements" utilizes findings from environmental science to provide a deeper analysis into the relationship between soldiers and weather. Concepts like shifting baselines and acclimatization can help explain men's perceptions of the elements, their ability to endure them, and especially how these both changed over time.[16]

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[16] Masashi Soga and Kevin J. Gaston, "Shifting Baseline Syndrome: Causes, Consequences, and Implications," *Frontiers in Ecology and the Environment* 14, no. 4 (2018): 222-230; Frances C. Moore, Nick Obradovich, Flavio Lehner, and Patrick Baylis, "Rapidly Declining Remarkability of Temperature Anomalies may Obscure Public Perception of Climate Change," *Proceedings of the National Academy of Sciences* 116, no. 11 (2019): 4905-4910; Ken Parsons, *Human Thermal Environments: The Effects of Hot, Moderate, and Cold Environments on Human Health, Comfort, and Performance, Third Edition* (Boca Raton, FL: CRC Press, 2014); Marcel Schweiker, Gesche M. Huebner, Boris R. M. Kingma, Rick Kramer, and Hannah Pallubinsky, "Drivers of Diversity in Human Thermal Perception – A Review for Holistic Comfort Models," *Temperature* 5, no. 4 (2018): 308-342.

Lastly, this dissertation draws on the ideas and methods of material culture studies to emphasize the significance of material objects in affecting daily aspects of service in the Civil War.[17] As scholars Brian Luskey and Jason Phillips explain, "Things support and threaten existence, and without stuff – technologies, infrastructure, goods, and resources – history cannot happen. An army cannot muster without things."[18] "Enduring the Elements" shows how regardless of individual soldiers' thoughts about the weather, material culture had a primary role in shaping their experiences with the weather. Looking particularly at material things reveals the points of intersection in the interactions between humans and nature. Items ranged from pieces of equipment typically issued to soldiers, such as tents, uniforms, blankets, shoes, and firearms, to resources like timber and water taken from natural and built environments. For soldiers, these items were much more than just stuff. They enabled troops to contend with adverse weather more effectively by mitigating and countering to varying levels the problems imposed by the elements. Certain material objects were more useful depending on the aspect of soldering engaged in, but some proved more versatile by being utilized in numerous activities. No matter the facet of wartime service, however, troops who possessed or had access to sufficient equipment and other material resources often fared better in their interactions with the weather than those men who did not. As will be seen throughout this

[17] Similar to environmental history, material culture studies are a new and growing field of Civil War study. Examples include *Civil War History* 63, no. 2 (June 2017); Joan E. Cashin, ed., *War Matters: Material Culture in the Civil War Era* (Chapel Hill: University of North Carolina Press, 2018); and Joan E. Cashin, *War Stuff: The Struggle for Human and Environmental Resources in the American Civil War* (New York: Cambridge University Press, 2018).

[18] Brian Luskey and Jason Phillips, "Muster: Inspecting Material Cultures of the Civil War," *Civil War History* 63, no. 2 (June 2017), 105-106.

dissertation, Federals were generally more well supplied with the gear needed to help deal with inclement weather than their Confederate enemies.

"Enduring the Elements" analyzes hundreds of Civil War soldiers' letters and diaries, supplemented with memoirs and unit histories, from published sources and unpublished manuscript collections, to provide an extensive view of the troops' diverse encounters with the weather. Diaries and letters written in the moment, rather than postwar writings, form the bulk of the evidence base due to the important differences between eyewitness accounts and reminiscences. Wartime writings are not only more likely to reflect experiences more accurately than retrospective records like memoirs, but they also capture the raw emotion about a man's encounter with the weather and give a more direct insight into what he was thinking and feeling.[19] A total of around 350 Union and Confederate soldiers composes the sample for this dissertation. The sample reflects a broad spectrum of social, class, and occupational backgrounds, with men from all parts of the North and South. The majority of the soldiers were white; fewer African Americans are included due to the limited availability of their writings, especially those that relate day-to-day life in the army.[20] The sample incorporates men who were in the infantry,

[19] Discussions of the differences between wartime and postwar writings are included in Shively, *Nature's Civil War*; Stephen Cushman, *Bloody Promenade: Reflections on a Civil War Battle* (Charlottesville: University of Virginia Press, 1999).

[20] Compared to white soldiers, Civil War accounts written by African American troops are sparse. Many of the writings are those of men who were born free in the North before the war, but the majority of African Americans in the U.S. armies had been enslaved in the South and only gained their freedom during the conflict. Just a small number of these soldiers had the ability to read or write at the time of the war, and the few accounts composed by them were mainly memoirs from the postwar period. Additionally, even fewer accounts provide a sustained and detailed look at daily life in the military. This

cavalry, and artillery and who served in all the areas of the Civil War, from the Eastern, Western, and Trans-Mississippi Theaters to the contested territories in the American West.[21]

There was no such thing as a typical wartime experience for the men in the U.S. and Confederate armies and every individual's military service was distinct. Moreover, it must be remembered that troops' interactions with the weather were subjective.[22] Not all soldiers were affected by weather conditions in the same way, and they did not perceive or respond to them in an objective or singular manner. For example, temperatures that one soldier considered hot or cold may not have been deemed that way by another soldier. Some men were more discomforted by cooler or warmer conditions than their comrades, and preferred types of weather conditions varied from soldier to soldier. Some troops thought that rain was the worst type of weather for soldiering, but others believed that the heat caused the greatest hardships. Despite the subjective nature of relations with the elements, all the soldiers encountered variable weather conditions during the war. This dissertation does a close reading of their words and look for patterns that emerge

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dissertation utilizes the writings of eight Black soldiers to explore African Americans' experiences with the weather to the extent possible.

[21] While often considered distinct, when it comes to soldiers and their experiences, traditional theaters of operations and the violent struggles between U.S. forces and Native peoples in the West are actually connected in several ways. Many of the Federal troops who confronted Native Americans in the West also fought or at least joined the army to fight Confederates in the South.

[22] Studies by modern environmental scientists have confirmed the subjective nature of humans' perceptions of weather, particularly temperature, with various processes playing a significant role in thermal comfort evaluation. Studies include Igor Knez and Sofia Thorsson, "Influences of Culture and Environmental Attitude on Thermal, Emotional and Perceptual Evaluations of a Public Square," *International Journal of Biometeorology* 50, no. 5 (2006): 258-68; and Simone Queiroz da Silveira Hirashima, Antje Katzschner, Daniele Gomes Ferreira, Eleonora Sad de Assis, and Lutz Katzschner, "Thermal Comfort Comparison and Evaluation in Different Climates," *Urban Climate* 23 (2018): 219-230.

across all the letters, diaries, and other writings to reveal the common aspects of those different interactions.

Every project has to limit its scope, and while "Enduring the Elements" assumes a broad view in terms of space, time, and wartime activities, it is no exception. The focus is specifically on the experiences of privates, noncommissioned officers, and junior officers and those who served in conventional combat units. This decision was made for several reasons. First, as discussed previously, enlisted men and lower-ranking officers (captains and below) were the rank-and-file soldiers of the Civil War. They comprised a vast majority of the men who served in the conflict and thus the ways that they interacted with the weather were the most common that occurred. Second, the soldiers in combat units engaged in various types of activities that demanded incessant encounters with the elements. Third, higher-ranking officers are mostly excluded not only because they formed a much smaller number of the men in Civil War armies, but also because as a virtue of their rank, they were less vulnerable to the detrimental effects of weather conditions on a daily basis compared to the more ordinary soldiers. This dissertation, however, will examine how the military rank of even the lower ranking men factored into their experiences with the elements and discuss common soldiers' thoughts on some of their superior officers' actions and orders that were connected to the current state of the weather. While this dissertation will look at ways that the elements affected fighting in battles, bringing in examples from various points in the war, it will not analyze weather's larger role in shaping individual campaigns as a whole.[23]

[23] While not inferring that weather lacked a role in their wartime experiences, this dissertation does not look at combatants in the navies, guerrilla units, or many garrison and other behind-the-battlefront forces of the U.S. and Confederacy.

"Enduring the Elements" is divided into five chapters, with each one focusing on a specific aspect of military service in the Civil War. The chapters explore tent camping and winter quarters, marching, bivouacking, manning picket and guard posts and field fortifications, and fighting on the battlefield. This dissertation is structured in this manner because to a large extent, soldiers' interactions with the natural environment were determined by the wartime activity in which the men were engaged. For instance, troops in camp or at bivouacs had many more options in responding to the problems caused by harsh weather than men on the march, stationed in earthworks, or in combat against the enemy. While not following a chronological format, as the pressures caused by adverse conditions were the same in 1861 as in 1865, the chapters will highlight the progression in men's struggles against the elements as they learned and adapted over the course of their service. Soldiers generally became more successful at adjusting to the rigors of weather, and this in turn helped them survive the war. Through their struggles against the elements, Federals and Confederates received a whole education – sometimes a four-year-long education – in becoming toughened veterans and martial men.

Chapter 1 – Tent Camping and Winter Quarters

Introduction

Soldiering in the Civil War evokes images of long columns of marching men and massed formations exchanging musket fire on the battlefield. The reality is that troops spent the majority of their service in encampments. When men joined the army, campsites were the closest thing to home for the duration of their service. Camp was where they socialized with fellow soldiers, cooked and ate meals, wrote diary entries and letters, read newspapers and messages from home, played games and gambled, or rested and slept. Encampments were also where men learned how to fight in battle. They spent long hours training, also known as drilling, especially in the early days of their enlistment. Drilling was designed to instill discipline in units and prepare troops for combat by teaching them to follow orders, move in and change formations, maintain even ranks in lines of battle, and load and fire their weapons.

Much of the time when Federals and Confederates encamped, they lived in different types of tents. They usually were able to pass the time comfortably under their canvas shelters when temperatures were mild and skies were clear, but camping was much different in adverse weather. No matter the type of military tent that soldiers used, inclement conditions usually exceeded their capacity to shield against the elements. Men on both sides quickly discovered upon joining the army that they would have to adapt. They utilized available pieces of equipment, material resources from around their camps, and their own ingenuity to make the weather as endurable as possible. The culmination of their adaptions were winter quarters, the more substantial structures that men built and inhabited to contend with the cold and snow of winter.

Soldiers recognized that their struggles against the elements were not frequently shared by the officers in the upper echelons of the armies. Those individuals usually had the most comfortable type of tents and ordered the men under their command to do the work of erecting their shelters and adding the features that would provide more protection from the weather (methods discussed below). The meteorological challenges that the rank and file constantly faced as they camped would have served as a vivid representation of their lowly position in the military hierarchy. But these troops took pride in their ability to successfully live in tents and winter quarters amid conditions ranging from sizzling heat to heavy rain and freezing cold. In their view, learning how to camp amid such weather was an indispensable skill of soldiering, one that was not only critical for their welfare and survival, but also for becoming seasoned veterans.

Types of Tents

The protection afforded by the different models of tents varied considerably. A popular canvas shelter used by both armies early in the war was the Sibley tent, a bell-shaped or conical tent eighteen feet in diameter and twelve feet high supported by a center pole. It had a single entrance, and a vent at the top and flaps on the sides could be opened for ventilation, though there were complaints about foul air quality inside the tent if the openings were closed for many hours. Sibley tents were typically inhabited by around twelve men, but sometimes groups as large as twenty were assigned to each one, making for cramped quarters. Despite their criticisms, many soldiers agreed with Iowa sergeant Cyrus F. Boyd's assertion that, "for enlisted men the Sibley is the best of all

others."[24] This was particularly because Sibley tents were better at mitigating the effects of harsh weather than other types. In late 1862, Pvt. Richard W. Waldrop of the 21st Virginia Infantry wrote that his unit would "be better protected from the weather…If we could get the right kind of tent (a Sibley) we could make it as comfortable as a house – more so than some houses."[25] Sibley tents proved cumbersome to transport by wagon trains due to their large size, however, and armies in the field no longer used them by the middle stages of the war.[26]

Wall tents were another sizable type of canvas dwelling and were often issued to officers for their personal quarters and as headquarters. Although there were much larger versions that served as field hospital tents, the ones used by officers were nine feet square with four upright sides or walls. According to Massachusetts artillerist John D. Billings, this design made them more comfortable to occupy than most other tents, "as one can stand erect or move about in them with tolerable freedom."[27] Wall tents required several poles to hold up the canvas along with more than two dozen tent stakes and a dozen supporting ropes. This tent also came with an extra piece of canvas, called a fly, that could be stretched over the roof as additional protection against the sun and rain or placed in front of the entrance as a porch-like area. Given the supply wagons needed to transport

[24] Mildred Throne, ed., *The Civil War Diary of Cyrus F. Boyd, Fifteenth Iowa Infantry, 1861-1863* (Millwood, NY: Kraus, 1977), 124.
[25] Richard W. Waldrop to Mother, December 6, 1862, Richard Woolfolk Waldrop Papers, Southern Historical Collection, University of North Carolina.
[26] John D. Billings, *Hardtack and Coffee: The Unwritten Story of Army Life* (Boston: George M. Smith & Co., 1888), 46-48; William C. Davis, *The Fighting Men of the Civil War* (Norman, University of Oklahoma Press, 1998), 132-133.
[27] Billings, *Hardtack and Coffee*, 50.

wall tents, higher-ranking officers, such as generals and colonels, typically camped in these shelters, but junior officers were only able to some of the time.[28]

Captains and lieutenants regularly lived in the same types of tents given to noncommissioned officers and privates. One of these was the "A" or wedge tent, a one-piece canvas stretched over a horizontal bar that was around six feet long and supported at the ends by upright poles of about the same length. Corp. Lawrence Van Alstyne of the 128th New York Infantry described wedge tents in his diary: "They are like the roof of a house cut off at the eaves, and one gable split open for us to enter, with strings sewed fast to one side and buttonholes in the other so we can close them up tight."[29] These tents were about seven feet square and occupied by four to six men, who often had to lay close together to fit in the enclosed space. Wedge tents were commonly employed in the few couple years of the conflict, but like Sibley tents, their transportation needs were too great and their use in the field eventually ended.[30]

As the war progressed, the larger tents for enlisted men and lower-ranking officers were replaced with smaller and lightweight ones that did not require numerous wagons and horses to transport them. Commanders sought to enable their forces to move faster and more efficiently while campaigning by reducing the number of supply wagons accompanying the army. In the early spring of 1862, U.S. troops began to be supplied with shelter tents, a new kind of canvas dwelling modeled after a French invention, and

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[28] Billings, *Hardtack and Coffee*, 50-51; Davis, *The Fighting Men of the Civil War*, 132; Andrea R. Foroughi, ed., *Go If You Think It Your Duty: A Minnesota Couple's Civil War Letters* (St. Paul: Minnesota Historical Society Press, 2008), 238-239.
[29] Lawrence Van Alstyne, *Diary of an Enlisted Man: The Recollections of a Union Soldier of 'Bostwicks Tigers,' 128th New York Volunteers During the American Civil War* (New Haven: Tuttle, Morehouse & Taylor Company, 1910), 37.
[30] Billings, *Hardtack and Coffee*, 48-50; Davis, *The Fighting Men of the Civil War*, 133.

they ultimately became the standard tent of the Federal rank and file. These tents consisted of two shelter halves, each piece approximately 5 ½ to 6 feet square, with buttons and buttonholes on three sides. Every soldier carried one half of the shelter tent while on the march, and when camping, they would pair up to combine the small pieces of canvas.[31]

"The operation of spreading them for use is very simple," New York lieutenant Josiah M. Favill wrote in April 1862, "you take two sticks cut with crotches about three feet long, stick them into the ground…and upon these lay a light ridge pole, then two men button their pieces together, throw it over the ridge pole, pull it tight and fasten it down to the ground with pegs, little loops being made in the shelter tent for that purpose, and the tent is complete."[32] When wooden sticks and poles were not available near campsites, soldiers sometimes held their tents up by sticking two muskets with fixed bayonets into the ground and stretching a rope between them as a ridgepole. Shelter tents were open at both ends and provided enough space for two men, but they were only about three to four feet high, meaning that the occupants had to sit or lie down and needed to crawl in and out on hands and knees.[33]

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[31] Billings, *Hardtack and Coffee*, 51-53; Davis, *The Fighting Men of the Civil War*, 134; Kenneth W. Noe, *The Howling Storm: Weather, Climate, and the American Civil War* (Baton Rouge: Louisiana State University Press, 2020), 123.
[32] Josiah Marshall Favill, *The Diary of a Young Officer Serving with the Armies of the United States During the War of the Rebellion* (Chicago: R.R. Donnelley & Sons Company, 1909), 77.
[33] Helyn W. Tomlinson, ed., *"Dear Friends": The Civil War Letters and Diary of Charles Edwin Cort* (Helyn W. Tomlinson, 1962), 75-76; John B. Gallison to Mother, April 12, 1863, John B. Gallison Papers, Massachusetts Historical Society; Walter D. Kamphoefner and Wolfgang Helbich, eds., *Germans in the Civil War: The Letters They Wrote Home* (Chapel Hill: University of North Carolina Press, 2006), 205.

Shelter tents were also widely used by Confederate troops, but they did not receive them from their army's quartermasters. As the Confederacy possessed a smaller industrial base and weak military supply and transportation systems compared to the U.S., it had continual trouble providing its forces in the field with a variety of equipment, including canvas shelters.[34] To compensate for the material shortages, Confederates came to rely on battlefield captures to supply their needs. Tents and other equipment were so coveted by Confederate soldiers that they were willing to take them from dead or captured Federals or gather up quantities that had been thrown away by fleeing troops. Consequently, from the middle of the war onward, many Confederate campsites were filled with Union shelter tents, which they called "Yankee flies."[35] These tents were "a commentary on the war," Mississippi private Franklin Riley remarked in September 1863 in Virginia, "Close by must be 10-20,000 of them, mostly white, all (almost all) captured from the enemy. From the beginning of the war the Yankees have been our commissary."[36] Without tents seized from battlefields, many Confederates would have been forced to encamp with no type of canvas dwelling.

Opinions about shelter tents among the rank and file of both armies were mixed. Some men appreciated how carrying their tents on their backs allowed them to always

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[34] Earl J. Hess, *Civil War Logistics: A Study of Military Transportation* (Baton Rouge: Louisiana State University Press, 2017), 31-33, 267-269; Earl J. Hess*, Civil War Supply and Strategy: Feeding Men and Moving Armies* (Baton Rouge: Louisiana State University Press, 2020), 12-13, 85, 354-356, 361.

[35] Noe, *The Howling Storm*, 297 and 360; James Fitz James Caldwell, *The History of a Brigade of South Carolinians, Known First as "Gregg's," and Subsequently as "McGowan's Brigade"* (Philadelphia: King & Baird Printers, 1866), 111.

[36] Austin C. Dobbins, ed., *Grandfather's Journal: Company B Sixteenth Mississippi Infantry Volunteers, Harris's Brigade, Mahone's Division, Hill's Corps, A.N.V., May 27, 1861-July 15, 1865* (Dayton, OH, Morningside House, 1988), 162.

have shelter with them and eliminated their dependance on wagon trains that might not keep up with units on the move. “I like shelter tents on some accounts much,” Massachusetts lieutenant Charles B. Fox commented, “There is a feeling of independence in always having a house at hand, ready for any emergency.”[37] Men were also pleased by the ease with which they were pitched and taken down compared to the larger kinds of tents, completing the process in just a few minutes. Many others had a much less favorable view of shelter tents, however, complaining that they were cramped, low, and stuffy. These types of tents popularly became known as “dog tents,” because as Massachusetts gunner Billings explained, “when one is pitched it would only comfortably accommodate a dog, and a small one at that.”[38] One of the primary reasons that soldiers disliked the minimalistic and open-ended shelter tents was because they provided only limited protection from the weather compared to the larger and fully enclosed Sibley and wall tents. A Massachusetts officer reflected the feelings of many when he declared, “it really seems a little like living again” after switching from a shelter tent to a wall tent.[39] Enlisted men and junior officers may have wished to be in more substantial tents, but as their preferences did not factor into the decision-making of commanders or the exigencies of field service, they mostly had to make do with basic ones.

Hot and Dry Days

[37] Charles B. Fox to Ruth Ann Prouty, June 18, 1862, Charles Barnard Fox Papers, Massachusetts Historical Society.
[38] Billings, *Hardtack and Coffee*, 52.
[39] David W. Blight, ed., *When This Cruel War Is Over: The Civil War Letters of Charles Harvey Brewster* (Amherst: University of Massachusetts Press, 1992), 153.

Many Americans who enlisted in the army found their service taking them to areas of the United States far from their home regions. With the bulk of military operations occurring in the South, this was especially the case for Northerners, but Southerners also often served well outside their state of residence. Men from states in the Deep South such as Texas and Alabama, for instance, were sent to states in the Upper South like Virginia and Tennessee. Furthermore, soldiers on both sides were deployed in various territories of the West, where they fought each other as well as Indigenous peoples. Regardless of where troops were from, the characteristic weather of their prewar home areas acted as a point of reference and comparison for them as they encountered the elements in different parts of the country. A large number of recruits had spent most of their lives in and around their home communities and had never experienced the climate of these disparate places before the war brought them there.

Wartime writings, particularly letters to family and friends, are dotted with regional weather evaluations. In a typical example, Illinois sergeant William Standard wrote home from a campsite in Tennessee, "There is a great difference in the weather here and up in Illinois, warm in the daytime and chilly at night."[40] These weather comparisons connect to a concept in modern environmental science known as shifting baselines. This refers to the idea that individuals use their own knowledge and recent experiences, rather than any deeper historical or geographic comparisons, to determine their definition of normal conditions in the natural world, including weather, against

[40] Timothy Mason Roberts, ed., *"This Infernal War": The Civil War Letters of William and Jane Standard* (Kent, OH: Kent State University Press, 2018), 27.

which current conditions are then evaluated.[41] Although scholars use the term in a temporal sense, shifting baselines is seen in the Civil War in a more spatial one. However, there were some temporal components, as soldiers remembered their interactions with certain weather conditions at specific dates and places during their service and would compare their present experiences with past ones.

A common consensus among Union soldiers was that the heat of the South was more severe than in their home states in the North. "The heat still continues with unabated fervor," Sgt. Tighlman Jones of the 59th Illinois Infantry remarked in Georgia in August 1864, "fully entitling this country to its long enjoyed reputation of The Sunny South."[42] These observations reflected the climate zones of the U.S., as the states located in the South were in the hot-humid and mixed-humid zones, which generally feature weather that is hotter than the country's northern areas, which are in the cold and even very-cold climate zones.[43] Federals considered the intensity of the South's summer heat a new but undesirable experience. Environmental science studies have shown that perceptions of thermal comfort are affected by previous experience, meaning that Americans residing in the South for years, if not their entire lives, were more accustomed

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[41] Masashi Soga and Kevin J. Gaston, "Shifting Baseline Syndrome: Causes, Consequences, and Implications," *Frontiers in Ecology and the Environment* 14, no. 4 (2018): 222-230; Frances C. Moore, Nick Obradovich, Flavio Lehner, and Patrick Baylis, "Rapidly Declining Remarkability of Temperature Anomalies may Obscure Public Perception of Climate Change," *Proceedings of the National Academy of Sciences* 116, no. 11 (2019): 4905-4910.

[42] Glenn W. Sunderland, ed., *Five Days to Glory* (New York: A.S. Barnes and Company, 1970), 163.

[43] Office of Energy Efficiency & Renewable Energy, "Climate Zones," *U.S. Department of Energy*, https://www.energy.gov/eere/buildings/climate-zones?fbclid=IwAR199rCeNsGg6WYCjGFIGaxROE7b0Byoaz0gdDxU03ljeTaO4pStjTQ8b3E.

to the region's heat than their Northern counterparts who only arrived at the Civil War's outbreak.

As an individual is exposed to specific temperatures for extended periods, a process of acclimatization occurs, with the human body physiologically adjusting in order to reduce the stress imposed by the thermal environment and increase bodily comfort.[44] According to research scientists, "Repeated cold exposure…leads to enhanced heat production of the body, whereas repeated exposure to warm environments facilitates more efficient heat loss. Thus, an individual can physiologically become cold or respectively heat adapted."[45] Studies have demonstrated that physical adaptions are accompanied by psychological ones, as perceptions of comfort level change accordingly after recurring exposure to a regional thermal environment.[46] This meant the more time spent exposed to the heat of the South, the more accustomed U.S. soldiers would become to it, though it could be a painful process. Even though Southern men were more acclimated to the climate and could endure it in ways that Northern men could not, fighting a war in the heat was by no means easy for them either.

Troops in both armies frequently complained about the rigors of camping in hot weather, noting that their tents did little to screen them from the rays of the sun. In

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[44] Ken Parsons, *Human Thermal Environments: The Effects of Hot, Moderate, and Cold Environments on Human Health, Comfort, and Performance, Third Edition* (Boca Raton, FL: CRC Press, 2014); Marcel Schweiker, Gesche M. Huebner, Boris R. M. Kingma, Rick Kramer, and Hannah Pallubinsky, "Drivers of Diversity in Human Thermal Perception – A Review for Holistic Comfort Models," *Temperature* 5, no. 4 (2018): 308-342.

[45] Schweiker et al., "Drivers of Diversity in Human Thermal Perception," 321.

[46] Schweiker et al., "Drivers of Diversity in Human Thermal Perception," 321; Pamela Smith and Cristián Henríquez, "Perception of Thermal Comfort in Outdoor Public Spaces in the Medium-Sized City of Chillán, Chile, During a Warm Summer," *Urban Climate* 30 (2019).

Virginia in mid-1864, Vermont private Wilbur Fisk grumbled, "With the hot sand underneath, and the burning sun overhead, our little tents are so many little ovens, and a fellow is well nigh roasted alive in one of them."[47] Men were constantly bathed in sweat, with Fisk noting on an earlier occasion that they "cannot prevent perspiring freely – so freely sometimes that every garment is wringing wet with perspiration."[48] Sweating is the body's physiological mechanism for cooling itself in the heat; sweat releases onto the skin and then evaporates, which helps reduce an individual's internal temperature and avert overheating.[49] But sweating did not do enough to keep soldiers from feeling uncomfortable while camping amid high temperatures. "I can hardly say living" on such hot days, Tennessee lieutenant Hannibal Paine lamented in August 1861, "we cant more than just breathe," especially since "we've not a single shade tree in our whole encampment."[50]

As Paine implied, men disliked camping in open fields that left them exposed to the full force of the sun's rays, preferring their campsites to be in wooded areas where the shade of trees could alleviate the heat to some extent.[51] Troops in the open responded by devising shade of their own, creating shelter from the sun by building arbors of brush or

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[47] Emil Rosenblatt and Ruth Rosenblatt, eds., *Hard Marching Every Day: The Civil War Letters of Private Wilbur Fisk, 1861-1865* (Lawrence: University Press of Kansas, 1983), 234.
[48] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 132.
[49] Lauralee Sherwood, *Human Physiology: From Cells to Systems, 9th Edition* (Boston: Cengage Learning, 2016), 630.
[50] Hannibal Paine Letter, August 7, 1861, Paine Family Papers, Tennessee State Library and Archives.
[51] Donald C. Elder III, ed., *A Damned Iowa Greyhound: The Civil War Letters of William Henry Harrison Clayton* (Iowa City: University of Iowa Press, 1998), 94; Robert Hunt Rhodes, ed., *All For the Union: The Civil War Diary and Letters of Elisha Hunt Rhodes* (New York: Orion Books, 1985), 73.

tree boughs over their tents and even entire campgrounds. Writing to his brother from Mississippi, Ohio corporal Mungo P. Murray explained, "We have forks set on each side of our tents, about twelve feet high, and poles laid from one to the other and covered overhead with green brush, protecting the doors of our tents as well as the tents themselves from the almost vertical rays of the sun."[52] Men also cut down small trees in the surrounding area and replanted them throughout their camps to provide additional shade.[53] Other methods to stay cool in camp included looping up the sides of the larger types of canvas dwellings and pitching the shelter tents several feet from the ground to allow the free circulation of air.[54] Some soldiers found that these efforts could not prevent them from being "almost suffocated" with the heat, but others reported that they could pass their leisure hours in camp quite pleasantly, avoiding all physical exertions and relaxing in the shade away from the hot sun.[55]

Lengthy periods of dry weather made warm days even worse for camping troops. As part of the larger pattern of irregular and turbulent weather during the war, the western and southern United States experienced generally drier than normal conditions, with

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[52] Mungo P. Murray to Brother, June 19, 1862, Mungo P. Murray Letters, Civil War Times Illustrated Collection, U.S. Army Heritage and Education Center (USAHEC).
[53] Timothy J. Orr, ed., *Last to Leave the Field: The Life and Letters of First Sergeant Ambrose Henry Hayward, 28th Pennsylvania Volunteer Infantry* (Knoxville: University of Tennessee Press, 2010), 165.
[54] Norman L. Ritchie, ed., *Four Years in the First New York Light Artillery: The Papers of David F. Ritchie* (Hamilton, NY: Edmonston Publishing, 1997), 173; Albert Augustus Pope Diary, June 22, 1863, Civil War Times Illustrated Collection, USAHEC.
[55] Favill, *The Diary of a Young Officer*, 165; Michael E. Banasik, ed., *Serving With Honor: The Diary of Captain Eathan Allen Pinnell, Eighth Missouri Infantry (Confederate)* (Iowa City: Camp Pope Bookshop, 1999), 73; Peter H. Buckingham, ed., *All's for the Best: The Civil War Reminiscences and Letters of Daniel W. Sawtelle, Eighth Maine Volunteer Infantry* (Knoxville: University of Tennessee Press, 2001), 288.

unusually low rainfall and widespread droughts.[56] The South and West were precisely where the battles and campaigns of the Civil War were taking place, meaning that the conflict was fought in the driest regions of the country. Without periodic rain, the soil at campsites became a fine powder that would fill the air with clouds of dust when kicked up by the wind. At the same time that troops "sweat & pant like so many dogs" in the heat, U.S. sergeant Charles T. Bowen penned at a Virginia camp in May 1863, "the dust will fill a fellows eyes, nose & mouth, & it is impossible to keep clean for it will work its way to the body through every nook."[57]

To help relieve the heat and dryness by staying hydrated, soldiers favored encampments that were located close to streams, springs, and other sources of clean drinking water. They detested camping in areas where water was only available in stagnant pools and impure ponds, but as one man noted, sometimes "we must use that or none."[58] From their perspective, poor water was better than no water at all, as they suffered terribly from thirst when there were no nearby sources or not enough to satisfy the needs of hundreds or thousands of men. Water scarcity particularly became a problem for armies in regions affected by drought, such as Virginia in the summer of 1864. A common practice that units employed to find drinking water was to dig deep wells at their

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[56] Celine Herweijer, Richard Seager, and Edward R. Cook, "North American Droughts of the Mid to Late Nineteenth Century: A History Simulation and Implication for Mediaeval Drought," *Holocene* 16 (Feb. 2006): 160-161; E. R. Cook and P. J. Krusic, "North American Summer PDSI Reconstructions," IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series No. 2004-045, (Boulder, CO: NOAA/NGDC Paleoclimatology Program, 2004).

[57] Edward K. Cassedy, ed., *Dear Friends at Home: The Civil War Letters and Diaries of Sergeant Charles T. Bowen* (Baltimore, MD: Butternut & Blue, 2001), 274.

[58] Arthur M. Daniels, *A Journal of Sibley's Indian Expedition During the Summer of 1863 and Records of the Troops Employed* (Winons, MN: Republican Office, 1864), 6.

camps. Soldiers considered the laborious work of digging a well worthwhile to access good water, even at sites they only inhabited for a short time.[59] While on an expedition in the Dakota Territory in July 1863, Minnesota infantryman Amos E. Glanville wrote, "We dug wells and found a good supply of the best of water…From our recent experience" with filthy or no water, we were able to appreciate the blessing to the fullest extent."[60]

Besides as a source of drinking water, soldiers liked streams and other waterways near their camps because they could refresh themselves by bathing and swimming. "Hot as the weather is here" in Tennessee during the summer, Pvt. George H. Weston of a Georgia battery recorded, "we experience but very little dissatisfaction…as we are always where plenty of water is handy & we amuse as well as cool off ourselves in the limpid stream. To day I enjoyed 3 fine baths."[61] Fortunately for troops, the difficulties related to camping in hot conditions were mainly confined to the daytime hours. Temperatures typically dropped at night and men were able to rest in their tents or in the open air without any inconveniences from the heat. They were also glad when stretches of hot and dry weather were broken by rain showers. As Georgia private George W. Hall observed, such rain "cooled the air and laid the dust considerable," making life in camp much more tolerable.[62] Sweltering in the sun and choking on dust caused troops to yearn for rain, but they could quickly come to regret it – camping was even harder in wet and stormy weather.

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[59] Ruth L. Silliker, ed., *The Rebel Yell & the Yankee Hurrah: The Civil War Journal of a Maine Volunteer* (Lanham, MD: Down East Books, 1985), 177; Favill, *The Diary of a Young Officer*, 164.
[60] John K. Glanville, ed., *I Saw the Ravages of an Indian War: A Diary by Amos Glanville Sr. Company F, 10th Minnesota Volunteers* (Privately published, 1988), 129.
[61] George Harry Weston Diary, July 1863, Duke University.
[62] George Washington Hall Diary, July 11, 1862, Library of Congress.

Storms of Wind and Rain

When it rained, Federals and Confederates sought cover in their tents, but the comfort that they attained was mixed. Men sometimes commended their tents for shedding the rain and keeping them dry. This allowed the occupants to entertain themselves through activities like reading, writing, and playing games or to get some rest without disturbance from the elements.[63] Both the larger and smaller styles of tents were praised, including shelter tents. "It was cheering to be able to sit snug in our tents and hear the rain patter over our heads," Massachusetts sergeant Henry W. Tisdale commented, while Virginia artillerist Creed T. Davis claimed the dwellings, "small as they are, are our best friends."[64] Oftentimes, however, tents were a meager defense against heavy rain, which leaked through the canvas roofs "as through a sieve," wetting the men and all their belongings.[65] The rain could also be blown by the wind through the open ends of the shelter tents and under the sides of the other types. As Vermont sergeant Ransom W. Towle wrote home from Virginia in June 1862, "the wind whisked and

[63] Joseph Spafford to Sister, October 8, 1861, Joseph Spafford Correspondence, University of Vermont Libraries; Julius F. Ramsdell Diary, January 18, 1864, Southern Historical Collection, University of North Carolina.
[64] Henry W. Tisdale Diary, December 26, 1863, Boston Public Library; Creed Thomas Davis Diary, August 19, 1864, Virginia Historical Society.
[65] Samuel Storrow to Parents, March 23, 1863, Samuel Storrow Papers, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society; Constance Hall Jones, ed., *The Spirits of Bad Men Made Perfect: The Life and Diary of Confederate Artillerist William Ellis Jones* (Carbondale: Southern Illinois University Press, 2020), 74; Robert F. Harris and John Niflot, ed., *Dear Sister: The Civil War Letters of the Brother Gould* (Westport, CT: Praeger, 1998), 124.

howled, and drove the Rain over under around and through our gossamer houses till we were as wet as if we were outside."[66]

Troops were further drenched by rainwater flowing across the ground into their tents, flooding the shelters with water ranging from one or two inches to one foot deep. Many were driven from their tents by the flooding, but escaping from the water was not always so simple because whole campsites could be inundated. After torrential rain in early 1863, Missouri captain Eathan A. Pinnell reported that his unit's camp in Arkansas was "covered with about six inches of water and so miry as to render it almost impossible to get about."[67] In rare instances, the flooding was so quick and violent that tents, equipment, and even soldiers were swept away by the water, with some men actually drowning.[68] As low-lying areas where water drainage was poor were more susceptible to extensive flooding, troops preferred to establish camp on higher ground, though this could not prevent the rainwater from still running through their tents.

With tents leaking, flooding, or both, wet weather frequently interfered with the occupants' ability to sleep by awakening them during the night or not giving them a chance to rest at all. "It is not a very pleasent affair," Pennsylvania corporal Calvin S. Heller penned in his diary in Virginia, "to be roused from one's slumber by a flood underneath and the pouring down of the wartery elements from above."[69] Perhaps worse

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[66] Ransom W. Towle to Family and Friends, June 10, 1862, Ransom W. Towle Correspondence, University of Vermont Libraries.
[67] Banasik, *Serving With Honor*, 54. Other example is Ann Hartwell Britton and Thomas J. Reed, ed., *To My Beloved Wife and Boy at Home: The Letters and Diaries of Orderly Sergeant John F.L. Hartwell* (London: Associated University Presses, 1997), 68 and 282.
[68] Edwin W. Bearse to Mother, August 16, 1864, Edwin W. Bearse Letters, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[69] Calvin S. Heller Diary, December 15, 1862, Civil War Document Collection, USAHEC.

than one night of lost sleep was that persistent rain meant soldiers lived in a persistent state of wetness. It was normal for men to remark that their entire bodies and all their clothing, woolen blankets, and other equipment remained saturated for days at a time.[70] Even if tents managed to protect them from rain, many had to occupy their canvas shelters after completing marches or other military duties that required exposure to the elements.[71] Their methods of drying wet clothing and blankets – drying in the open air or using campfires – were not feasible as long as the bad weather continued.

Undoubtedly, most men related to Pvt. David B. Griffin of the 2nd Minnesota Infantry when he asserted in April 1862, "I am wet all of the time and go to bed in my wet clothes."[72] Drenched troops also had trouble keeping warm in their tents and could feel "chilled through" amid cooler temperatures.[73] Some soldiers were able to sleep despite their saturated equipment, but many others were too miserable and uncomfortable to rest well.[74] This was especially because the floor of tents often became damp and muddy in rainy weather regardless of flooding. As Rhode Island officer Elisha Hunt Rhodes put it, "It is raining, and we all live in mud, sleep in mud, and almost eat in

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[70] Nannie M. Tilley, ed., *Federals on the Frontier: The Diary of Benjamin F. McIntyre, 1862-1864* (Austin: University of Texas Press, 1963), 50; Robert F. Harris and John Niflot, ed., *Dear Sister: The Civil War Letters of the Brother Gould* (Westport, CT: Praeger, 1998), 62.
[71] Blight, *When This Cruel War Is Over*, 137-138.
[72] Nick Adams, ed., *My Dear Wife and Children: Civil War Letters from a 2nd Minnesota Volunteer* (Strategic Book Publishing and Rights Co., 2014), 110.
[73] Alvin Brackett to Brother, June 11, 1863, Brackett Family Collection, USAHEC.
[74] Clyde G. Wiggins III, ed., *My Dear Friend: The Civil War Letters of Alva Benjamin Spencer, 3rd Georgia Regiment, Company C* (Macon, GA: Mercer University Press, 2007), 114-115: William Gilfillan Gavin, ed., *Infantryman Pettit: The Civil War Letters of Corporal Frederick Pettit, Late of Company C 100th Pennsylvania Veteran Volunteer Infantry Regiment "The Roundheads."* (Shippensburg, PA: White Mane Publishing Company, 1990), 33.

mud."[75] Long stretches of rain turned entire camps into muddy quagmires, so that men could not leave their tents without stepping in ankle- or knee-deep mire.[76] The interior of their quarters were little better, looking like, in the words of an artilleryman, "so many hog pens for it is impossible to keep them clean."[77]

All models of tents received their fair share of criticism, but shelter tents were singled out as the least effective in wet and stormy conditions. Heller considered them "quere concerns" because "they answer almost evry other purpoes except that for witch they are intended," while another Federal soldier disdainfully called them "a gigantic humbug."[78] Troops tried to compensate for shelter tents' failings and keep themselves dry by closing off the open ends of these canvas dwellings. With buttons and buttonholes on multiple sides of each shelter half, a number of them could be put together, and four or more men would sometimes combine their pieces to form a larger and more fully enclosed tent.[79] Both pairs and groups occupying shelter tents would also hang any spare pieces of canvas or blankets over open ends of the dwellings.[80] According to

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[75] Rhodes, *All For the Union*, 133.
[76] Barbara M. Croner, ed., *A Sergeant's Story: Civil War Diary of Jacob J. Zorn, 1862-1865* (Apollo, PA: Closson Press, 1999), 90; Walter D. Kamphoefner and Wolfgang Helbich, ed., *Germans in the Civil War: The Letters They Wrote Home* (Chapel Hill: University of North Carolina Press, 2006), 203.
[77] John S. Collier and Bonnie B. Collier, ed., *Yours for the Union: The Civil War Letters of John W. Chase, First Massachusetts Light Artillery* (New York: Fordham University Press, 2004), 52.
[78] Heller Diary, December 15, 1862, USAHEC; Dominick Mazzagetti, ed., *"True Jersey Blues": The Civil War Letters of Lucien A. Voorhees and William Mackenzie Thompson, 15th Regiment, New Jersey Volunteers* (Madison: Fairleigh Dickinson University Press, 2011), 38.
[79] Stephen W. Sears, ed., *For Country, Cause & Leader: The Civil War Journal of Charles B. Haydon* (New York: Ticknor & Fields, 1993), 213.
[80] Eric Ward, ed., *Army Life in Virginia: The Civil War Letters of George G. Benedict* (Mechanicsburg, PA: Stackpole Books, 2002), 38.

Massachusetts corporal Andrew R. Linscott, this allowed troops to "shut ourselves completely out from the rest of the world and laugh at the furious wind and pelting rain."[81]

For all types of tents, Federals and Confederates attempted to prevent flooding by digging ditches or trenches around the shelters. Many learned to do this through the unpleasant experience of being awakened on a rainy night by water flowing underneath them. "It rained as hard as I ever heard it," Virginia sergeant James E. Whitehorne observed in mid-1863, "but we could have stood all this, if we had not failed to provide for our comfort in one very important particular, which was digging a trench around our tent to keep the water out."[82] Ditches could not always keep tents from flooding because they were not properly dug or there was too much rainwater streaming across the ground to be contained.[83] But in many cases, the trenches did manage to carry off the water and allow soldiers to remain comfortably dry in their tents.[84] Men gloried in the success of their ditches, especially when comrades' tents flooded because their own trenches were insufficient. While campaigning in his home state, Pvt. John Walters of a Virginia artillery unit wrote, "it was with many a congratulatory chuckle that I lay shivering under my blanket and listened to the anathema of those who were compelled to get up and bail

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[81] Andrew R. Linscott to Parents, September 25, 1864, Andrew R. Linscott Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[82] Fletcher L. Elmore, Jr., ed., *Diary of J.E. Whitehorne, 1st Sergeant, Co. "F", 12th VA. Infantry, A.P. Hill's 3rd Corps, A.N. VA.* (Utica, KY: McDowell Publications, 1995), 14.
[83] Fred R. Laubach Diary, January 21, 1863, Civil War Document Collection, USAHEC; Robert W. Glover, ed., "The War Letters of a Texas Conscript in Arkansas," *The Arkansas Historical Quarterly*, vol. 20, no. 4 (1961), 375.
[84] Mac Wyckoff, ed., *The Civil War Letters of Alexander McNeill, 2nd South Carolina Infantry Regiment* (Columbia: University of South Carolina Press, 2016), 236-237.

their tents out."[85] Digging ditches around their quarters became part of soldiers' normal routine whenever they camped and pitched their tents at a new place.

Tent dwellers also relied on blankets to protect them from the effects of rainy weather. Enlistees in both armies were typically issued woolen blankets measuring around 5 feet by 6 ½ feet, but these were mainly intended to keep them warm on chilly and cold nights, not shield them from the rain. Men complained about their woolen blankets becoming soaked in wet weather and doing little to add to their comfort. They hoped to possess the different types of waterproof blankets – rubber blankets and oilcloths – that were supplied to many segments of the U.S. Army and some portions of the Confederate Army as the war progressed (discussed in Chapter 2). When tents leaked in heavy rain, occupants would gather all their belongings together and then cover the items and themselves with their waterproof blankets to stay relatively dry.[86] More importantly, rubber blankets and oilcloths were used as beds to avoid laying on the damp, muddy, or even flooded ground within tents. "We spread the india rubber blanket on the ground and lays right down without paying any regard to the weather," Wisconsin private William Wallace wrote to his wife from Maryland, "The water runs under us when it rains, but not a drop touches us."[87] Waterproof blankets often helped men sleep at night without being disturbed by the moisture permeating the ground of their quarters.[88]

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[85] Kenneth Wiley, ed., *Norfolk Blues: The Civil War Diary of the Norfolk Light Artillery Blues* (Shippensburg, PA: Burd Street Press, 1997), 176.
[86] Sears, *For Country, Cause & Leader*, 33.
[87] John O. Holzhueter, ed., "William Wallace's Civil War Letters: The Virginia Campaign," *Wisconsin Magazine of History*, vol. 57, no. 1 (autumn 1973), 32.
[88] Adams, *My Dear Wife and Children*, 230.

Troops craving greater protection from wet weather's impact on the terrain of their camps, especially if they lacked waterproof equipment, constructed makeshift beds and floors for their tents. These sleeping accommodations were composed of a variety of materials, ranging from boughs and branches collected in nearby woods to hay, straw, and boards taken from civilian farms in the vicinity of campsites. Men would place whichever item they obtained on top of the muddy and saturated ground in their tents and then lay with their blankets on top.[89] Some men created more elaborate bunks, such as the ones built by New York officer Favill's regiment near Washington, D.C., in late 1861. Favill explained, "our beds are formed of poles laid on crotches, driven into the ground, then strewn with cedar branches, over which are spread our blankets."[90] No matter their composition, all of the improvised beds and floors were designed to allow soldiers to rest more comfortably by keeping them off the wet ground and providing them with a dry place to lay down for the night.

When units remained at the same site for extended periods amid wet conditions, the men sometimes constructed wooden walkways throughout their campgrounds so that they could move about without having to trudge through deep mud. "This is done by felling large trees, cutting them up into logs of some three or four feet in length, and then splitting them," New York lieutenant Cornelius Moore wrote home from Virginia, "These layed upon the ground raises one some three or four inches from the ground, and

[89] Mark Grimsley and Todd D. Miller, ed., *The Union Must Stand: The Civil War Diary of John Quincy Adams Campbell, Fifth Iowa Volunteer Infantry* (Knoxville: University of Tennessee Press, 2000), 68; Henry J. Seaman Diary, March 9, 1862, Civil War Times Illustrated Collection, USAHEC; Gavin, *Infantryman Pettit*, 34 and 38.
[90] Favill, *The Diary of a Young Officer*, 57.

answers for a very neat and dry walk."[91] Building the walkways was hard work and took days to complete, but troops appreciated how they could subsequently avoid stepping in and getting coated by mud when they left their tents.

The strong winds that could accompany rainstorms caused still more problems for tent dwellers. The shelters were commonly blown down and collapsed onto the occupants, who had to extricate themselves from the wet canvas and were left exposed to the falling rain. While camping in January 1864 in Arkansas, Kansas private Henry A. Strong grumbled, "My tent was blown over and left me out in the 'wet'. Everything got as wet as water could make it."[92] At times, nearly all the tents in an encampment fell victim to gusting winds over the course of a nighttime storm. Corp. George Wise of the 17th Virginia Infantry detailed a chaotic scene at one such camp in November 1861. "A perfect mess presents itself to the eye now – tents lying flat on the ground amid puddles of water & mud," Wise wrote, "almost everything about camp scattered here & there; the wind blowing a perfect gale & raining hard. Men nearly frozen & stiff from lying in water."[93] As Wise noted, many soldiers whose tents were blown down had to bear the brunt of the storm until it abated. In other instances, however, they would struggle to re-pitch their shelters while the rain and wind continued or search elsewhere in camp for

[91] Gilbert C. Moore, Jr., ed., *Cornie: The Civil War Letters of Lt. Cornelius L. Moore, Co. I, 57th Regiment, New York State Volunteers* (Chattanooga: G.C. Moore, Jr, 1989), 156.
[92] Tom Wing, ed., *"A Rough Introduction to this Sunny Land": The Civil War Diary of Private Henry A. Strong, Co. K, Twelfth Kansas Infantry* (Little Rock: Butler Center for Arkansas Studies, 2006), 24.
[93] George Newton Wise Diary, November 2, 1861, Duke University.

quarters for the night.[94] Regardless of which approach was taken, the prospects of a good night's rest were slim.

Soldiers whose tents were in danger of getting blown down labored to keep them upright. They held onto and supported the poles within their tents or went outside in the raging storm to brace the exterior of the shelters and strengthen the stakes pinning it to the ground. These efforts could stop tents from collapsing, but sometimes the heavy wind was too much and they still fell down.[95] And even if successful, as an Ohio lieutenant observed, "many tent residents…were robbed of their sleep."[96] To avoid such predicaments, men realized that they needed to prepare for gusty winds by taking extra time to stake their tents to the ground as securely as possible. "The wind and rain will never again – to use a vulgar phrase – catch us 'with our breeches down,'" Wisconsin gunner William H. Ball promised after his tent was blown down in Missouri in 1862, "We'll have our tents strongly pitched if we only intend to occupy it a few minutes."[97] Soldiers did not learn to dig ditches around their quarters, build makeshift beds, and more methodically stake and secure their tents from any military manuals, but from their harsh personal encounters with the elements as they lived under simple canvas. They had to

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[94] Grimsley and Miller, *The Union Must Stand*, 34; Favill, *The Diary of a Young Officer*, 128-129.
[95] Mildred Throne, ed., *The Civil War Diary of Cyrus F. Boyd, Fifteenth Iowa Infantry, 1861-1863* (Millwood, NY: Kraus, 1977), 132; John Kent Folmar, ed., *From That Terrible Field: Civil War Letters of James M. Williams, Twenty-First Alabama Infantry Volunteers* (Tuscaloosa: University of Alabama Press, 1981), 39.
[96] Joseph R. Reinhart, ed., *A German Hurrah! Civil War Letters of Friedrich Bertsch and Wilhelm Stängel, 9th Ohio Infantry* (Kent, OH: Kent State University Press, 2010), 172.
[97] William H. Ball to Family, April 19, 1862, William H. Ball Letters, Auburn University.

continually improvise, devising methods of protection that they never had before at home.

Health and Sickness

Residing comfortably in their tents and attaining restful sleep were not the only reasons that soldiers worked to protect themselves from the elements. They also were concerned about falling sick. Americans in the mid-nineteenth century were not yet aware of germ theory and had little understanding of the real causes of most diseases. A prevailing belief among people of all social classes was that many illnesses were produced by environmental factors, including specific geographic features like swamps and weather conditions like rain. Men brought these ideas with them into the army and continually claimed that exposure to inclement weather was the cause of their sicknesses.[98] According to historian Kathryn Shively, rain received the most blame, with soldiers often linking it to a wide range of diseases, including ague, malaria, typhoid fever, rheumatism, diarrhea, and dysentery.[99] "Colds are our greatest enemies here now" in Arkansas, Iowa lieutenant William T. Rigby told his brother in February 1863, "the ground is wet all the time & the earth floor of our tent is of course very damp so that it requires the greatest care to avoid taking fresh cold every day."[100] Many troops believed

[98] Alfred Jay Bollet, *Civil War Medicine: Challenges and Triumphs* (Tucson: Galen Press, 2002), 49-55; Kathryn Shively, *Nature's Civil War: Common Soldiers and the Environment in 1862 Virginia* (Chapel Hill: University of North Carolina Press, 2013), 17-21 and 45-50; Margaret Humphreys, *Marrow of Tragedy: The Health Crisis of the American Civil War* (Baltimore: John Hopkins University Press, 2013), 78-80.
[99] Shively, *Nature's Civil War*, 47.
[100] William T. Rigby to Brother, February 11, 1863, William Titus Rigby Letters, University of Iowa Libraries.

that the "colds and coughs" that afflicted their units were unavoidable as long as they lived in wet and muddy conditions, while others feared that more serious ailments like pneumonia would inevitably result from such exposure.[101] Although not to the same extent as rain, hot and especially cold weather were also thought to be the reason for sickness in the ranks.

Union and Confederate troops hoped that their efforts to mitigate exposure to rainy weather while camping would help them avoid becoming ill. They may have been mistaken about the meteorological origins of the many diseases that ravaged regiments, but they were correct in believing that their adaptions were important means of preserving their health. As discussed previously, wet conditions could preclude sleep, and soldiers would soon become worn out and exhausted without sufficient rest, particularly since they were often engaged in various strenuous activities like marching and sentry duty. Lack of sleep can compromise the body's ability to resist sicknesses by disrupting the immune system. Conversely, adequate hours of high-quality sleep strengthens the immune system, ensuring that it functions in a well-balanced and effective manner.[102] By successfully sleeping in their tents through the methods that they utilized to minimize the difficulties imposed by the rain and mud, Civil War soldiers unknowingly helped

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[101] Robert G. Evans, ed., *The 16th Mississippi Infantry: Civil War Letters and Reminiscences* (Jackson: University Press of Mississippi, 2002), 54; John B. Gallison to Mother, March 7, 1863, John B. Gallison Papers, Massachusetts Historical Society; John Mitchell Davidson to Wife, January 28, 1863, Davidson Family Papers, Atlanta History Center.

[102] Eric Suni, "How Sleep Affects Immunity," *Sleep Foundation*, April 22, 2022, https://www.sleepfoundation.org/physical-health/how-sleep-affects-immunity; Penelope A. Bryant, John Trinder, and Nigel Curtis, "Sick and Tired: Does Sleep Have a Vital Role in the Immune System?" *Nature Reviews Immunology*, 4 (2004): 457-467.

maintain and boost their body's defense against infectious diseases. As will be seen, their struggles to get enough sleep amid inclement weather were not limited to wet conditions.

Rain and other forms of inclement weather not only affected the physical health of troops, but also their mental well-being. "The weather has so much to do with my feelings," Mississippi artillerist Charles Roberts acknowledged in June 1864 in a letter from Georgia, "I always am more buoyant and hopeful when the sun shines brightly than I am of a wet, cloudy day."[103] The privations of camp life on wet and overcast days could cause men to feel dispirited and depressed, lowering unit morale. The soldiers themselves referred to these feelings as having "the blues." "It is just such a rain as gives one the blues, and if there ever was a person that has had them, I am one," South Carolina private Richard Simpson confessed while serving in Virginia, "I have the blues so bad now that I can scarcely live. Everything seems sad and dreary."[104] Men found themselves homesick and lonely, missing their families and the comforts of home and feeling "as if he did not have a friend in the world."[105]

Modern psychological studies have revealed a connection between rainy weather and negative emotions, with people more likely to experience a decrease in happiness, energy, and motivation on such days. Researchers believe that a primary reason that wet and stormy weather can dampen moods is a lack of sunlight, which interferes with the body's regulation of serotonin and melatonin. Serotonin is a chemical associated with

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[103] Charles Roberts to Wife, June 20, 1864, Charles Roberts Collection, University of Mississippi Libraries.
[104] Guy R. Everson and Edward H. Simpson, Jr., ed., "*Far, Far from Home": The Wartime Letters of Dick and Tally Simpson, Third South Carolina Volunteers* (New York: Oxford University Press, 1994), 61.
[105] Richard C. Bridges to Sister, January 10, 1863, Richard C. Bridges Collection, University of Mississippi Libraries.

positive and calm moods, while serotonin is one that supports restful sleep at night. Rain clouds obstructing sunlight can disrupt the production of these chemicals, which in turn can disrupt a person's sleep quality and also contribute to feelings of depression.[106] Weather's psychological impact was likely even more pronounced among Civil War troops given their sheer level of exposure and the many hardships that they faced as they camped with minimalistic shelter. Soldiers had to strive to protect their mental health just as they did their physical health throughout their service, especially because the psychological tribulations caused by bad weather extended well beyond tent encampments.

But as Roberts mentioned, the weather itself could also revive men's spirits when stormy conditions ended and the sun came out, the ground dried, and temperatures remained comfortably warm. "A beautiful day of warm sunshine has dispelled the gloom that had enveloped our camp and our spirits," Sgt. James M. Williams of the 21st Alabama Infantry recorded at a Mississippi camp in April 1862, "Every body is perceptibly better, more cheerful, and satisfied with his lot as a soldier."[107] After days of dealing with weather-related pressures and being cooped up in their tents, troops enjoyed spending time outdoors without discomfort and basking in the pleasant sunshine.[108] One

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[106] Courtney Telloian, "Can Rain Cause Depression? Plus, 4 Ways to Relieve Those Rainy Day Blues," *Healthline Media*, June 28, 2022, https://www.healthline.com/health/depression/depression-rain; M. Nathaniel Mead, "Benefits of Sunlight: A Bright Spot for Human Health," *Environmental Health Perspectives* 116 (April 2008): A160-A167; Caijuan Xu, Weijia Wu, Danni Peng-Li, Peilin Xu, Dong Sun, and Bin Wan, "Intraday Weather Conditions Can Influence Self-Report of Depressive Symptoms," *Journal of Psychiatric Research* 123 (February 2020): 194-200.
[107] Folmar, *From That Terrible Field*, 62.
[108] Flavel King Sheldon to Parents, December 29, 1862, Flavel King Sheldon Papers, Massachusetts Historical Society.

reason that they were delighted by the onset of good weather was that it often offered them their first opportunity to dry their wet clothing and equipment. Some men used campfires, while others relied on the warm rays of the sun.[109] Describing a normal scene in the aftermath of rainy weather, Williams wrote, "all the camp looks like a wash woman's yard, with the blankets and clothing hung out to dry in the sun."[110] At more long-term camps, soldiers also capitalized on mild conditions to prepare tents for future adverse weather by adding the features that rendered the shelters more comfortable and secure.[111]

Cold and Wintry Months

Many soldiers considered rain and mud to be the worst weather for camping, but for numerous others, that distinction was held by cold, snow, and ice. The war did not stop during the months of winter, and campaigning occurred across the South, with men continuing to live under canvas. Much to the surprise and displeasure of many U.S. troops, the conditions in the so-called "Sunny South" could get as cold and wintry as their homes in the North. "I thought we were in the sunny South, but the north Illinois ain't any colder at this season," Illinois lieutenant Chesley A. Mosman exclaimed in Georgia in late 1863, complaining several months later in Tennessee, "What is there in a name anyway? 'The Sunny South' is about as cold this April as the bleak North."[112] Given the

[109] William B. Westervelt Diary, January 25, 1863, and February 26, 1865, Civil War Document Collection, USAHEC.
[110] Folmar, *From That Terrible Field*, 62.
[111] Wiley, *Norfolk Blues*, 186-187.
[112] Arnold Gates, ed., *The Rough Side of War: The Civil War Journal of Chesley A. Mosman, 1st Lieutenant, Company D, 59th Illinois Volunteer Infantry Regiment* (Garden City: Basin Publishing Co., 1987), 134 and 183.

South's reputation and the severity of its summer heat, Federals expected that the winters would be much more moderate than the ones in their home region.

These men were mistaken, as the South experienced freezing temperatures and heavy snowstorms throughout the conflict, with the conditions no doubt exacerbated by the war's unusual weather patterns. While the cold was likely never as consistent in the South as in the North, and the intensity of the winter weather fluctuated across time and space in the southern half of the country, this was small consolation to Union troops. They were familiar with bitter winters, but living outdoors in encampments made them more conscious of the cold and vulnerable to it than when they had been at home. Wisconsin sergeant James H. Leonard expressed the thoughts of many Northerners when he declared, "talk about your winters in the sunny south, but I never see it any worse at this time of year anywhere that I have ever been."[113]

Federals were not alone in remarking on the harshness of wartime winters in the South. For Confederate enlistees from the Deep South, the cold in the Upper South was frequently more severe than what they experienced in their home regions, even before winter set in. "The Nights are already very cold to what it is in Texas," Texas private Irenus W. Landingham wrote home from Virginia in the fall of 1861.[114] Just as Northern men had to acclimate to the South's hot summers, Southern men from states like Texas and Mississippi had to adjust to the colder weather of the Confederacy's northern areas. The amount of snow that fell on their camps during the winter months was also new to

[113] R. G. Plumb, ed., "Letters of a Fifth Wisconsin Volunteer," *Wisconsin Magazine of History*, vol. 3, no. 1 (Sept. 1919): 71.
[114] Irenus W. Landingham to Sister, September 14, 1861, Irenus Watson Landingham Letters, Auburn University.

many of these soldiers. "It is already the largest snow any of us have ever seen," Sgt. Alexander McNeill of the 2nd South Carolina Infantry reported in Virginia, "I have often read of the severe snow storms of the more Northern states, but never had I the most distant idea of their severity untill now."[115] Men from the Deep South were less accustomed to cold and wintry weather than their opponents from the North, but no matter where troops were from, camping with canvas in such conditions was difficult and disagreeable for everyone.

Charles B. Haydon, an officer in the 2nd Michigan Infantry, endured nearly three years of winter camping, detailing its many rigors in his journal. While his regiment was serving in Virginia in December 1862, Haydon observed that the enlisted men's shelter tents were "a very insufficient protection against a severe winter storm," but the junior officers like himself did not fare much better in "a thin old 'A' tent" per company.[116] These were widely held opinions in both armies, with soldiers criticizing canvas quarters for failing to protect them from wintry weather. Men had trouble keeping warm and were able to obtain little to no sleep at night due to suffering from the cold, especially as the ground was often frozen.[117] "You cannot imagine how uncomfortable it is to shiver half the night – with no prospect of getting warm till morning," Illinois artillerist William T. Shepherd wrote home from Missouri.[118] Similar to sweating, shivering is a physiological

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[115] Wyckoff, *The Civil War Letters of Alexander McNeill*, 238.
[116] Sears, *For Country, Cause & Leader*, 294.
[117] Kenneth C. Turino, ed., *The Civil War Diary of Lieut. J. E. Hodgkins, 19th Massachusetts Volunteers, From August 11, 1862 to June 3, 1865* (Camden, ME: Picton Press, 1994), 15; Croner, *A Sergeant's Story*, 34; Fred Smith to Father, February 7, 1863, Fred Smith Letters, Civil War Times Illustrated Collection, USAHEC.
[118] Kurt H. Hackemer, ed., *To Rescue My Native Land: The Civil War Letters of William T. Shepherd, First Illinois Light Artillery* (Knoxville: University of Tennessee Press, 2005), 83.

mechanism for regulating core temperature, but rather than cooling the body down, the aim is to warm it up. Shivering causes an individual's skeletal muscles to contract and relax at a rapid rate, increasing internal heat production.[119] Unfortunately for soldiers, shivering alone was not enough to end their misery, which was augmented further when wintry precipitation occurred. Wet canvas became coated with ice or frozen stiff, while snow blew into the tents, covering the occupants, and buried the small shelters.[120] Echoing the thoughts of many men camping amid wintry conditions, Charles Haydon asserted, "All one can hope for here at present is merely to preserve life, i.e., to stay along from day to day."[121]

One of the reasons that comfort was so elusive for tent dwellers in the winter months was inadequate equipment. "The men are ragged & short of shoes…I am very deficient in clothing," Haydon noted at the Virginia campsite, lamenting over a year later in Tennessee, "I saw several whose bare feet came in contact with the frozen ground at every step. The balance of their [his unit's] clothing is little better."[122] Material shortages plagued regiments throughout the war, with troops lacking sufficient amounts of clothing, footwear, overcoats, and blankets.[123] As these items were critical in staving off cold weather in camp, there was considerable suffering reported among poorly equipped units. Virginia gunner Davis, for example, bemoaned that "most of our company are without

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[119] Sherwood, *Human Physiology*, 630-631.
[120] Reinhart, *A German Hurrah!*, 225; Warren Goodale to Children, November 6, 1864, Warren Goodale Papers. Massachusetts Historical Society.
[121] Sears, *For Country, Cause & Leader*, 292.
[122] Sears, *For Country, Cause & Leader*, 294 and 351.
[123] Banasik, *Serving With Honor*, 123 and 131; Edward L. Edes to Father, December 19, 1862, Edward Louis Edes Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.

the necessary clothing to keep them even tolerably warm" in late 1864.[124] Both armies experienced problems, but Federals were generally better supplied with weather-protection gear than their Confederate counterparts due to the more effective U.S. logistical and supply system. Pennsylvania captain Levi Bird Duff recognized that his side was more prepared for the onset of winter weather, telling his wife, "It is coming the time of year now where our superiority in equipping our soldiers is of some advantage, while our enemies will feel the sad disadvantage of their thin wardrobes."[125]

Many troops whose material needs were not fulfilled by quartermasters looked to their home communities for relief. Men wrote home requesting that family members send them thick clothing, blankets, shoes, and other equipment that would help protect them from the elements.[126] One frequently asked for item for the colder months was woolen gloves, which were not issued for use in the field by either army.[127] Given the logistical failings of the Confederacy, seeking supplies from the home front was a more common practice among its soldiers. Their entreaties had a sense of desperation that was mostly absent from Federal requests. In one such letter penned in September 1861 in Virginia, Lt. Ujanirtus Allen of the 21st Georgia Infantry explained, "Winter is coming on…and if the people do not provide for them they will certainly suffer."[128] Confederates heaped

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[124] Davis Diary, December 2, 1864, Virginia Historical Society.
[125] Jonathan E. Helmreich, ed., *To Petersburg with the Army of the Potomac: The Civil War Letters of Levi Bird Duff, 105th Pennsylvania Volunteers* (Jefferson, NC: McFarland & Company Inc., 2009), 75.
[126] Evans, *The 16th Mississippi Infantry*, 16; Edes to Mother, January 3, 1864, Massachusetts Historical Society.
[127] Gavin, *Infantryman Pettit*, 36.
[128] Randall Allen and Keith S. Bohannon, eds., *Campaigning with "Old Stonewall": Confederate Captain Ujanirtus Allen's Letters to His Wife* (Baton Rouge: Louisiana State University Press, 1998), 32-33.

thanks and praise on their families and communities for answering their calls for clothing and equipment, understanding the beneficial impact it would have on their daily lives in camp.[129] Just as with tents, Confederate forces also tried to meet their supply needs by scavenging U.S. protective gear from battlefields.

Whether from military or civilian sources, soldiers appreciated when they were sufficiently equipped because oftentimes, as Charles Haydon commented in late 1862, with "blankets enough…the nights are pretty comfortable."[130] An abundance of heavy clothing to wear and woolen blankets to cover themselves with made cold weather much more bearable while outdoors in camp and especially inside their tents. Men highly valued these pieces of equipment; Georgia lieutenant John B. Evans told his wife that he "would not this [chilly] morning take three hundred dollars for it."[131] Many felt the same way about their own outerwear and blankets, as the items could help them keep warm and get restful sleep at night.[132] On freezing days, particularly when it was precipitating, many remained in their tents, where men such as Haydon bundled in their overcoats and passed the time with activities like playing card games with comrades, while numerous others like Virginia artillerist Davis lay in bed, "rolled up in their blankets, dreaming of happier days."[133] Similar to rainy weather, additional measures to rest comfortably in canvas quarters included using straw, pine boughs, or other available materials to construct makeshift beds to avoid laying on the cold and icy ground.[134] Tentmates also

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[129] Evans, *The 16th Mississippi Infantry*, 137.
[130] Sears, *For Country, Cause & Leader*, 299.
[131] John B. Evans to Wife, November 15, 1864, John B. Evans Papers, Duke University.
[132] Fox to Ruth Ann Prouty, October 29, 1862, Massachusetts Historical Society.
[133] Davis Diary, October 27, 1864, Virginia Historical Society.
[134] Laubach Diary, November 7, 1862, USAHEC; Gavin, *Infantryman Pettit*, 34.

slept very close together at night, "spooning," to share their body warmth and combine the protection afforded by their overcoats and blankets (both woolen and rubber types). On a night in which "watter froze in our canteens" in Maryland, Pennsylvania infantryman Fred Laubach noted, "we all lay hugin-snug…it being to cold to sleep any other way comfortable."[135] When three or more men bunked together, those in the middle had the warmest position, making it "the place of honor."[136]

Multiple times while camping in December 1862 in Virginia, Haydon and his tentmates "were fairly frozen out" of their shelter.[137] This was a usual occurrence in wintry weather, with soldiers wracked by cold in their tents despite their equipment and attempts to stay comfortable. These men were missing an important tool for fighting low temperatures – fires. Outdoor campfires were used to dry saturated blankets and apparel, but they were also sources of much-needed warmth. As a Connecticut private related, "large campfires [were] kept burning nights and days" throughout camps in cooler weather, with troops spending long hours standing and sitting close to the blazes, trying to keep warm.[138] Like Haydon, tent dwellers who were uncomfortably cold and unable to sleep were regularly driven to seek relief near a fire.[139] Many men passed most of the night huddled by a campfire, but others followed the same approach as Haydon, who explained that "if we succeed in getting warm we plunge into our hole & remain there till

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[135] Laubach Diary, October 21, 1862, USAHEC.
[136] Edward G. Longacre, ed., *From Antietam to Fort Fisher: The Civil War Letters of Edward King Wightman, 1862-1865* (Cranbury, NJ: Associated University Presses, 1985), 45.
[137] Sears, *For Country, Cause & Leader*, 294.
[138] Charles H. Lynch, *The Civil War Diary, 1862-1865, of Charles H. Lynch, 18th Conn. Vol's* (Hartford: Case, Lockwood & Brainard Co., 1915), 46.
[139] Pope Diary, September 26, 1862, and December 20, 1862, USAHEC; Rhodes, *All For the Union*, 84.

driven out again by the cold."[140] Some soldiers tried to reap the benefits of outdoor fires while staying within their tents by kindling blazes right in front of their quarters.[141]

The innumerable campfires required vast amounts of timber for fuel, much of which was obtained by cutting down trees in woodlots and forests around encampments. Troops favored campsites that were conveniently close to timber because otherwise it was much more difficult to get enough wood to build and maintain their fires. "We have to walk a great distance" for wood, Pvt. George Weston, while serving in a Maryland (Confederate) regiment, penned in his diary in February 1862, "We have to carry it on our shoulders, logs large enough to weigh a horse down."[142] Similar to hot and sunny days, men also preferred to camp in wooded areas to reduce their vulnerability to frigid weather. Camps in open fields or on hills were exposed to the full force of the wind, which threatened to blow tents down and augmented the severity of the cold.[143] Federals and Confederates fueled their fires by not only taking timber from the natural environment across the South, but also the built one. Rails from the fences of homes and farms near camps were constantly seized by troops trying to find comfort on cold nights. (The confiscation of resources from civilians and the irony of ransacking the natural world to find protection from it will be discussed in Chapter 3.)

Campfires were crucial means of warmth, but there were downsides to such outdoor blazes. Charles Haydon griped, "the smoke always comes in our faces but where

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[140] Sears, *For Country, Cause & Leader*, 299-300.
[141] Holzhueter, "William Wallace's Civil War Letters," 42.
[142] Weston Diary, February 9, 1862, Duke University.
[143] Thomas G. Clark to Wife, December 23, 1861, Clark Family Collection, University of Mississippi Libraries; Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 8-9.

the heat goes is more than I can tell."[144] To avoid these inconveniences, men looked for more efficient heating methods, particularly ones that would warm the interior of their tents and not force them to remain outside. One popular choice was the portable sheet-iron wood stove known as a Sibley stove. These cone-shaped devices were around 29 inches tall with an 18-inch base diameter and short lengths of stovepipe connected to the main body to vent the smoke through an opening in the top of the tent. Sibley stoves were originally designed to be used in conjunction with Sibley tents, though they would be used in other types of shelters as well.[145] Sibley stoves or comparable models of camp stoves were sometimes issued to units, but often soldiers purchased them from local vendors at their own expense.[146] For many, the heat that emanated from these small items was worth the price. On a freezing and snowy day near Washington, Wisconsin lieutenant Henry F. Young wrote to his wife, "we get along well. You would not beleive our Small Sheet iron Stoves would make our tents so comfortable, as they do."[147]

If camped at the same place for longer stretches of time during colder weather, a more innovative way that soldiers heated their tents was by working together to add makeshift fireplaces and chimneys. Massachusetts captain Richard Cary described the ones constructed by his regiment in November 1861 in Maryland in a letter home:

> The weather…has turned cold & windy but by means of furnaces we manage to keep warm when in doors. A furnace is built by digging a hole on one side of the tent outside

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[144] Sears, *For Country, Cause & Leader*, 299.
[145] Davis, *The Fighting Men of the Civil War*, 132; Billings, *Hardtack and Coffee*, 47; John D. Wright, *The Language of the Civil War* (Westport, CT: Oryx Press, 2001), 271.
[146] Lynch, *The Civil War Diary*, 37-38; Moore, Jr., *Cornie*, 30; Virginia Cornue and William R. Trotter, eds., *So Much Blood: The Civil War Letters of CSA Private William Wallace Beard, 1861-1865* (Montclair, NJ: Creative Books, 2015) 51-52.
[147] Michael J. Larson and John David Smith, ed., *Dear Delia: The Civil War Letters of Captain Henry F. Young, Seventh Wisconsin Infantry* (Madison: University of Wisconsin Press, 2019), 36.

for a fireplace & running a trench through the tent & covering it with flat stones & plastering the cracks up with mud & then on the side of the tent opposite the fire erecting a chimney of stones & mud; this works well & keeps the tent warm.[148]

In this type of heating system, which was known as a Crimean oven, fires were kindled outdoors at the mouth of the subterranean passage, and the hot air would then flow under the tent and heat the adjacent ground, warming the interior, while the smoke was conducted out the other end of the flue through the chimney. Another widely used model of fireplace and chimney was referred to as a California oven. "It is a large hole in the centre of the tent covered over with stone with one canal, or passage, to carry off the smoke and another to let in a draft of air," Rhode Island officer Rhodes explained, "The passage ways are under ground, and we left off the top stone of the oven to put in wood. It works well and keeps us very warm."[149] The California oven design's main difference from the Crimean one was that the fireplace was dug into the ground on the inside of tents rather than the outside, but both types were praised for the warmth and comfort that they afforded. Many tent dwellers utilized variations of these two heating systems, but there was no uniformity among Civil War armies, and soldiers employed an assortment of designs and techniques throughout the war.[150] For example, some fireplaces were lined with brick or stone, while chimneys could be built of turf, stone, brick, sticks and daub,

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[148] Richard Cary to Wife, November 16, 1861, Richard Cary Letter, Massachusetts Historical Society.
[149] Rhodes, *All For the Union*, 36.
[150] Joseph Balicki, "Watch-Fires of a Hundred Circling Camps: Theoretical and Practical Approaches to Investigating Civil War Campsites," in Clarence R. Geier, Lawrence E. Babits, Douglas D. Scott, and David G. Orr, eds., *Historical Archaeology of Military Sites: Method and Topic* (College Station: Texas A&M University Press, 2010), 66-69.

or even empty wooden barrels – it all depended on the available materials and the inclinations of the builders.[151]

Constructing effective fireplaces and chimneys for tents was a learning process, one in which errors resulted in problems for the occupants. A typical grievance was that a heating system did not properly vent the smoke, which would fill the interior of the tent instead of exit through the chimney.[152] The smoke particularly pained troops by getting in their eyes, causing stinging, burning, and excessive watering. "Our chimney did not draw good," Sgt. Osiah Moser of the 10th Iowa Infantry complained in Tennessee in 1863, "I have almost got my eyes smoked out, while I am writing I can barely see the line, but hope they will get better again soon."[153] The more experience that men had building makeshift chimneys and fireplaces, the more efficient their constructions became. Over the course of their service, it became relatively simple for them to add such protective features to their tents. Soldiers felt immense satisfaction in the successful heating systems that they made with their own hands. Kentucky (Confederate) captain Edward F. Spears claimed that his unit's chimneys make "our Tents as comfortable as a King's Palace. I can assure you that no King sleeps any better than I do…unfortunately they move us about so much that we can't enjoy the fruits of our labor long but two hours work makes

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[151] Noe, *The Howling Storm*, 68-70; Reinhart, ed., *A German Hurrah!*, 161; Jean M. Cate, ed., *If I Live to Come Home: The Civil War Letters of Sergeant John March Cate, Co. D, 33rd Massachusetts Volunteer Infantry Regiment* (Pittsburgh: Dorrance Publishing Co., 1995), 41-42.
[152] Fox to Ruth Ann Prouty, November 30, 1862, Massachusetts Historical Society.
[153] Osiah A. Moser to Wife, January 16, 1863, Osiah A. Moser Letters, Civil War Collection, Missouri Historical Society.

a chimney & they pay in one cold night."[154] After weeks of enduring frigid weather in a tent at the Virginia campsite in late 1862, Haydon and his comrades decided to build a better shelter for themselves.[155] Improvised fireplaces and chimneys significantly improved quality of life under canvas, but like Hayden, most troops on both sides wanted to spend the cold and snowy months in winter quarters.

Housing for the Winter

Winter weather forced Civil War soldiers to get involved in the construction of more substantial shelters. Commanders sometimes ordered their forces to move into winter quarters, while other times the troops themselves decided to build winter housing when it seemed that they would be camped at a single location for weeks or months. The construction of these quarters was not an individual endeavor but a group project, with the rank and file pooling their labor to erect a shelter that they would then inhabit together. Men often turned to the countryside around their campsites to supply building materials, the most important of which was timber. "The clatter of axes is heard all through the woods surrounding our camps," Vermont private Fisk observed in Virginia in November 1864, "and the crashing of falling trees greets the ear continually" as his brigade prepared their shelters.[156] Although nearly all incorporated timber, there was no standard style of winter quarters and they took a wide range of architectural forms. "There are about as many ways as there are men," a New England corporal remarked,

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[154] Samuel R. Flora, ed. "I consider the Regiment my home": The Orphan Brigade Life and Letters of Capt. Edward Ford Spears, 1861-65," *The Register of the Kentucky Historical Society*, Spring 1996, Vol. 94, No. 2, pp. 155.
[155] Sears, *For Country, Cause & Leader*, 300-301.
[156] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 276.

and soldiers variously referred to these shelters as huts, cabins, houses, or shanties.[157] One of the most prevalent types, particularly in the U.S. Army, was a log-walled structure roofed with tent canvas. Historian Kenneth Noe terms this combination design as "log-canvas hybrids," while many soldiers described it as their tents being "stockaded." The average dimensions of these shelters were eight by ten feet, but there were many that were larger or smaller. The height also varied, ranging from three to five logs high, or two to five feet, before one of the different kinds of army tents would be stretched over the top. The number of men living in each log-canvas shelter was determined by its size, though it was usually around four.[158]

For all their variations, hybrid models shared several common characteristics. New Jersey sergeant George Bowen's notes some of those features in the description of his quarters during the winter of 1862-1863 in Virginia:

> We have a tent raised on a stockade about 3 feet from the ground, 7 feet long, 6 feet wide with the chimney and fireplace in half the front, the other half is a door, covered with a piece of tent or a Gum Blanket, in the rear of the tent have our bed raised from the ground on poles in forked sticks, covered with pine boughs, we feel as we were living at home.[159]

All log-canvas huts included a heating system, and many men like Bowen built fireplaces and attached chimneys with the same diverse materials – stone, mud, brick, wood – as when they added such apparatus to their tents. Others acquired camp stoves for their

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[157] John B. Gallison to Mother, December 21, 1862, John B. Gallison Papers, Massachusetts Historical Society.
[158] Noe, *The Howling Storm*, 70-72, 206, 216-217, 351-352, and 367; Billings, *Hardtack and Coffee*, 54-57; Goodale to Children, November 27, 1864, Massachusetts Historical Society; Thomas S. Howland to Mother, December 4, 1862, Thomas S. Howland Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[159] "The Diary of Captain George A. Bowen, 12th Regiment New Jersey Volunteers," *The Valley Forge Journal* 2 (1984), 121.

cabins and connected them to an outdoor chimney. Most soldiers fashioned a similar style of elevated bunk as Bowen; these makeshift beds were wide enough for one or two occupants and allowed them to sleep off the ground at night and have a seat in their quarters during the day, with the space underneath used to store firewood. When erecting log-canvas shelters, men also would utilize mud from around their campsites to fill in the cracks between logs to prevent cold air from penetrating the structures. Blankets and spare pieces of tent canvas usually served as doors, but the floor of quarters differed – some settled for a dirt floor while others covered the ground with logs, boards, or fence rails.[160] A number of soldiers constructing combination structures first dug a couple feet into the ground before adding log walls several feet high around the excavation and placing their tent pieces on top. These partially underground quarters had the same basic features as the regular versions, but by having the floor below the surface, occupants aimed to have more space and be better protected from the weather.[161] Fisk made such a shelter with his comrades in 1861, noting that "this basement protects us securely from the wind, is quite warm, and affords us a chance to stand erect anywhere within our circumscribed limits."[162]

The other main form of winter housing was single room log huts, though they were built in as many different sizes and shapes as the hybrid structures. This style was

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[160] Noe, *The Howling Storm*, 70-72, 206, 216-217, 351-352, and 367; Billings, *Hardtack and Coffee*, 54-57; Megan Kate Nelson, *Ruin Nation: Destruction and the American Civil War* (Athens: University of Georgia Press, 2012), 120-123; Johnnie Perry Pearson, ed., *Lee and Jackson's Bloody Twelfth: The Letters of Irby Goodwin Scott, First Lieutenant, Company G, Putnam Light Infantry, Twelfth Georgia Volunteer Infantry* (Knoxville: University of Tennessee Press, 2010), 152; William H. Walling to Sister, December 9, 1862, William Henry Walling Letters, Civil War Document Collection, USAHEC.
[161] Noe, *The Howling Storm*, 71; Billings, *Hardtack and Coffee*, 54.
[162] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 2.

used in both armies, but it was more popular among Confederates than Federals.[163] The design of the cabins constructed by Missouri captain Pinnell's unit in Arkansas in late 1863 were typical. "Our house, we call it a house, is twelve by fourteen feet square," Pinnell wrote, "built of round logs, daubed with red clay, wooden chimney in the south, door in the east, in the back end from the fire, and two bunks bedstead fashion, in which six of us sleep."[164] As Pinnell reveals, these huts included many of the same features – wooden walls, raised bunks, makeshift fireplaces and chimneys, mud plastering – as the log-canvas ones. The primary difference between the two was that cabins were roofed with boards or other timber items instead of tents. Although hybrid quarters and log cabins were the most common, the spectrum of winter housing was broad. For example, some men created simple lodgings with poles and earth for themselves and a friend, while regiments occasionally built elaborate wooden barracks that housed dozens.[165] And shelters were not only created for men; members of cavalry and artillery units could have to build quarters for themselves as well as stables for the horses and mules that carried them or pulled their guns.[166]

Winter quarters were designed in a plethora of ways, but the overarching priority of the builders was always comfort through protection from the elements. To the displeasure of some soldiers, their shelters were not as comfortable as they had hoped.

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[163] Noe, *The Howling Storm*, 67, 206, 352, and 435; Nelson, *Ruin Nation*, 120-121; William E. Sloan Diary, December 25, 1861, Civil War Collection, Tennessee State Library and Archives; Cornue and Trotter, *So Much Blood*, 52 and 373.
[164] Banasik, *Serving With Honor*, 123.
[165] Noe, *The Howling Storm*, 71-72 and 217-218; Judith Lee Hallock, ed., *Civil War Letters of Joshua K. Callaway* (Athens: University of Georgia Press, 1997), 68-69.
[166] Noe, *The Howling Storm*, 73; Nelson, *Ruin Nation*, 125-126; Wiley, *Norfolk Blues*, 102.

"Tis a rough looking camp scene," Pvt. Abial H. Edwards of the 10th Maine Infantry told a friend, "the little huts almost buried in snow and every crevice the snow comes blowing in soon giving us a pretty good supply of snow outside and in."[167] In addition to the snow, rain could leak through canvas roofs, with both forms of precipitation saturating the occupants' belongings and causing the dirt floor to become muddy.[168] Other troops complained that cold wind penetrated their quarters or their chimneys did not function properly so, as another Maine private penned, "our houses soon filled with smoke and our eyes almost washed out of our heads," driving them out of their shanties.[169]

But many U.S. and Confederate soldiers lauded their lodgings, boasting that they successfully shielded them from the worst of the winter weather. Echoing countless others, New York private Edward K. Wightman declared, "This rude hut protects us well and has already defied and grinned in the teeth of a heavy snow storm…We do not fear freezing in it."[170] Building shelters required long and hard labor, but men expressed contentment and satisfaction with their living conditions, especially compared to occupying tents in adverse weather. While living in a cabin near Richmond in December 1864, South Carolinian Alexander McNeill, now an officer, explained that "it is difficult to estimate the intrinsic value of even such a hut as I now occupy while outdoors it is freezing cold, yet we are very warm with but a small fire."[171] Even though these

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[167] Beverly Hayes Kallgren and James L. Crouthamel, eds., "*Dear Friend Anna": The Civil War Letters of a Common Soldier from Maine* (Orono, ME: University of Maine Press, 1992), 52.
[168] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 181; Cate, *If I Live to Come Home*, 79.
[169] Silliker, *The Rebel Yell & the Yankee Hurrah*, 53. Other example is John Crittenden to Wife, February 21, 1864, John Crittenden Letters, Auburn University.
[170] Longacre, *From Antietam to Fort Fisher*, 84.
[171] Wyckoff, *The Civil War Letters of Alexander McNeill*, 532.

structures may appear crude and minimalistic, to soldiers they were "more comfortable than a palace is to a King."[172] Many worked to further improve their shelters by adding windows or building pieces of furniture like desks, chairs, and shelves. Troops took pride in their winter quarters not only because they were protected from the weather, but because they created the structures themselves.

Although enlistees from rural regions had knowledge of clearing woodlands and erecting farm buildings, other men's prewar lives, particularly those from more urban areas, had not prepared them for such work. But learning how to be a soldier also meant learning how to construct their own "houses" to help get through the winter. As with so much in army life, men became more adept through experience, discovering how to efficiently build the different components of their shelters and which techniques were better at providing comfort than others. In a letter home to a local newspaper in late 1863, New Jersey sergeant William M. Thompson discussed how skill sets had evolved over time. "The experience of last winter has been useful in teaching us how to improve in this military architecture, and all have profited by the lesson," Thompson wrote in Virginia, "It is amusing how necessity compels men to change vocations – to see former clerks, teachers, printers and representatives of every trade and profession carrying logs, or besmeared with mud, erecting chimneys and plastering."[173] Besides year after year, troops' abilities improved because they often had to create new quarters multiple times each winter.

[172] Ridley Wills II, ed., *Old Enough to Die* (Franklin, TN: Hillsboro Press, 1996), 50.
[173] Mazzagetti, *"True Jersey Blues"*, 147.

With large numbers of men constructing a hodgepodge of structures, individual winter camps across the wartime South grew into what were described as a "village" or "settlement."[174] Most buildings were made for military use, but some campsites included ones for entertainment and religious worship.[175] In all aspects of the camp landscape, historian Megan Kate Nelson argues, "they sought to make camp life resemble their hometowns as much as possible through the medium of architecture, injecting a sense of spatial normalcy into military life."[176] However, many of these winter encampments only lasted for weeks, if not even less. Soldiers could have to abandon their quarters and move to a different location with little notice due to the exigencies of military operations or the whims of commanders.[177] After expending such time and energy into the construction of their huts, men were frustrated and upset when they did not get to long enjoy them. "I never lived so poor as I have this winter," Massachusetts gunner John W. Chase grumbled in early 1865, "and we have put up winter quarters this makes four times and I expect as soon as we get these done we shall have to move again a few miles just enough to lose them."[178] Troops would have to settle for tents or build anew at the new camp, but often with no guarantees that they would remain at that site any longer than the previous one. Some were reluctant to labor on new quarters given this uncertainty, but many

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[174] Blight, *When This Cruel War Is Over*, 72; Ephraim M. Anderson, *Memoirs: Historical and Personal; Including the Campaigns of the First Missouri Confederate Brigade* (St. Louis: Times Print Co. Street, 1868), 134.
[175] Nelson, *Ruin Nation*, 125-129.
[176] Nelson, *Ruin Nation*, 129-130.
[177] Charles F. Larimer, ed., *Love and Valor: The Intimate Civil War Letters Between Captain Jacob and Emeline Ritner* (Western Springs, IL: Sigourney Press, 2000), 221; John Kennedy Coleman Diary, January 15, 1865, Civil War Times Illustrated Collection, USAHEC.
[178] Collier and Collier, *Yours for the Union*, 381-382.

thought that the comfort and protection gained was worth it, even if they only remained for a short time. Fisk spoke for men on both sides when he asserted, "A fellow will work all day for the sake of a good sleep at night, and this taking good care of one's self here in the army, is a business that pays handsomely in the long run, otherwise the chances are that his run will be very short, and that he will fall a prey to some malady, or at best, cripple his constitution and seriously endanger his life."[179] Fisk and others like him believed that they were laboring for one of the most important reasons possible – ensuring their survival by safeguarding their health.

When temperatures dipped low and snowstorms raged, Federals and Confederates desired nothing more than to stay ensconced in their winter quarters. For a number of men, winter was their favorite time of year precisely because it regularly was the quietest period of their wartime service. These were the months when they could often observe the inclemency of the weather from the interior of their substantial shelters rather than be exposed to it while camping with tents, marching, bivouacking, or fighting. Whenever they did not have to complete duties around camp, they could remain comfortably indoors in adverse weather – sleeping, reading, writing, and talking with comrades.[180] Soldiers also found another opportunity for amusement and camaraderie in the aftermath of wintry storms by engaging in snowball fights. This activity was more widespread among Confederates, perhaps because a much greater proportion of their forces had never seen enough snow for such games before the war. These snowball battles could be massive, involving all sizes of military units from companies and regiments of hundreds

[179] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 175-176.
[180] Laubach Diary, March 1, 1863, USAHEC; Robert C. Plumb, ed., *Your Brother in Arms: A Union Soldier's Odyssey* (Columbia: University of Missouri Press, 2011), 177.

to brigades and divisions of thousands.[181] "It reminds one of a real battle to see the contest so hot and the men so much in earnest – and to see a thousand or two men standing face to face throwing the white balls is truly exciting as well as amusing," South Carolina corporal Taliaferro Simpson wrote home in Virginia in January 1863, "Sometimes a party would dash in and secure one or two prisoners and completely envelop them in snow."[182] Snowball fights became so intense that participants actually suffered minor injuries like black eyes and bloody noses, but most men nevertheless thought that they were a fun way to pass a winter day and helped sustain good morale within the army.[183]

Troops were at times so pleased with their winter quarters and quiet stretches of time in camp that they were actually glad when adverse weather occurred, especially in the closing stages of the season, because it usually postponed the commencement of campaigning for several more days or weeks. In early April 1864, Pvt. Alva B. Spencer of the 3rd Georgia Infantry penned to a friend, "It is again raining, and I do feel so thankful; for the old proverb 'more rain more rest' is certainly true in our situation. So long as it continues bad weather we are sure to remain in our present quarters."[184] Soldiers wanted to defeat the enemy and see the war end, but it must have been difficult to willingly exchange the comforts of winter housing with the weather-related rigors of active operations.

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[181] Wyckoff, *The Civil War Letters of Alexander McNeill*, 214-215; George Washington Dillon Diary, March 31, 1863, Tennessee State Library and Archive.
[182] Everson and Simpson, Jr., "*Far, Far from Home"*, 181.
[183] Isaac Gaillard Foster Diary, April 2, 1864, James Foster and Family Correspondence, Louisiana State University.
[184] Wiggins, III, *My Dear Friend*, 104.

Growing Accustomed to Camp Life

One of the main reasons that Civil War soldiers were unenthusiastic about once again only having tents as their best means of protection was because the changeability of the weather. It did not matter in what part of the country that troops served, they often asserted that the weather was changeable, quickly moving between different types of conditions within a short span of time. These frequent and sudden changes meant that soldiers regularly had to face various forms of inclement conditions within a short period, including only a day or two.[185] Many U.S. soldiers disliked and disparaged the climate of the South specifically because they believed that the variability of the weather was normal for the region. "As the penetrating rays of the sun shone forth, our situation, minus shade, was indeed undesirable," New Jersey sergeant Lucien A. Voorhees complained in mid-1863 in Virginia, "but it was of short duration, for ere the shades of night gave consolation to the weary and sun-burnt, a shower came up and soon deluged the plain with the unconquerable element…Through the night every available garment was required to keep warm, so changable is the clime of 'Dixie.'"[186] But Confederates did not think the variable weather was typical for the South, with just as many of them commenting on the drastic shifts as Federals did. While camping in Tennessee, Georgia lieutenant Charles H. George recorded that "the weather is as changeable as the month of march can make it, one day it is clear and warm and the next raining and the next sleeting

[185] Henry J. Seaman Diary, February 25, 1862, Civil War Times Illustrated Collection, USAHEC; Linscott to Parents, February 13, 1863, and February 15, 1863, Massachusetts Historical Society.
[186] Mazzagetti, *"True Jersey Blues"*, 112.

and the next clear and cold and so it goes."[187] Although not understood by troops on either side, the unusually variable weather was most likely connected to the larger climatic patterns of the war years.[188]

Regardless of what caused it, the changeability of the weather necessitated that soldiers be prepared to utilize the methods discussed throughout this chapter to adapt to rapidly shifting conditions at their tent encampments. Weeks, months, and years of service in the field while making do with only simple canvas forced men to engineer ways to make their living arrangements more bearable. Their survival and ability to fulfill their duties depended on their ingenuity and resourcefulness. But many in both armies also contended that the challenges imposed by the weather became easier to withstand because they became accustomed to them. Amid rain and hail in January 1862, Maryland private Weston journaled, "we all say 'Oh this is nothing when you are used to it.' Some of the boys care no more for rain, than if twas straws, no matter if they were half drownded!"[189] For men who had been soldiering for years, one of the differences between

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[187] Charles H. George to Sister, March 6, 1863, George Family Letters, Auburn University. Other example is Everson and Simpson, Jr., "*Far, Far from Home"*, 207.
[188] Edward R. Cook, R. D. D'Arrigo, and Michael E. Mann, "Well-Verified Winter North Atlantic Oscillation Index Reconstruction," IGBP PAGES / World Data Center for Paleoclimatology Data Contribution Series 2002-059, NOAA/NGDC Paleoclimatology Program, 2002, ftp://ftp.ncdc.noaa.gov/pub/data/paleo/treering/reconstructions/nao_cook2002.txt; "North Atlantic Oscillation (NAO) Index," Climate Data Archive. Joint Institute for the Study of the Atmosphere and Ocean (JISAO), February 2002, http://research.jisao.washington.edu/data_sets/nao/; Celine Herweijer, Richard Seager, and Edward R. Cook, "North American Droughts of the Mid to Late Nineteenth Century: A History Simulation and Implication for Mediaeval Drought," *Holocene* 16 (Feb. 2006): 159-171; Richard Grove and George Adamson, *El Niño in World History* (London: Palgrave Macmillan, 2018); Browning and Silver, *An Environmental History of the Civil War*; Noe, *The Howling Storm*.
[189] Weston Diary, January 4, 1862, Duke University.

themselves and new enlistees was their capacity to handle the elements with only insubstantial tents for shelter. "We are today having a cold rain which is very unpleasant & which I dare say will create a distaste for camp life among the recruits who have lately come in," Virginia private Waldrop observed in his home state in late 1864, "It is slightly annoying to us who have been enduring it for the last four years & I know they do not like it. They will however have to do as we have done, get used to it & then they won't mind it any more than we do."[190]

Waldrop and numerous others perceived being able to grapple with inclement weather in camp as an important marker of a capable, veteran soldier. But it was more than that. "Our men have become quite soldier-like, and endure without much murmuring the little ills as they come," Illinois captain Charles W. Wills reported on a wintry day in Tennessee, "It shows some of the principles of manhood, you must believe, when men stand this weather in these worthless little wedge tents, without fires and without grumbling."[191] As Wills' statement about masculinity implies, Federals and Confederates saw their interactions with the elements as a way to illustrate their adherence to martial manhood ideals. From their perspective, the toughness and fortitude to successfully deal with meteorological pressures while living under canvas were key characteristics of martial men. Soldiers' struggles to demonstrate their masculinity through their struggles against the elements were enduring features of wartime service, stretching from tent campsites to marching routes and beyond.

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[190] Waldrop to Father, November 2, 1864, University of North Carolina.
[191] Mary E. Kellogg, ed., *Army Life of an Illinois Soldier, Including a Day by Day Record of Sherman's March to the Sea; Letters and Diary of the Late Charles W. Wills* (Washington, D.C., Globe Printing Company, 1906), 147.

Chapter 2 – Marching

Introduction

From the beginning of the Civil War to its conclusion, the armies of the United States and the Confederacy moved back and forth across the states of the South as well as several territories of the West. Soldiers traveled on trains, riverboats, and steamships, but by far more than anything, they marched.[192] Marches varied in distance. An average march was between ten and fifteen miles in a day, though they could be as short as three to five miles or as long as twenty miles or more. The process of marching was not the same for all soldiers but, like camping, varied depending on rank and branch of the army. Enlisted men and noncommissioned officers in infantry units marched on foot, as did most junior officers, while higher-ranking officers completed movements while riding on horses. Cavalrymen undertook marches on horseback, and artillerymen sometimes marched on foot and other times rode on their unit's horses or ammunition caissons. Marching was a strenuous activity for soldiers, especially for those who marched on foot while carrying between thirty and fifty pounds of equipment.[193]

The arduousness of marching was directly and intimately linked with the prevailing weather conditions. Unsurprisingly, Union and Confederate soldiers preferred to march in weather that they deemed fair and pleasant. For some, this meant clear and

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[192] Although not examined in this dissertation, wartime means of transportation such as trains and steamboats also often involved soldiers interacting with different types of inclement weather.

[193] At times, lower-ranking commissioned officers and fortunate enlisted men in infantry units were able to have their knapsacks, blankets, and other heavier pieces of equipment transported in wagon trains, reducing the load that they had to carry on a march. Most of the time, however, marching infantrymen were responsible for carrying all of their equipment themselves.

sunny days, while many others favored skies that were cloudy, but most important to marching soldiers was that the temperatures were mild and cool. Moving through Mississippi on a cool and cloudy day in July 1863, Illinois infantryman Henry J. Seaman asserted that the weather "rendered our journey pleasant and agreeable in every respect."[194] Surely from troops' perspective, marches did not occur amid ideal conditions as much as they wished. Some men complained that when the weather was fair and cool, they remained stationary in camp, but when they did have to march, the weather was too hot, wet, cold, or dry. In a letter home, Kentucky (Confederate) captain Edward F. Spears noted, "it seems to me that we have always to go in the worst weather we have."[195]

Civil War armies marched regardless of the weather, and soldiers had no choice other than to face the problems imposed by the elements. Troops marching on foot encountered the most difficulties created by various adverse conditions, but men riding on horses or wheeled vehicles did not escape hardships either. As marching in inclement weather equated to an unrelenting struggle against inclement weather, Federals and Confederates became preoccupied with the meteorological conditions surrounding their movements. Soldiers on the march in harsh weather sought to adapt to the circumstances and employed a range of methods to try to successfully alleviate and endure the impediments.

Troops were determined to withstand the challenges as best as they could (most of the time) because they seemed to link successfully completing marches with their sense

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[194] Henry J. Seaman Diary, July 23, 1863, Civil War Times Illustrated Collection, U.S. Army Heritage and Education Center (USAHEC).
[195] Samuel R. Flora, ed. "I consider the Regiment my home": The Orphan Brigade Life and Letters of Capt. Edward Ford Spears, 1861-65," *The Register of the Kentucky Historical Society*, Spring 1996, Vol. 94, No. 2, pp. 155.

of manhood. Contending with the weather was no minor component of their soldiering experience but hit at the core of who they were – as men. To overcome the threat of the weather was to prove themselves as men, to prove that they were living up to the tenets of martial manhood. They did so in part by writing letters to family and friends that described the weather conditions of their marches in vivid and meticulous detail. And they did so repeatedly. U.S. and Confederate soldiers were intent on having their manhood recognized by making certain that people at home could envision and feel what they experienced as they slogged through adverse weather. Being a good soldier was not just about shooting an enemy on the battlefield, it was about enduring blistering heat, torrential rain, and glutinous mud while on the march too.

Wet Weather and Mud

One of the most notorious events of the Civil War was the Mud March, when U.S. forces launched an offensive against the Confederate army in Virginia in January 1863 but became bogged down in heavy rain and deep mud. With thousands of men, animals, artillery, and wagons floundering in miry terrain, the Confederates had plenty of time to counter the movement, forcing the Federal army to abort the offensive and return to its encampments. The campaign failed without a shot being fired due to the rainstorm.[196]

The Mud March was only one of the hundreds of instances in the conflict when the armies of both sides conducted movements in wet weather. Soldiers marched in all

[196] Overview of the Mud March in George C. Rable, *Fredericksburg! Fredericksburg!* (Chapel Hill: University of North Carolina Press, 2002), 408-426; Francis A. O'Reilly, *The Fredericksburg Campaign: Winter War on the Rappahannock* (Baton Rouge: Louisiana State University Press, 2006), 457-493.

intensities of rain, including light drizzles, steady showers, heavy downpours, and severe thunderstorms. Marching while exposed to falling rain often left men drenched, with all of their clothing and equipment saturated. Completing movements in hard rains in 1863, Massachusetts private Andrew R. Linscott was "completely soaked through" in Maryland, while Georgia artillerist George Weston "wore 2 sets of clothing throughout" but was still "saturated to the skin" in Tennessee.[197] In cooler temperatures, becoming wet in rainstorms was even more uncomfortable for marching soldiers. "The rain fell in torrents," Pvt. Joseph Garey of Hudson's Battery (Mississippi) related in Missouri in 1861, "wetting the few remaining dry threads we had on us & almost chilling us to the bone."[198]

Rainwater increased the weight of the clothing, knapsacks, and blankets that troops had to carry, augmenting the laboriousness of marching. According to Texas sergeant William W. Heartsill, "Let a soldiers clothing and blankets get thoroughly saturated with water and it will add thirty pounds to his burden."[199] A primary way that marching soldiers attempted to mitigate the difficulties caused by adverse weather involved using certain pieces of equipment, and in wet conditions, one of the most valued items was the rubber blanket. Also known as India rubber blankets or gum blankets, these

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[197] Andrew R. Linscott to Parents, April 19, 1863, Andrew R. Linscott Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society; George Harry Weston Diary, early July 1863, Duke University.
[198] David A. Welker, ed., *A Keystone Rebel: The Civil War Diary of Joseph Garey Hudson's Battery, Mississippi Volunteers* (Gettysburg: Thomas Publications, 1996), 23.
[199] Bell Irvin Wiley, ed., *Fourteen Hundred and 91 Days in the Confederate Army: A Journal Kept by W. W. Heartsill for Four Years, One Month, and One Day* (Jackson, TN: McCowat-Mercer Press, 1954), 130. Another example is Linda Foster Arden and Walter L. Powell, ed., *Letters From the Storm: The Intimate Civil War Letters of Lt. J.A.H. Foster, 155th Pennsylvania Volunteers* (Chicora, PA: Mechling Bookbindery, 2010), 18.

rectangular pieces of canvas were coated with vulcanized rubber to make them waterproof. Discovered in the mid-1840s, vulcanization is the process of heating crude rubber with sulfur to make it stronger, flexible, durable, and waterproof.[200]

A few Union states procured rubber equipment for their soldiers in the first few months of the Civil War, but the blankets became standard issue for the U.S. Army in November 1861. Of course, the actual supply of these items to men in the field across the nation varied due to the logistical challenges of the conflict. The Federal army purchased vast quantities of rubber equipment over the course of the war – well over 2.5 million items, with the largest number produced by the Union India Rubber Company of New York. Rubber blankets came in different sizes, but they were often around 45-60 inches wide by 71 inches long, with brass grommets or eyelets on the outer edges. The blankets were only coated with vulcanized rubber on one side to make them lighter, with each weighing approximately two-and-a-half to three pounds.[201]

U.S. soldiers on the march found rubber blankets invaluable in rainstorms. As Massachusetts private Warren H. Freeman reported in Virginia in June 1862, "On a march, in a rain-storm, we pin our rubber blankets over our shoulders, letting them fall below the knees; this affords considerable protection from the weather."[202] By draping

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[200] Mike Woshner, *India-Rubber and Gutta-Percha in the Civil War: An Illustrated History of Rubber & Pre-Plastic Antiques and Militaria* (Alexandria, VA: O'Donnell Publications, 199), 11-12 and 121-124.
[201] Woshner, *India-Rubber and Gutta-Percha in the Civil War Era*, 121-129; Frederick C. Gaede, "Ponchos and Waterproof Blankets During the Civil War," *Military Images* 40, no. 2 (Spring 2022): 70-74; Mark R. Wilson, *The Business of Civil War: Military Mobilization and the State, 1861-1865* (Baltimore: John Hopkins University Press, 2006), 117.
[202] Warren H. Freeman, *Letters From Two Brothers Serving in the War for the Union to Their Family at Home in West Cambridge, Mass.* (Cambridge: Houghton, 1871), 37.

rubber blankets over themselves, troops shielded much of their bodies and equipment from the falling rain, allowing them to stay mostly dry. Rubber equipment came in other forms besides blankets, but the most prevalent type supplied to Union troops was ponchos. Essentially the same as rubber blankets, the ponchos had a slit in the center through which men's heads were passed, covering themselves as well as their knapsacks and other equipment. With the protection offered by rubber blankets and ponchos, many marching troops agreed with Iowa sergeant John Q. A. Campbell's assertion, "My gum-blanket played for me the part of a 'friend in need.'"[203]

Rubber blankets and related items could not completely shield men marching on foot in rainy weather, with the most common complaint being that their lower legs and feet were still exposed. On a march in heavy rain in Georgia in July 1864, Lt. Chesley A. Mosman of the 59th Illinois Infantry observed, "The poncho comes down just far enough to thoroughly wet my body from the knees down."[204] This was a minor inconvenience though considering that not all soldiers had rubber blankets or ponchos, meaning those without these pieces of equipment faced greater hardships on movements in wet weather than the men who did. "Some had rubber blankets but I was not one of the fortunate," New York corporal John F. L. Hartwell wrote about a march amid a rainstorm, "I was obliged to take what I got."[205]

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[203] Mark Grimsley and Todd D. Miller, ed., *The Union Must Stand: The Civil War Diary of John Quincy Adams Campbell, Fifth Iowa Volunteer Infantry* (Knoxville: University of Tennessee Press, 2000), 168.
[204] Arnold Gates, ed., *The Rough Side of War: The Civil War Journal of Chesley A. Mosman, 1st Lieutenant, Company D, 59th Illinois Volunteer Infantry Regiment* (Garden City: Basin Publishing Co., 1987), 241.
[205] Ann Hartwell Britton and Thomas J. Reed, ed., *To My Beloved Wife and Boy at Home: The Letters and Diaries of Orderly Sergeant John F.L. Hartwell* (London: Associated University Presses, 1997), 165.

The Confederate Army did not provide rubber blankets to its soldiers. The best waterproof items that they could hope to be issued were oilcloths, linen or cotton blankets painted with boiled linseed oil.[206] Oilcloths were not as effective as rubber blankets, though men on both sides could use the terms "oilcloth" and "rubber" interchangeably to refer to water-resistant blankets. Additionally, Confederate troops were generally inefficiently supplied with these weather-protection items compared to their Union counterparts. This was all due to the Confederacy's weak industrial base and poor logistical systems, which left its men more vulnerable to the elements.[207] The limited number of Confederates with waterproof equipment were glad for the protection they provided on marches in wet weather. For example, moving through Virginia in a torrential rain, Georgia infantryman John Wood noted, "I would have got wet to the skin if it had not been for an india rubber cloth that I got at battle of Fredericksburg." Most of Wood's comrades were not as fortunate, getting "as wet as they could be."[208] As with tents and other equipment, the only reason that many Confederates even had waterproof blankets was because they took them off battlefields.

While water-resistant equipment was not universally possessed by soldiers, one other helpful item that most men did have was some type of headwear. The two standard issue hats for both the Union and Confederate armies were kepis and forage caps. Similar

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[206] Kenneth W. Noe, *The Howling Storm: Weather, Climate, and the American Civil War* (Baton Rouge: Louisiana State University Press, 2020), 33.
[207] Earl J. Hess, *Civil War Logistics: A Study of Military Transportation* (Baton Rouge: Louisiana State University Press, 2017), 31-33, 267-269; Earl J. Hess, *Civil War Supply and Strategy: Feeding Men and Moving Armies* (Baton Rouge: Louisiana State University Press, 2020), 12-13, 85, 354-356, 361.
[208] Mills Lane, ed., *"Dear Mother: Don't Grieve About Me. If I Get Killed, I'll Only be Dead:" Letters from Georgia Soldiers in the Civil War* (Savannah: Beehive Press, 1977), 240.

in construction, both were made of wool and had circular crowns with a narrow leather visor in front, but while the body of the kepi was short and low, made of cloth that was stiffened, the forage cap was taller and less rigid. As neither kepis nor forage caps afforded much protection from the elements, however, Federals and especially Confederates preferred to equip themselves with the soft, broad-brimmed slouch hats. Compared to the short visors of the caps, the wide brim of the slouch hat offered more protection from the weather, such as by preventing rain from dripping down men's faces.[209] Massachusetts corporal Joseph K. Taylor wrote home from Virginia in early 1864, "A hat is much superior to a cap as it sheds the rain and keeps it from running down one's neck."[210]

Besides saturating troops, wet weather hindered the marches of Civil War armies through its impact on many of the roadways that the Union and Confederate forces traversed in the South. Heavy rains could cause roads and the surrounding countryside to flood, forcing troops to wade through differing levels of water. Iowa sergeant George Remley reported in Mississippi in May 1863 that "sometimes we would have to wade through water nearly waist deep and long before night every part of any clothing was completely drenched."[211] More significantly, as most roads in the Southern states were

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[209] Steven E. Woodworth and Kenneth J. Winkle, *Atlas of the Civil War* (New York: Oxford University Press, 2004), 380; Webb Garrison, *The Encyclopedia of Civil War Usage: An Illustrated Compendium of the Everyday Language of Soldiers and Civilians* (Nashville: Cumberland House, 2001), 132; Neil Kagan and Stephen G. Hyslop, eds. *Smithsonian Civil War: Inside the National Collection* (Washington, D.C.: Smithsonian Books, 2013), 162.
[210] Kevin C. Murphy, ed., *The Civil War Letters of Joseph K. Taylor of the Thirty-Seventh Massachusetts Volunteer Infantry* (Lewistown, NY: Edwin Mellen Press, 1998), 171.
[211] Julie Holcomb, ed., *Southern Sons, Northern Soldiers: The Civil War Letters of the Remley Brothers, 22nd Iowa Infantry* (DeKalb: Northern Illinois University Press, 2004), 66.

composed of dirt rather than crushed stone, rain often turned the soil into deep and gooey mud. In the words of Maine private John Haley, "It commenced to rain in fine old Virginia style, and in less than an hour the road was a mass of liquid mud up to, even over, our ankles in many places."[212] As a result, during and after rainstorms, soldiers marching on foot had to trudge through various depths of mud.[213] Men were stunned and disgusted by how muddy that roadways could become. "The roads are such as I never saw before in all my life anywhere-," Lt. Benjamin F. McIntyre of the 19th Iowa Infantry declared in Missouri, "Mud mud mud – it is wading half leg deep every step."[214]

The remarkably deep mud encountered by soldiers stemmed from the soil composition of large portions of the South, particularly in the states that comprised the Confederacy. Soils are complicated mixtures of mineral and organic materials shaped over time by climate, chemistry, geology, and living organisms. Of the twelve basic soil orders classified in the modern U.S. Department of Agriculture soil taxonomy, different varieties of Ultisols are the dominant soils in the South. Commonly known as red clay soils, Ultisols, as historian Kenneth Noe argues, "helped define the Confederacy." The clayey soils tend to drain poorly, are prone to flooding, and absorb water when wetted by heavy rain, becoming a viscous mud. The scholars Judkin Browning and Timothy Silver explain that during prolonged rains and if disturbed or compressed by the movement of

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[212] Ruth L. Silliker, ed., *The Rebel Yell & the Yankee Hurrah: The Civil War Journal of a Maine Volunteer* (Lanham, MD: Down East Books, 1985), 93.
[213] Thilbert H. Pearce, ed., *Diary of Captain Henry A. Chambers* (Wendell, NC: Broadfoot's Bookmark, 1983), 173.
[214] Nannie M. Tilley, ed., *Federals on the Frontier: The Diary of Benjamin F. McIntyre, 1862-1864* (Austin: University of Texas Press, 1963), 141.

armies, "the clays undergo a process technically known as liquefaction…the clay becomes an incredibly sticky deep mud that behaves more like a liquid than a solid."[215]

Hailing from states that mostly lack Ultisols, U.S. troops were astonished by the South's mud and claimed to have never seen anything like it, especially when they had to march in it. During the Mud March, Connecticut captain Samuel W. Fiske reported, pouring rain "poached the ground into mud deeper than the New England mind can conceive of and stickier than – well I am at a loss for a similitude. Pitch, for cohesive attraction, is but as sand compared with it."[216] Illinois corporal Lewis Roe asserted, "No one knows much about mud until they see the Alabama article; red and sticky, oh, so sticky."[217] Many men recognized that the clayey contents of the soil in much of the South was the reason that roads became so muddy. "They are all clay," Lt. Josiah M. Favill of the 57th New York Infantry wrote about the roadways in Virginia, "and the center of the road is universally the lowest part of it, in consequence, an hour's rain makes them impassable for artillery or wagons, and laborious and difficult for infantry."[218] As Favill's point could be applied to roadways throughout the wartime South, soldiers on both sides detested the gooey mud that impeded their marches in wet weather.

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[215] U.S. Department of Agriculture Natural Resources Conservation Service, "Distribution Maps of Dominant Soil Orders," https://www.nrcs.usda.gov/Internet/FSE_MEDIA/stelprdb1237749.pdf; Browning and Silver, *An Environmental History of the Civil War*, 58-59; Noe, *The Howling Storm*, 64-65.

[216] Stephen W. Sears, ed., *Mr. Dunn Browne's Experiences in the Army: The Civil War Letters of Samuel W. Fiske* (New York: Fordham University Press, 1998), 56.

[217] John P. Wilson, ed., *From Western Deserts to Carolina Swamps: A Civil War Soldier's Journals and Letters Home* (Albuquerque: University of New Mexico Press, 2012), 81.

[218] Josiah Marshall Favill, *The Diary of a Young Officer Serving with the Armies of the United States During the War of the Rebellion* (Chicago: R.R. Donnelley & Sons Company, 1909), 96.

Union and Confederate troops preferred to march on dirt roads with soils consisting less of clay and more of other materials because they did not become as muddy. New York lieutenant William B. Westervelt noted while marching in South Carolina in March 1865, "the first few miles the road was sandy and the walking good" despite rainy weather, but "we then came to a clay soil that was just the reverse; at every step we almost stuck fast."[219] The best pathways for completing marches in wet conditions were macadamized roads, hard-surface and all-weather roadways also referred to as turnpikes. Built of layers of crushed and compacted stone, these paved roads allowed soldiers on the move to avoid miry terrain. Describing a march in Kentucky in a letter home, Minnesota private David Griffin wrote, "we had an awful hard road to go" because of mud until coming "onto a turnpike which was good."[220] However, only a small number of macadamized roads existed in the U.S. at the time of the Civil War. In early 1862, Iowa sergeant Campbell lamented, "After marching a whole day through Missouri mud, I am decidedly in favor of Macadamized roads – an institution I have failed to find in Missouri."[221] As Campbell implied, much of the time soldiers had to march on roads of clayey soils that turned into glutinous mud in wet weather.

Marching soldiers struggled to maintain their footing, regularly slipping, sliding, and stumbling on the miry ground. In a letter to his parents in late 1862, Massachusetts corporal Samuel Storrow metaphorically described the excessively muddy roads encountered during a Union expedition in North Carolina and the resulting slow progress.

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[219] William B. Westervelt Diary, March 2, 1865, Civil War Document Collection, USAHEC.
[220] Nick Adams, ed., *My Dear Wife and Children: Civil War Letters from a 2nd Minnesota Volunteer* (Strategic Book Publishing and Rights Co., 2014), 84.
[221] Grimsley and Miller, *The Union Must Stand*, 26.

"Surely this is a great country where to get forward one foot you must start by slipping back two," Storrow related, "You put your foot down with great firmness & determination & the first you know you have advanced a half a yard to the rear." Storrow humorously concluded, "The only thing to be done is to about face & try to walk in the opposite direction. In this manner you may succeed in making some head- or rather stern-way."[222] Despite their efforts to keep their balance, soldiers marching on miry roadways frequently fell and sometimes actually got trapped in the mud. While moving in "mud from shoemouth to halfleg deep" during the Atlanta Campaign, Alabama private Grant Taylor noted, "you never saw or herad such a splashing and falling as we had. I fell flat 4 times and to my knees 5 times. One time I slipped and sit down so hard that it knocked off several rattles and a button."[223]

Some soldiers attempted to avoid the worst of the mud in the roadways by carefully choosing their steps, but often this was in vain and men had no other option than to trudge and splash right through the muck. "We marched off through the mud trying at first to sleight it as much as we could," Pennsylvania infantryman Fred R. Laubach recounted near Washington, D.C., "but finding this an impossibility we struck boldly forth waiding some times in mud 6 inches deep."[224] The difficulties became even greater at night, as the stormy darkness limited or even completely eliminated the

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[222] Samuel Storrow to Parents, November 23, 1862, Samuel Storrow Papers, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[223] Ann K. Blomquist and Robert A. Taylor, ed., *This Cruel War: The Civil War Letters of Grant and Malinda Taylor, 1862-1865* (Macon, GA: Mercer University Press, 2000), 256.
[224] Fred R. Laubach Diary, January 22, 1862, Civil War Document Collection, USAHEC.

visibility of the men.[225] Unable to see and continually walking into each other, soldiers marching on stormy nights utilized various methods to make forward progress on the muddy roads, such as by holding on to the backs or knapsacks of those preceding them. Michigan captain Charles Haydon and his fellows "marched four abreast with arms locked to keep from slipping & felt our way before us like blind men" while moving through Mississippi in mid-1863.[226] Soldiers were angered by having to undertake night marches in wet conditions when the movement could have waited until daylight, reducing the obstacles they faced. When required to engage in marches that they believed were avoidable, unnecessary, or achieved nothing, it was common for Federals and Confederates to become indignant and disgruntled, particularly toward the superior officers who ordered the march.[227]

There was no more important weapon to wield against muddy roads than the one on Civil War soldiers' feet: their footwear. The standard shoe for foot soldiers on both sides was the Pattern 1851 Jefferson brogan, or bootee, ankle-high and made of tanned leather with the rough side out.[228] While men often found these shoes serviceable when the weather and roads were dry, the opposite was the case in wet and muddy conditions. Soldiers' feet became soaked, as the leather of the shoes could not effectively keep out wetness and often the levels of mud and water being trudged through were higher than the shoes' height. Two Massachusetts sergeants elaborated on the inadequacies of

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[225] John G. Barrett, ed., *Yankee Rebel: The Civil War Journal of Edmund Dewitt Patterson* (Chapel Hill: University of North Carolina Press, 1966), 16.
[226] Stephen W. Sears, ed., *For Country, Cause & Leader: The Civil War Journal of Charles B. Haydon* (New York: Ticknor & Fields, 1993), 336.
[227] Blomquist and Taylor, *This Cruel War*, 162.
[228] Russ A. Pritchard, Jr., *Civil War Weapons and Equipment* (Guilford, CT: The Lyons Press, 2003), 27-28 and 39.

standard army shoes in letters home from Virginia in 1863. Flavel K. Sheldon wrote, "I have nothing but a pair of shoes and they dont work first rate in the mud," while John Cate declared, "my feet are wet all the time. It is actualy imposible to keep dry in snow and mud two inches to a foot deep."[229] Consequently, when storms raged and the ground became viscous mud, soldiers preferred to have high leather boots, which were much more water-resistant, allowing their feet to stay dry on marches.

Unlike most mounted men, however, U.S. and Confederate infantrymen were not issued a standard pair of high boots and had to procure them on their own. This meant that the boots worn by soldiers varied in type and quality, but the overriding concern was that they were, in the words of one man, "as near waterproof as possible."[230] Many troops wrote home requesting that their families send them a "good" pair of boots, regularly including instructions for the footwear's make. "Be sure and have first-rate leather in the backs as well as the fronts," New York private Charles Biddlecom told his wife, "for this Virginia mud beats all for working its way through the leather."[231] Other soldiers purchased boots from local sources, such as camp sutlers, for prices that ranged from nearly to more than half the amount enlisted men were paid per month. Regardless of boots' prices, many men expressed sentiments similar to Pennsylvania corporal George

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[229] Flavel King Sheldon to Parents, October 17, 1863, Flavel King Sheldon Papers, Massachusetts Historical Society; Jean M. Cate, ed. *If I Live to Come Home: The Civil War Letters of Sergeant John March Cate, Co. D, 33rd Massachusetts Volunteer Infantry Regiment* (Pittsburgh: Dorrance Publishing Co., 1995), 79.
[230] Thomas S. Howland to Mother, December 26, 1862, Thomas S. Howland Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[231] Katherine M. Aldridge, ed., *No Freedom Shrieker: The Civil War Letters of Union Solider Charles Freeman Biddlecom, 147th Regiment New York State Volunteer Infantry* (Ithaca: Paramount Market Publishing, 2012), 67.

W. W. Hawk, who asserted, "when I had to march through the mud and water nearly knee deep…I would not have missed having them for 3 times what they cost."[232] No matter how they obtained boots, soldiers were appreciative for the protection and comfort they provided. New York corporal Hartwell contended, "I never had anything that did me more good or that I was more thankful for than those boots."[233] In wet conditions, boots offered the only means for foot soldiers to avoid having to march with waterlogged feet.

Boots were also favored for moving through muddy terrain because men could struggle to simply keep the standard army shoes on their feet. Troops' feet often became stuck in the deep and sticky mud as they marched, but unlike boots, the brogans would get pulled off. Retreating in wet weather after the Battle of Gettysburg, Pvt. George W. Hall of the 14th Georgia Infantry reported, "I had to stop several times and feel for my shoes in the mud, and several lost their shoes burried so deep in the mud that they never found them."[234] As Hall noted, shoes could become so trapped in the mud that soldiers were unable to retrieve them. At times throughout the war, shoes were lost in miry terrain or worn out from extensive use, forcing men to complete marches and other duties in only their socks or even barefooted.

Although soldiers with high boots invariably fared better than those with army shoes or without any shoes at all, trudging through deep mud while exposed to the rain and carrying a heavy load of equipment exhausted soldiers. It became more fatiguing when they had to travel on roads already used by large numbers of troops and particularly

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[232] George W.W. Hawk to Father, January 25, 1863, George W.W. Hawk Letters, Civil War Times Illustrated Collection, USAHEC.
[233] Britton and Reed, *To My Beloved Wife and Boy at Home*, 44.
[234] George Washington Hall Diary, July 4, 1863, Library of Congress.

cavalry, artillery, and wagons. More so than the feet of troops, the hooves and wheels of the non-infantry components of armies on the move churned up the ground into seemingly bottomless depths of mud. This commonly occurred in areas where major armies were conducting operations, such as the Virginia counties between Washington, D.C., and Richmond for much of the war. Describing a march in this region in 1862, Hall stated, "it rained all day…and the road was cut up so bad with waggons artillery and cavalry that the mud was half leg deep and it was the most tiresome to march imaginable."[235] Wet weather combined with the passage of wagon trains and artillery batteries drawn by hundreds and thousands of horses and mules rendered roads so difficult to traverse that soldiers commonly declared that roadways were "almost impassable" due to the mud. Given the state of the roads when rainstorms occurred, progress on marches was slow, especially because men on foot often had to halt to wait for wheeled vehicles.

Even more than soldiers marching on foot, wet weather and muddy roadways hindered the movement of artillery. Civil War artillery batteries typically consisted of four to six cannons and included limbers, caissons, and supply wagons, all of which were pulled by more than seventy horses. Artillery crews struggled to move their batteries on dirt roads in wet conditions, as the massive weight of the guns and supporting vehicles caused them to sink deep into the quicksand-like mud and often become stuck. As Pvt. William E. Jones of Crenshaw's Battery (Virginia) related about a march in Virginia: "Well, off we start, the rain coming down in torrents, and before going a hundred yards,

[235] Hall Diary, May 5, 1862, Library of Congress.

shish we go in a mud hole and came to a dead halt."[236] The teams of six or so horses normally used to pull cannons were insufficient in muddy conditions, forcing artillerymen to move their guns as well as accompanying wheeled vehicles by other means.

A common method was by increasing the number of horses pulling each component of the battery, though this could be a wearisome process. Virginia artillerist John Walters described an example in the summer of 1862. After a pouring rain made the roads "almost impossible for our pieces," Walters explained, "we were two or three times compelled to take all the horses off one piece and hitch them to another and drawing it a mile or so return and get another, til all were once more together."[237] Besides additional horses, Union and Confederate artillery crews also tried to physically assist the guns, caissons, and other vehicles out of mudholes by pushing and pulling at the wheels, becoming covered with mud in the process. Even when artillerymen managed to extricate stuck pieces, the cannons and vehicles would often soon again get bogged down in the muddy roadways. Army wagon trains encountered similar difficulties during rainy weather, sinking to the hubs of their wheels or even axles in the mire.

Marching infantrymen not only had to halt to wait for the stalled artillery batteries and supply wagons, but also frequently needed to help move and extricate the vehicles. "Our teams can scarce move their loads," Iowa officer McIntyre reported in Missouri in May 1863, "and infantrymen have accompanied them through the entire day to assist in

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[236] Constance Hall Jones, ed., *The Spirits of Bad Men Made Perfect: The Life and Diary of Confederate Artillerist William Ellis Jones* (Carbondale: Southern Illinois University Press, 2020), 70.
[237] Kenneth Wiley, ed., *Norfolk Blues: The Civil War Diary of the Norfolk Light Artillery Blues* (Shippensburg, PA: Burd Street Press, 1997), 27.

helping them along."[238] At the end of the failed Mud March, Lt. Elisha Hunt Rhodes of the 2nd Rhode Island Infantry noted "the mud was so deep that sixteen horses could not pull a gun," so "companies of men would take hold of a rope called a prolong and pull the gun out of the mire…It was hard on men and horses."[239] Despite the efforts of soldiers and animals, roadways at times became so muddy in heavy rain that artillery pieces and wagons could not be moved at all until conditions dried out. Additionally, bogged-down wheeled vehicles as well as horse and mule teams were abandoned by marching columns because they could not be freed.[240]

At various times, armies tried to combat the viscous mud and facilitate the movement of troops, animals, and particularly wagons and other wheeled vehicles by constructing corduroy roads. Also used in low-lying and swampy areas, corduroying was the process of cutting small trees and laying the trunks down on the surface of the mud as an improvised wooden paving. Ideally, these roads would consist of two layers of wood that were anchored to the ground to make them more stable and secure, but due to the exigencies of active operations, they typically were only made of one anchorless layer.[241] "A road is being made of logs layed down for Artilery & baggage to pass over" the mud, New York corporal Hartwell penned in late 1862, "logs are layed as close together as they can be. It makes a pretty rough road but after all a good one."[242]

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[238] Tilley, *Federals on the Frontier*, 141.
[239] Robert Hunt Rhodes, ed., *All For the Union: The Civil War Diary and Letters of Elisha Hunt Rhodes* (New York: Orion Books, 1985), 97.
[240] Weston Diary, early July 1863, Duke University.
[241] Earl J. Hess, *Civil War Logistics: A Study of Military Transportation* (Baton Rouge: Louisiana State University Press, 2017), 178-183; Megan Kate Nelson, *Ruin Nation: Destruction and the American Civil War* (Athens: University of Georgia Press, 2012), 113-116.
[242] Britton and Reed, *To My Beloved Wife and Boy at Home*, 30.

Corduroy roads helped armies move through muddy terrain throughout the South, but they still were difficult to traverse. The roads were uneven because the timber pieces were rarely the same diameter, causing men and animals to stumble along; rain made the wood slippery; and sections of logs could sink into the mud when wagons were too heavy. More significantly, the work to build corduroy roads was as arduous and unpleasant for soldiers as it was for them to march through deep mud.[243] "We ar at work every day making caudroy roads clear…10 or 15 miles," Massachusetts private Oscar Bailey commented in 1863, "it is awful work up to your knees in Virginia mud."[244] Groups of troops numbering in the hundreds or thousands would be detailed to labor at a time, especially since these improvised roads often needed repair and reconstruction. Corduroy was used as a temporary solution to miry roadways throughout the war, but likely in part because the time and effort they required to build and maintain, marching armies mostly made do with the existing unpaved roads, forcing the soldiers to slog their way through the glutinous mud.

To conform to standards of martial manhood, Civil War soldiers not only had to adapt physically, but also mentally, to the challenges posed by muddy roads and rain. Men sought to maintain their psychological well-being and thus better tolerate the physical difficulties by employing different types of coping mechanisms. Today, the American Psychological Association defines coping mechanisms as "any conscious or nonconscious adjustment or adaptation that decreases tension and anxiety in a stressful

[243] Hess, *Civil War Logistics*, 178-183; Nelson, *Ruin Nation*, 113-116.
[244] Oscar Bailey to Father, March 27, 1863, Oscar Bailey Civil War Letters, Bailey Family Letters, Massachusetts Historical Society.

experience or situation."[245] Sometimes swearing and cursing provided a much-needed emotional release. "Last night, while struggling through the mud, wet, footsore, and weary, I made use of an oath," Walters recorded in his diary in mid-1863, "it was not an involuntary oath, but one uttered with the utmost deliberation."[246] When swearing failed, other soldiers coped with humor. Troops in both armies made jokes and laughed in amusement as they watched comrades fall or get stuck in the wet terrain. During a march in Tennessee, Illinois officer Mosman observed, "Mud six inches deep but the boys were laughing all the time to see others fall in the mud, wading streams up to the crotch."[247] Even many of those who fell in the mud found enjoyment in the scene. "I saw the other day when we were marching our slick roads in time of the rain…a hundred men fall down in the mud," Alabama lieutenant Joshua K. Callaway explained in 1863, "and every time one fell, and grunted under the weight of his knapsack & gun every body else laughed and made some remark. But he would soon laugh at some one else's fall."[248] Humor helped soldiers distract themselves from the rigors of marching and remain in good spirits.[249]

The troops undertook hard marches more enthusiastically when they believed the outcome would prove beneficial to their respective side's war effort or to themselves

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[245] "Coping Mechanism," American Psychological Association: Dictionary of Psychology, https://dictionary.apa.org/coping-mechanism.
[246] Wiley, *Norfolk Blues*, 81.
[247] Gates, *The Rough Side of War*, 46.
[248] Judith Lee Hallock, ed., *Civil War Letters of Joshua K. Callaway* (Athens: University of Georgia Press, 1997), 109.
[249] Examples of similar coping mechanisms in World War I are discussed in Georgia McWhinney, "Getting Cold Feet in the First World War: Leaky Boots, Trench Foot and Vernacular Medicine Among British Soldiers," *Social History of Medicine* 34, no. 3 (August 2021): 895-915.

personally. For example, many soldiers willingly endured the impediments imposed by rain and mud when moving to a battlefield where they could play a part in the fighting. While a battle raged at Williamsburg in Virginia in May 1862, Pennsylvania infantryman William R. Williams explained, "The rain was pouring down in torrents and the mud was knee deep…Our boys toiled through it manfully never for a moment complaining, but all were anxious to get up to the assistance of the brave boys who were fighting so nobly in front of us."[250] Other troops accepted facing disagreeable conditions as they marched when they would be rewarded at the end by getting time to rest in comfortable shelters. "Our march was an exceedingly rough one as the roads were much impaired by the hard rains and badly cut up," Ohio artilleryman Simeon McCord wrote to his sister from Mississippi in 1863, "But we could see comfortable quarters ahead and didn't mind much about rough roads, rainy weather."[251] Men's thoughts about dealing with the challenges of moving in wet weather on muddy roads could vary depending on their prospects for military success or personal comfort.

Cold and Wintry Weather

Much to soldiers' displeasure and disgust, roads could become more difficult to traverse in the months of winter. Dirt roadways froze when cold weather occurred and temperatures dropped below freezing, but when conditions warmed enough to thaw out the frozen roads, they converted into deep mud. Not only did men have to deal with the

[250] William R. Williams to Wife, May 12, 1862, William R. Williams Letters, Civil War Document Collection, USAHEC.
[251] Simeon McCord to Sister, October 26, 1863, Simeon McCord Letters, Earl M. Hess Collection, USAHEC.

hindrances of marching in muddy conditions, but also the passage of armies cut up the roadways. When colder temperatures once again set in, especially at night, the churned-up roads froze. The resulting uneven and jagged ground made, in the words of one man, "the roughest walking imaginable."[252] Completing a movement in these conditions in Virginia in December 1864, Pennsylvania captain George P. McClelland asserted, "the rough frozen roads rendered pedestrianism difficult and painful so that when we did at last reach home, I was most emphatically 'played out.'"[253]

Freezing temperatures combined with wintry precipitation also could require troops to have to slog through depths of snow ranging from a few inches to a foot or more. A greater hindrance to marches, however, was when severe cold and wintry storms covered the roads with snow and sleet that became sheets of ice. Men struggled to keep their footing as they marched on icy ground, regularly slipping and falling. After moving on roads in which "the ice on the ground was an inch thick and slick as glass," Georgia private Irby G. Scott wrote to his father, "It was one continual slip down all along the road. One place we had to get on our hands and knees to crawl up. Sometimes four or five would fall and be piled up together."[254] The horses carrying soldiers and pulling artillery and wagons had an even harder time remaining upright and fell constantly, with both men and animals suffering injuries. During an expedition in western Virginia in early 1862, Virginia private Thomas M. Smiley bemoaned, "there was several men

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[252] Albert Augustus Pope Diary, December 11, 1862, Civil War Times Illustrated Collection, USAHEC.
[253] Robert C. Plumb, ed., *Your Brother in Arms: A Union Soldier's Odyssey* (Columbia: University of Missouri Press, 2011), 237.
[254] Johnnie Perry Pearson, ed., *Lee and Jackson's Bloody Twelfth: The Letters of Irby Goodwin Scott, First Lieutenant, Company G, Putnam Light Infantry, Twelfth Georgia Volunteer Infantry* (Knoxville: University of Tennessee Press, 2010), 55-56.

slipped down and broke their legs and arms" and "there was a great many horses killed and crippled."[255] Marching on frozen terrain that was slippery or rough was fatiguing and tiresome for troops, who had to be careful of every step and struggle to maintain their balance while at the same time making forward progress.

Exposure to wintry conditions such as cold temperatures, bitter winds, and freezing rain or snow was uncomfortable and painful for soldiers on the move. In Tennessee in February 1863, Texas lieutenant George L. Griscom reported, "It has been raining hard all day & very cold – are perfectly saturated & perfectly benumbed with cold & suffer more intently than heretofore at any time."[256] When marching amid winter storms, the precipitation could freeze on men's clothing and equipment. For instance, Scott observed, "Our cloths on the outside was a solid sheet of ice."[257] Additionally, a common feature of wartime movements was that soldiers had to cross any waterways that bisected the routes of march. Streams and rivers that had to be forded varied in width (ranging from a few yards to well over one hundred) and depth (varying from ankle to waist deep). Marching troops were glad for the presence of waterways in warm weather, but this was not the case in colder conditions. As chilly air temperatures meant cold water temperatures, crossing watercourses was torturous for the men. Moving through a wide and deep stream in South Carolina in March 1865, Massachusetts sergeant Thomas S.

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[255] Thomas M. Smiley to Sister, January 10, 1862, Smiley Family Papers, University of Virginia, *Valley of the Shadow*, World Wide Web Manuscript Resource.
[256] Homer L. Kerr, ed., *Fighting With Ross' Texas Cavalry Brigade C.S.A.: The Diary of George L. Griscom, Adjutant, 9th Texas Cavalry Regiment* (Hillsboro, TX: Hill Jr. College Press, 1976), 58.
[257] Pearson, *Lee and Jackson's Bloody Twelfth*, 56.

Howland noted, "We shouldn't have minded it if it had been warm but it was cold, ice on the water, when I got across my feet, and legs were so numb I could hardly step."[258]

Marching troops responded in various ways in efforts to lessen the difficulties imposed by cold and wintry weather. As with rain, men used profanity as a coping mechanism to vent their misery and frustration, helping to preserve their mental health. "Such swearing I never heard," Lt. Charles H. Brewster of the 10th Massachusetts Infantry observed while moving through a wintry mix, "the men cursed the government, the president, the commander of the Army and the Army itself, the North + the South and everything else," but completed the march.[259] Swearing was such an effective way to cope with the pains of marching because it could have a liberating effect on pent-up emotions, allowing soldiers to build resilience by releasing their physiological and psychological stress over a situation in which they had no control. On the physical side, soldiers on foot suffering from the cold tried to warm their bodies through the exertions of marching, particularly by traveling at a faster pace. As Pennsylvania sergeant Laubach noted in West Virginia in early 1864, "Oh my God, it was cold…The wind blew tremendous hard, but we marched very fast and soon got warmed up."[260]

Troops riding horses or wheeled vehicles, however, could not effectively warm themselves through the physical motion of marching and thus suffered more in cold conditions. Usually undertaking movements while mounted was an advantage, and this was especially the case with most forms of inclement weather. For example, soldiers on

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[258] Howland to Sister, March 30, 1865, Massachusetts Historical Society.
[259] David W. Blight, ed., *When This Cruel War Is Over: The Civil War Letters of Charles Harvey Brewster* (Amherst: University of Massachusetts Press, 1992), 194.
[260] Laubach Diary, January 2, 1864, USAHEC.

horseback or wheeled vehicles were wetted in rainy conditions, but they did not have to slog through deep mud and water on foot. When temperatures dipped to wintry lows and chilly winds blew, however, mounted travel became more challenging. Horseback riding could be a physically demanding and heat-inducing activity for soldiers, but less so at the ordinary moderate pace of marching columns. Describing marches in cold weather, Pennsylvania officer James B. Thomas declared, "Today was pretty severe on all hands while marching, especially *we* horsemen" in Virginia in 1862, while Minnesota private Oscar G. Wall recalled, "The men, and particularly the cavalry and artillery, suffered from the benumbing cold" in Dakota Territory in 1863.[261]

No matter if soldiers were mounted or on foot, military equipment remained of crucial importance when on the march in wintry weather. Besides rubber blankets or ponchos, troops relied on heavier clothing like overcoats to protect them and help keep warm. In November 1863, Massachusetts infantryman Linscott discussed the difference between being poorly and well clad while marching in wintry conditions. "I had no overcoat and my summer blouse was but a poor defense against the wind and snow," Linscott explained, "since then I have got an overcoat and can now bid defiance to cold and storms."[262] Compared to the U.S. armies, the Confederate forces were poorly equipped with outerwear for marching in adverse weather, but a greater problem for the troops was a lack of footwear. Uncomfortable in all types of weather, marching

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[261] Mary Warner Thomas and Richard A. Sauers, ed., *The Civil War Letters of First Lieutenant James B. Thomas, Adjutant, 107th Pennsylvania Volunteers* (Baltimore: Butternut and Blue, 1995), 112; Oscar G. Wall, *Recollections of the Sioux* Massacre (Lake City, MN: "The Home Printery," 1909), 248.
[262] Linscott to Parents, November 18, 1863, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.

barefooted was especially painful in cold and wintry conditions. On a march in his home state in late 1864, Tennessee sergeant James L. Cooper was distressed to report, "Numbers of our men were without shoes, and their bloody tracks could be plainly seen on the ice and snow…eclipsing in suffering all that I had ever imagined."[263] For soldiers marching without shoes in wintry weather, frostbite was a constant danger.

Frostbite is an injury caused by the freezing of the skin and underlying body tissues due to exposure to cold weather. Symptoms include cold skin and a prickling feeling, progressing to numbness and inflamed or discolored skin. When frostbite worsens, skin may become hard or waxy looking, and severe cases cause skin to swell and blisters to appear. Skin can recover from mild forms of frostbite, but more serious cases can cause long-term or permanent damage such as tissue death. Frostbite usually affects extremities like fingers, toes, and ears, and exposed skin is most vulnerable, though it still can occur on covered skin.[264] Civil War soldiers marching barefooted in cold weather were highly susceptible to frostbite on their feet, but many troops with shoes also suffered from the condition. While campaigning in western Virginia in early 1862, Virginia artillerist Charles W. Trueheart noted, "Many of us got our feet and hands frostbitten. My feet were so badly bitten that I could scarcely walk."[265] Trueheart recovered, but some of his comrades had lasting effects, such as Tennessee private

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[263] William T. Alderson, ed., "The Civil War Diary of Captain James Litton Cooper: September 30, 1861 to January, 1865," *Tennessee Historical Quarterly* 15 (June 1956), 168.
[264] Lauralee Sherwood, *Human Physiology: From Cells to Systems*, 9th Edition (Boston: Cengage Learning, 2016), 634; Mayo Clinic Staff, "Frostbite," *Mayo Foundation for Medical Education and Research*, https://www.mayoclinic.org/diseases-conditions/frostbite/symptoms-causes/syc-20372656.
[265] Edward B. Williams, ed., *Rebel Brothers: The Civil War Letters of the Truehearts* (College Station: Texas A&M University Press, 1995), 43.

Samuel R. Watkins, who wrote over twenty-five years after the war that, "My feet peeled off like a peeled onion on that march, and I have not recovered from its effects to this day."[266]

Hot and Dry Weather

Just as often as cold and wet conditions, Civil War soldiers marched in hot weather, which proved even more challenging. Echoing a common refrain from troops marching in the heat, Illinois soldier Seaman declared, "The weather was intensely hot and the men suffered terribly from the effect of the hot and peircing rays of a 'Southern Sun'" in Mississippi in July 1863.[267] As Seaman's phrase "Southern Sun" suggests, many Union soldiers continued to differentiate the intensity of the South's heat from that of their homes in the North when they set out from camp on marches. For Federals gradually acclimating to Southern summers, the hot weather was even more disliked and unwelcome during such movements given the exertions involved. Confederates were more familiar with the heat of the southern U.S., but troops in both armies struggled with the rigors of soldiering and particularly marching in such conditions. As North Carolina lieutenant John M. Davidson wrote about marching in Mississippi around the same time as Seaman, "Oh, how we suffered for two days on a force march and the Sun so hot it appeared we would all die with heat."[268]

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[266] Samuel R. Watkins, *"Co. Aytch," Maury Grays, First Tennessee Regiment* (Chattanooga: Times Printing Company, 1882), 23.
[267] Seaman Diary, July 20, 1863, USAHEC.
[268] John Mitchell Davidson to Wife, July 9, 1863, Davidson Family Papers, Atlanta History Center.

Across the war-torn nation, soldiers frequently asserted that it was agonizing to march amid high temperatures and a blazing sun. Wearing thick wool or cotton uniforms that were not conducive to cooling and carrying heavy loads of equipment made marching in hot weather especially grueling for troops. As the body's physiological mechanism for cooling itself in the heat, men perspired profusely, often sweating enough to soak through their uniforms. Sgt. John B. Gallison of the 40th Massachusetts Infantry reported "sweating so much" while moving through Virginia that "our clothes were as wet as if we had been in a hard rain."[269] Like with precipitation, men on both sides thought that the army issue headwear, the kepis and forage caps, offered little protection from the hot rays of the sun. In 1864, Wisconsin captain Thomas N. Stevens spoke for many when he complained, "My uniform cap left my neck and ears exposed to the scorching sun, and yesterday they were very sore."[270] Consequently, many soldiers preferred to have slouch hats, as the wide brim could more effectively shield their heads from the sun.

Dry weather frequently compounded the effects of hot temperatures. Due to the droughts throughout the South and West during the Civil War, it was a normal occurrence, especially in the summer, for soldiers to march in very dry conditions. This made the dirt and macadamized roadways traversed by the armies exceedingly dusty, with men observing that the dust could range from several inches to even knee deep. The movement of large numbers of troops kicked up the dust into dense clouds through which

[269] John B. Gallison to Mother, August 2, 1863, John B. Gallison Papers, Massachusetts Historical Society.
[270] George M. Blackburn, ed., *"Dear Carrie…": The Civil War Letters of Thomas N. Stevens* (Mount Pleasant, MI: Clarke Historical Library, 1984), 227.

they could barely see. In September 1863, Tennessee officer Alfred T. Fielder noted "it was frequently the case we could not see men in the same column 25 yds in front of us in consequence of dust alone" on a march in Georgia.[271] The thick clouds not only reduced visibility, but also covered marching soldiers with dust, blinding and suffocating them. In a letter from Mississippi in June 1862, Wisconsin artilleryman William H. Ball wrote, "the dust…rose in clouds and hung over the road enveloping us completely all day – penetrating everything, eyes, ears, nose, mouth and lungs."[272] Although across the country in Arizona, Capt. John C. Cremony of the 2nd California Cavalry described a similar experience in the same month and year. "At every step it [the dust] rises in immense and blinding clouds two or three hundred feet above our heads," Cremony explained, "filling the eyes, ears and nose, getting into the mouth and choking the traveler, penetrating the clothing and fastening upon the person in the shape of a thin, sticky plaster, which is terribly irritating and uncomfortable."[273] With troops' bodies and clothing saturated with sweat from the exertions of marching, the dust encrusted them to the point that they became unrecognizably dirty. The rigors of movements in intense heat and stifling dust were not shared equally by all troops, as once again it was worse for those marching mile after mile on foot.[274]

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[271] M. Todd Cathey, ed*., Captain A. T. Fielder's Civil War Diary: Company B 12th Tennessee Infantry C.S.A. July, 1861-June, 1865* (Nashville: Tennessee Historical Society, 2012), 260.
[272] William H. Ball to Brother, June 16, 1862, William H. Ball Letters, Auburn University.
[273] John C. Cremony to editors of *San Francisco Daily Alta California*, June 8, 1862, in Andrew E. Masich, *The Civil War in Arizona: The Story of the California Volunteers, 1861-1865* (Norman: University of Oklahoma Press, 2006), 178.
[274] Blackburn, *"Dear Carrie…"*, 232; Weston Diary, July 1863, Duke University.

In certain situations, such as amid an active campaign or when battle was imminent, Federals and Confederates more readily faced the hardships imposed by the weather because they thought that their suffering had a meaningful purpose like attaining a military success. If circumstances allowed it, soldiers were thankful when general officers issued orders that took their men's well-being into consideration by easing the arduousness of moving in the heat. For example, troops preferred to set out on marches in the early morning hours, before the sun rose, so that much of a movement would be completed before the hottest portions of the day.[275] When superior officers' reason for ordering a movement amid severe heat was not appreciated by their men, however, they were subject to harsh criticism. "If there is a just God he will punish the man that ordered that awful march," Wisconsin private Chauncey H. Cooke angrily declared in Mississippi in June 1863, "It was useless and uncalled for…Every soldier on that horrid march hopes he will be punished."[276] Mounted on horses, general officers were spared most of the difficulties of undertaking marches in adverse weather, but soldiers still wanted their superiors to sympathize with the plight of the rank and file and adjust marching orders accordingly when possible.

Augmenting the challenges of marching in hot and dry weather was insufficient hydration. Today, the National Academy of Medicine advises that adult men consume at least 3.7 liters (around 125 ounces) of water each day, and even more if engaged in

[275] Joseph R. Reinhart, ed., *A German Hurrah! Civil War Letters of Friedrich Bertsch and Wilhelm Stängel, 9th Ohio Infantry* (Kent, OH: Kent State University Press, 2010), 272.
[276] William H. Mulligan, Jr., ed., *A Badger Boy in Blue: The Civil War Letters of Chauncey H. Cooke* (Detroit: Wayne State University Press, 2007), 63-64.

vigorous physical activity in the heat.[277] Civil War soldiers on the march rarely, if ever, consumed that recommended daily amount of water. Troops were issued canteens, but with their limited capacity of usually no more than 32 ounces, they generally became empty long before movements were completed. At times, men did not even start long marches in the heat with full canteens. During operations against the Navajo in Arizona in mid-1863, New Mexico captain Eben Everett lamented, "water being so far from our last nights camp, many of the men did not have their canteens filled and suffered from the want of it."[278] Empty canteens would not be a problem if water sources were readily available, but this was regularly not the case for soldiers on the move. The route of marching columns at times brought them by streams, rivers, springs, and other sources of drinkable water that allowed troops to refill their canteens, but with the prolonged and extensive periods of dry weather that occurred during the war years, local watercourses diminished and dried up.

Throughout the South and especially in the West, from the plains of the Northwest to the deserts of the Southwest, it was ordinary for armies' daily route of march through drought-ravaged areas to be devoid of water sources. Minnesota captain Christian Exel noted, "We marched eighteen to twenty miles" one day in Dakota Territory "without finding a single drop of water," while New York lieutenant Rush P. Cady observed, "The weather was excessively hot, & good water which is of such vital

[277] Institute of Medicine of the National Academies, *Dietary Reference Intakes for Water, Potassium, Sodium, Chloride, and Sulfate* (Washington, D.C.: The National Academies Press, 2005), 5 and 73.
[278] Raymond E. Lindgren, ed., "A Diary of Kit Carson's Navaho Campaign, 1863-4," *New Mexico Historical Review* 21, no. 3 (July 1946), 243.

necessity to the soldier, was scarce" on a long march in Virginia.[279] Consequently, troops on the move in the heat and dust were pained by severe thirst. Corp. James A. Foster of the 3rd South Carolina Infantry reflected the thoughts of countless soldiers suffering from heat and thirst when he asserted, "I never knew till then what it was to suffer for water, at times on the march I would have given everything I was worth almost for one drink of good cool water."[280] Inadequate water resulted in soldiers becoming dehydrated, especially when they were perspiring heavily. When the body lacks enough water and other fluids to carry out its normal regulatory functions, it is more vulnerable to heat-related injuries. Additionally, as dehydration progresses, it can cause headaches, dizziness, hallucinations, seizures, and eventually death.[281]

Thirsty troops often resorted to drinking poor and contaminated water because they had no other options. Soldiers' writings are riddled with accounts of men using muddy ditches, scum-covered puddles, dirty ponds, and stagnant pools to satisfy their intense thirst. On a march in Virginia in August 1862, Virginia sergeant George Wise "drank from a ditch covered with green skim & about 1 half mud & hot, as if it had been boiled," while the length of the muddy ditch "as far as the eye could reach was filled on either side with famished men."[282] Some marching troops became so consumed by thirst

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[279] Hermann E. Rothfuss, ed., "German Witnesses of the Sioux Campaign," *North Dakota History* 25, no. 4 (October 1958), 126; Rush P. Cady to Mother, June 22, 1863, Rush P. Cady Collection, Hamilton College.
[280] A. Gibert Kennedy, ed., *A South Carolina Upcountry Saga: The Civil War Letters of Barham Bobo Foster and His Family, 1860-1863* (Columbia: University of South Carolina Press, 2019), 266.
[281] Mayo Clinic Staff, "Dehydration," *Mayo Foundation for Medical Education and Research*, https://www.mayoclinic.org/diseases-conditions/dehydration/symptoms-causes/syc-20354086; Browning and Silver, *An Environmental History of the Civil War*, 13-16.
[282] George Newton Wise Diary, August 29, 1862, Duke University.

that they even drank from water sources that contained the decaying bodies of dead animals. “A soldier has to drink anything,” Michigan corporal John Pardington wrote to his wife, “I have drank water out of a ditch when there [h]as been a Dead horse laying a few rods above in the same Water.”[283]

Desperate men not only willingly drank foul water, but also were glad to get even a small amount of poor liquid. Drinking out of mudholes in June 1863, South Carolina private James A. Tillman asserted, “You cannot imagine how sweet and delicious it was.”[284] Intolerable thirst drove soldiers to use unclean water, but at times sickness was a consequence. Contaminated water could have delayed effects, such as by causing dysentery or other diseases that were prevalent in Civil War armies, as well as immediate ones, including incapacitating the drinker. “No water was to be had save the stagnated water we would find along the line of our march” in Kentucky in late 1864, Sgt. Elijah Marrs of the 12th U.S. Colored Heavy Artillery recalled, “The use of this water so weakened me that I became completely prostrated and had to cry for help.”[285] Despite the potential ill effects, for soldiers wracked with thirst while marching in the heat and dust, any water, no matter how poor, was a precious resource.

Sources of pure water such as springs or wells were therefore considered invaluable. Ready access to drinkable water helped troops to stay hydrated and thus better cope with the rigors of marching while exposed to a blazing sun and high temperatures.

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[283] Coralou Peel Lassen, ed., *Dear Sarah: Letters Home from a Soldier of the Iron Brigade* (Bloomington: Indiana University Press, 1999), 131.
[284] Bobbie Swearingen Smith, ed., *A Palmetto Boy: Civil War-Era Diaries and Letters of James Adams Tillman* (Columbia: University of South Carolina Press, 2010), 71.
[285] Elijah P. Marrs, *Life and History of the Rev. Elijah P. Marrs, First Pastor of Beargrass Baptist Church, and Author* (Louisville: The Bradley & Gilbert Company, 1885), 29.

On a march in Alabama, Wisconsin gunner Ball explained, "The day was excessively hot," but with the aid of "large draughts of the clear cold water from the numerous springs by the wayside, we stood the heat first rate."[286] When they came across fresh water, troops parched with thirst as they marched in the heat would often break ranks and eagerly rush for it, including in defiance of officers' orders. "It being very hot the men suffered for the want of water very much," Minnesota sergeant James T. Ramer noted while campaigning against the Sioux in Dakota Territory in 1863, when they reached the waters of a local river "the Officers tried to keep them in ranks but the men did not mind them but broke ranks."[287] Due to the value of clean water, groups of men would form around any available sources along the route of march, scrambling for the liquid. "You never saw anything like the crowds that collected around every spot where water could be obtained," Mississippi lieutenant William C. Nelson wrote home from Virginia in 1862, "a solid mass of men would sometimes be formed for yards around a well… there could'nt have been harder work if it had been gold they were struggling for."[288]

Federals and Confederates alleviated the hardships of moving in hot weather by utilizing water in other ways too. A number of men sought to cool themselves by pouring water on their heads, chests, or other parts of their bodies, while some kept a wet cloth or leaves in their army hats or caps to help protect their heads from the burning rays of the sun. Pennsylvania captain Francis A. Donaldson did both while marching through Virginia in June 1863, writing to a family member, "By keeping wet leaves in my hat…I

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[286] Ball to Brother, August 22, 1862, Auburn University.
[287] James T. Ramer Diary, August 17, 1863, Minnesota Historical Society.
[288] Jennifer W. Ford, ed., *The Hour of Our Nation's Agony: The Civil War Letters of Lt. William Cowper Nelson of Mississippi* (Knoxville: University of Tennessee Press, 2007), 95.

contrived to keep off the sun, and when I could do so I thoroughly wet my head and neck."[289] Regardless of the other uses, when soldiers had to march in scorching heat and choking dust, having water to drink still remained of the utmost importance. Troops were also delighted when rain showers suddenly passed over, as the light precipitation refreshed the men by laying the dust and cooling the air.[290]

Falling Out of the Ranks

To mitigate the laboriousness of marching in adverse weather like heat or rain, one of the most common practices among Civil War soldiers was to lighten the load they had to carry by discarding pieces of equipment. Items thrown away by troops on the move included personal effects, overcoats, extra clothing, blankets, and even entire knapsacks. In inclement conditions, the roads traversed by marching columns would often be strewn with discarded equipment. On a very hot day in Arkansas in 1863, Wisconsin officer Stevens reported, "Knapsacks, blankets, portfolios, shirts, clothing of all kinds, bibles & Testaments &c., &c., lie scattered all along the road, thrown away by the soldiers rather than carry them."[291] Although easing men's difficulties for the moment, some of the discarded articles of equipment might be desired or useful in the future while camping or bivouacking, particularly in interactions with the weather. For example, throwing away a blanket on a hard march would lessen troops' burden, but

[289] J. Gregory Acken, ed., *Inside the Army of the Potomac: The Civil War Experience of Captain Francis Adams Donaldson* (Lanham, MD: Stackpole Books, 1998), 283.
[290] Seaman Diary, May 29, 1863, USAHEC; Rothfuss, "German Witnesses of the Sioux Campaign," 127.
[291] Blackburn, *"Dear Carrie…"*, 148.

when bivouacking on a chilly night, they might miss the warmth and comfort offered by that abandoned blanket.

Still, throwing away equipment was less a choice and more a necessity for soldiers trying to endure a march. Moving through Virginia in May 1862, Georgia private Hall wrote, "I had to throw away nearly every thing in my knapsack to get allong" because of the deep mud "and a many a soldier threw away his knapsack and every thing he had."[292] Maine private Haley related a similar experience but while marching in the heat, asserting "Many things regarded as necessaries we have now discarded as of more burden than use, leaving them by the roadside rather than leave ourselves there."[293] After experiencing the physical demands of a few marches, men learned to reduce the strenuousness by only carrying the equipment that they considered the most essential for their survival, discarding all the items deemed surplus and needless. As Sgt. Charles T. Bowen of the 12th U.S. Infantry explained, "All we carry is in our oil blankets and our shelter tent, guns, belt, haversack & a canteen."[294] Essentially, to overcome the elements and complete marches, demonstrating their manhood in the process, all Bowen and his comrades carried were the bare necessities of soldiering: protection from the elements, weapons, food, and water.

The rigors of marching in bad weather, however, often caused troops to fall out of the ranks and straggle. In wet conditions, men drenched by the rain and slogging through viscous mud became so fatigued that they could no longer continue marching. In a letter

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[292] Hall Diary, May 5, 1862, Library of Congress.
[293] Silliker, *The Rebel Yell & the Yankee Hurrah*, 38.
[294] Edward K. Cassedy, ed., *Dear Friends at Home: The Civil War Letters and Diaries of Sergeant Charles T. Bowen* (Baltimore, MD: Butternut & Blue, 2001), 299.

to his wife, New York corporal Hartwell described giving out himself on a march in Virginia in early 1863. "I soon got out of strength hauling my feet after me," Hartwell wrote, "10 pounds of mud clinging to my boots as for dear life" and heavy saturated equipment "soon compelled me to fall to the rear of the regt… I followed as fast as I could but the whole brigade finally passed me…I knew I could not overtake them." Like many soldiers exhausted from plodding through rain and mud, especially at night, Hartwell rested near the roadway before later rejoining his regiment at its campsite. At times, such a large number of troops straggled in wet weather that only a small portion of units completed the march and reached the day's stopping point. Hartwell noted that at least 800 men of his brigade fell behind alongside him.[295]

Giving out and straggling on marches occurred more frequently in hot and dry weather, which posed a much greater threat to soldiers' health. Whenever on the move amid high temperatures, stifling dust, and a blazing sun, soldiers commented on men falling out of the ranks from their physical exertions combined with the effects of the heat and thirst. On a march in Tennessee in August 1862, Kentucky (U.S.) sergeant Jesse Hyde reported, "The weather is so very hot and dry, that a great many Officers and men gave out on the road. Many of whom did not reach camp, myself included."[296] It was common for large numbers of soldiers, ranging from dozens to hundreds and even thousands, to be unable to complete marches on hot days and be seen prostrated by the roadside, including in traveling only a few miles. Sgt. Cyrus F. Boyd of the 15th Iowa Infantry wrote that as "men kept falling out" on a march in Mississippi, "They lay like

[295] Britton and Reed, *To My Beloved Wife and Boy at Home*, 44-45.
[296] Jesse Hyde Diary, August 8, 1862, Kentucky Historical Society.

swine in the fence corners and under the bushes or behind logs or any place to *rest*."[297] Straggling reached such an extent that marching units could be significantly depleted, with more men having fallen out than remained in the ranks by the end of a movement. On a day in which it was "burning hot and dusty" while marching in Virginia during the Peninsula Campaign, Massachusetts lieutenant Brewster explained, "men fell out by the way by the hundreds and when we arrived at our Campground we had not two hundred men in our regt. some companies had but 4 men."[298]

Most of the soldiers who gave out on marches in hot weather suffered from different types of heat-related ailments like heat exhaustion or heatstroke. Heat exhaustion is a result of overtaxing the body's heat-loss mechanisms, with the body overheating because it is unable to efficiently cool itself through sweating. Dehydration contributes to heat exhaustion, and symptoms include dizziness, headache, nausea, muscle cramps, and fainting caused by reduced blood pressure.[299] Soldiers forced to straggle in hot conditions described suffering from heat exhaustion. Discussing a movement in Virginia in a letter home in May 1862, New York sergeant George A. Mitchell wrote "I felt it coming over me, and I staggered to a fence and kept myself up, until the dizziness passed away, when I went in the woods and laid down for about 2 hours, at the same time the dizziness came over me, there was a blindness also and I

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[297] Mildred Throne, ed., *The Civil War Diary of Cyrus F. Boyd, Fifteenth Iowa Infantry, 1861-1863* (Millwood, NY: Kraus, 1977), 68.
[298] Blight, *When This Cruel War Is Over*, 125.
[299] Sherwood, *Human Physiology*, 634; Mayo Clinic Staff, "Heat Exhaustion," *Mayo Foundation for Medical Education and Research*, https://www.mayoclinic.org/diseases-conditions/heat-exhaustion/symptoms-causes/syc-20373250; Browning and Silver, *An Environmental History of the Civil War*, 12-13.

could not see anything for about 5 or 10 minutes."[300] Two years later, New Jersey officer George A. Bowen reported, "The combination of the broiling sun with the terrible dust and lack of drinking water over came me" while marching during the Siege of Petersburg, "things turned green before me, my head spinned around. I threw myself down on the ground seeking a little shade."[301]

Treatment of heat exhaustion is simple, as the victim needs to cease physical activity and rest in a cool place while preferably drinking water until their body cools and can once more employ the normal heat-loss mechanisms.[302] Mitchell, Bowen, and other troops experiencing similar effects of heat exhaustion were compelled to fall out and take time to recover before they could resume marching. While these men were debilitated to some extent by heat exhaustion, some who felt themselves beginning to overheat chose to straggle and rest before they were incapacitated. For example, Alabama corporal Edmund Patterson recorded in 1862 in Virginia that "I became so much overheated that I could scarcely get my breath, and felt that I would faint, happily I had a canteen of water and stretching myself on my back in the shade of a tree, I unbuttoned my shirt and poured the canteen of water in my bosom, which soon relieved me."[303] Oftentimes, enlisted men and junior officers sought to help comrades who were struggling with heat and thirst on hard marches, such as by carrying some of their equipment. USCT artillerist Marrs

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[300] George A. Mitchell to Parents, May 12, 1862, George A. Mitchell Collection, New York Historical Society, Civil War Primary Source Documents Collection.
[301] "The Diary of Captain George A. Bowen, 12th Regiment New Jersey Volunteers," *The Valley Forge Journal* 2 (1985), 200.
[302] Sherwood, *Human Physiology*, 634; Mayo Clinic Staff, "Heat Exhaustion,"; Browning and Silver, *An Environmental History of the Civil War*, 12-13.
[303] John G. Barrett, ed., *Yankee Rebel: The Civil War Journal of Edmund Dewitt Patterson* (Chapel Hill: University of North Carolina Press, 1966), 36.

remembered that when on the verge of giving out in Kentucky, one of his officers, "who took pride in aiding and assisting his men, came to my relief, took my equipments, transferred them to his own back," allowing him to complete the march.[304] Other soldiers shared any water that they had in their canteens or helped faltering men reach water sources near the marching route.

While troops suffering from heat exhaustion on marches had a relatively simple recovery, many soldiers who straggled in hot weather succumbed to a much more dangerous heat-related illness. If the body is dehydrated and its heat-loss mechanisms are overloaded too much, heat exhaustion can progress to heatstroke. Heatstroke occurs when prolonged exposure causes a complete breakdown in a person's thermoregulatory systems. Sweating stops and body temperature increases significantly, with symptoms including confusion, disorientation, seizures, and loss of consciousness. Heatstroke can quickly damage the brain, heart, kidneys, and other vital organs, leading to organ failure and death. The mortality rate of heatstroke is high, and even those who survive have a long recovery and often are permanently disabled due to damaged organs no longer functioning properly.[305] Called sunstroke by Americans during the Civil War, heatstroke was common among Federals and Confederates on the move in hot conditions, with many of the victims dying from its effects.[306] While operating around the Maryland-

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[304] Marrs, *Life and History of the Rev. Elijah P. Marrs*, 29.
[305] Sherwood, *Human Physiology*, 634; Mayo Clinic Staff, "Heatstroke," *Mayo Foundation for Medical Education and Research*, https://www.mayoclinic.org/diseases-conditions/heat-stroke/symptoms-causes/syc-20353581; Browning and Silver, *An Environmental History of the Civil War*, 12-13.
[306] *The Medical and Surgical History of the War of the Rebellion* (*MSHWR*), a collection of volumes comprising official medical statistics, reports, and case studies from the Union and Confederate armies, includes information on heatstroke, referred to as

Virginia border in August 1864, Hartwell wrote home, "It was not an uncommon sight to see men drop down dead in the ranks of sunstroke while marching," noting later in the month that "in the last march we have lost in death by sunstroke at least 100 of our strongest men besides large numbers who have gone sick to the Hospitals."[307] Due to the grave effects of heatstroke, marching in hot weather was not just a difficult endeavor for troops, it was a life-threatening one.

For men forced to straggle on marches in the heat and dust, the outcome varied. Many soldiers who fell out because of nearly or actually suffering from heat exhaustion were left along the roadways and needed to catch up with the rest of their units once they sufficiently recovered. These men often rested in the shade until the evening, when temperatures cooled, before making their way back to their regiments at the day's campsite. As Pennsylvania captain Donaldson observed on a march in Maryland in 1862, "many fell out and lay scattered along the road… During the night however, the men came up and the command presented its usual appearance the next day."[308] At times, ambulances and wagons accompanied marching columns, and some troops prostrated by the heat and fatigue would get carried in the wheeled vehicles. With the limited capacity of the vehicles, only a fortunate number of debilitated men were able to be transported. "Many soldiers fell half dead by the wayside…The ambulances were sent back to collect the suffering soldiers, but the wagons were soon filled to overflowing," Minnesota captain Exel reported one day while operating in the Dakota Territory in 1863, "Thus

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sunstroke. However, heatstroke is an affliction that is far underestimated in the *MSHWR* (Kathryn Shively, *Nature's Civil War*, 101 and 175).

[307] Britton and Reed, *To My Beloved Wife and Boy at Home*, 264 and 266.

[308] Acken, *Inside the Army of the Potomac*, 118.

many a poor devil, tired and sick, had to drag himself over the prairie in spite of the fearful heat."[309] Some men experiencing heat-related illnesses were assisted by comrades who tried to relieve their sufferings by giving them water to drink or bathing their heads.

This help could reduce the seriousness of the effects of heat and thirst on a soldier's health, but for those men succumbing to heatstroke, there was only so much their fellow troops or army surgeons could do for them other than have them placed in an ambulance and taken to a military hospital for medical care. Treating heatstroke requires the victim's body to be cooled to a normal temperature, and though some Civil War physicians attempted to cool afflicted men, such as by pouring cold water over their bodies, time was of the essence to prevent or reduce damage to the brain and other vital organs.[310] Even if the victim survived, recovery could be difficult and lengthy, and sometimes impossible.

Ohio corporal George H. Cadman serves as a vivid example. On a march in Georgia in July 1864, Cadman suffered heatstroke, and in his words, "for several hours, the boys say, I was crazy."[311] Cadman was treated by a unit doctor and survived but felt weak and unwell in the days that followed while resting in a hospital. Cadman wrote to his wife, "there is a strange dreamy feeling over me which makes me fear my brain is affected."[312] However, within days of Cadman's heatstroke he felt good enough to be

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[309] Rothfuss, "German Witnesses of the Sioux Campaign," 127.
[310] Mayo Clinic Staff, "Heatstroke"; U.S. War Department, *The Medical and Surgical History of the War of the Rebellion, Volume 1, Part 3* (Washington, D.C., G.P.O., 1870-1888), 853-860; Alfred Jay Bollet, *Civil War Medicine: Challenges and Triumphs* (Tucson: Galen Press, 2002), 279.
[311] George H. Cadman to Wife, July 15, 1864, George Hovey Cadman Papers, Southern Historical Collection, University of North Carolina.
[312] Cadman to Wife, July 15, 1864, University of North Carolina.

released from the hospital and return to duty with his regiment. This was a mistake, as exerting himself in hot weather soon resulted in Cadman relapsing and returning to the hospital. "I do not suffer any pain except in my head occasionally, but my strength is entirely gone," Cadman related in early August, "My arms and legs are almost powerless and I think it will be a long time before I am able to march again."[313] At the end of the month, Cadman explained, "I have had no sleep of any consequence since I was sunstruck. It seems to have affected my brain so that it won't keep still."[314] Cadman hoped that time would cure him, but he died in mid-September 1864 from the irreparable effects of heatstroke.

General officers at times issued orders prohibiting straggling during marches in hot weather to try to maintain army discipline and keep units together. However, the combination of heat and thirst made that impossible, and the majority of troops believed that men falling out of the ranks on hot days was unavoidable. As Vermont private Wilbur Fisk put it in mid-1864, "Straggling may be a serious evil to an army, but under such circumstances…it is as much without remedy as casualties on a battle-field."[315] Even junior officers agreed, such as Alabama captain James M. Williams, who sought to keep his company together on a march in Mississippi in which "the heat was like that of an oven," but finally "determined…to say no more to the men and whenever they wished

[313] Cadman to Wife, August 4, 1864, University of North Carolina.
[314] Cadman to Wife, August 27, 1864, University of North Carolina.
[315] Emil Rosenblatt and Ruth Rosenblatt, eds., *Hard Marching Every Day: The Civil War Letters of Private Wilbur Fisk, 1861-1865* (Lawrence: University Press of Kansas, 1983), 242.

to leave the ranks let them go."[316] Both enlisted men and lower-ranking officers exhibited an acceptance of straggling in inclement conditions because they seemed to understand that though they may remain in the ranks on one march, they could find themselves forced to give out on another. Many troops who managed to complete movements in hot and dry weather were left worn out and claimed to have nearly fallen out themselves. "Yesterday I was about half dead, today I am just about half alive," Massachusetts sergeant Sheldon wrote home about a march in mid-1864, "You know I am good to stand the hot weather, but some of these marches are almost to much for me."[317]

Marching in brutally hot conditions left many men not only fatigued but also distressed and dispirited because of the heavy casualties, both dead and rendered unfit for service for months, that occurred. After long marches in the summer heat of Virginia, U.S. sergeant Bowen lamented, "is it not horrid that it is not enough for men to risk their lives against shell & shot but they must be marched untill they drop dead by the roadside."[318] Marches could result in such high losses from the effects of the heat and thirst that troops compared them to casualties sustained in battle.[319] Some men struggling to stay in the ranks turned to religion as a coping mechanism, asking God for strength and expressing thanks for good health amid harsh weather. Marching for days amid sweltering heat in 1862, Virginia lieutenant John Dooley reported, "I was wont on

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[316] John Kent Folmar, ed., *From That Terrible Field: Civil War Letters of James M. Williams, Twenty-First Alabama Infantry Volunteers* (Tuscaloosa: University of Alabama Press, 1981), 98.
[317] Sheldon to Parents, August 2, 1864, Massachusetts Historical Society.
[318] Cassedy, *Dear Friends at Home*, 309.
[319] James H. Clark, *The Iron Hearted Regiment: Being an Account of the Battles, Marches and Gallant Deeds Performed by the 115th Regiment N.Y. Vols*. (Albany: J. Munsell, 1865), 156-157.

occasions of such temptations [to give out] to ask of God to give me renewed strength to enable me to complete that arduous campaign."[320]

Marching and Manhood

Similar to other facets of military service, Civil War soldiers asserted that over time they could better endure weather-related pressures as they marched because they grew tougher and accustomed to contending with them. "We got here about dusk wet through," Capt. Richard Cary of the 2nd Massachusetts Infantry related from Maryland in September 1861, "though by no means so tired by marching over sixteen miles of cloying mud as we should have been when we first began real soldiering – it is surprising to see how the men have hardened."[321] While marching in Georgia in 1864, Kentucky (Confederate) lieutenant Daniel E. Turney noted, "raining & roads bad but having become accustomed to irregularities and hardship we endured all in perfect good humor."[322] Although many soldiers recognized that falling out in adverse weather was sometimes unavoidable and did not hold it against those men who did, at the same time they closely connected finishing marches with their conceptions of manhood.

Soldiers expressed feelings of pride and accomplishment in completing grueling marches in various forms of inclement weather while still in the ranks, unlike many of their comrades. "At times there would be 300 on behind unable to keep up with the Regt,

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[320] Robert Emmett Curran, ed., *John Dooley's Civil War: An Irish American's Journey in the First Virginia Infantry Regiment* (Knoxville: University of Tennessee Press, 2012), 20.
[321] Richard Cary to Wife, September 3, 1861, Richard Cary Letter, Massachusetts Historical Society.
[322] Civil War Journals of Captain Daniel E. Turney, May 24, 1864, Kentucky Historical Society.

officers as well as privates," Massachusetts private Linscott wrote home about a movement in hot and dry conditions in the fall of 1862, "Some of the old soldiers said it was the hardest march they ever had. I did not fall out once on the whole march."[323] Similar sentiments were exhibited by Confederates, such as South Carolina lieutenant Alexander McNeill. "I never suffered so much in any day before," McNeil related about a march on an oppressively warm day in Virginia in 1863, "but I am glad to say that I stood up much better under the almost superhuman labors of the day much better than many others."[324] The pride felt by soldiers in their own toughness on marches at times extended to entire units, with men claiming that their regiments more effectively endured the difficulties than other units. Amid hot weather during the Gettysburg Campaign, Pennsylvania officer Levi Duff observed, "The men fell out of the ranks by scores…the Brigade was reduced to half its size. Our regiment kept up…but the others were scattered & strewn along the road."[325] Reflecting on his unit's fortitude, Cary boasted, "I think they feel proud of being able to do with ease what other regiments grunt & sweat about doing at all."[326] For Union and Confederate troops, successfully withstanding the elements while they marched, either individually or collectively, was not just an achievement, but a demonstration of their martial manhood.

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[323] Linscott to Parents, September 21, 1862, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[324] Mac Wyckoff, ed., *The Civil War Letters of Alexander McNeill, 2nd South Carolina Infantry Regiment* (Columbia: University of South Carolina Press, 2016), 303.
[325] Jonathan E. Helmreich, ed., *To Petersburg with the Army of the Potomac: The Civil War Letters of Levi Bird Duff, 105th Pennsylvania Volunteers* (Jefferson, NC: McFarland & Company Inc., 2009), 125-126.
[326] Cary to Wife, September 3, 1861, Massachusetts Historical Society. Another example is Thomas T. Bigbie to Wife, July 12, 1863, Thomas T. Bigbie Letters, Auburn University.

Men were surprised at their ability to hold up under the hardships imposed by bad weather. Discussing a series of marches in burning heat and dusty roads in Virginia in August 1863, Pennsylvania sergeant Ambrose H. Hayward stated, "Men of iron constitutions who have supposed they could stand everything belonging to the duties of a Soldier have had to drop by the way side. is it not strange that I bare up under the hardships so well I am astonished at it myself."[327] Some troops exhibited a deep determination and resolve to withstand the rigors of a march in order to not show weakness and prove their manly strength to both themselves and their comrades. Amid hot weather, Alabama captain Williams asserted in Mississippi, "I kept myself out of pure bravado to show that I could do it to myself and every body else," while Hartwell wrote succinctly in Virginia, "Pride only kept me in the ranks."[328] This proves that soldiers were determined to go to great lengths to demonstrate their manhood – and they were doing this consciously.

Straggling may have been generally accepted by comrades, but some soldiers who were compelled to give out because of heat and thirst or rain and mud wanted to prove that they remained as tough as other troops. To not appear unmanly or weak, these men emphasized that they were not alone and that there were large numbers of their fellow soldiers who also fell out and rejoined their units later. "I became so hot and thirsty I was compelled to fall out of the ranks and lie under the fence and come up with the rest of the straglers," Wisconsin private Charles Carr wrote to his wife from Kentucky in 1862,

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[327] Timothy J. Orr, ed., *Last to Leave the Field: The Life and Letters of First Sergeant Ambrose Henry Hayward, 28th Pennsylvania Volunteer Infantry* (Knoxville: University of Tennessee Press, 2010), 164.
[328] Folmar, *From That Terrible Field*, 98; Britton and Reed, *To My Beloved Wife and Boy at Home*, 239.

"their was only thirty-six men in our regiment to stack arms. The rest was behind…So you see that I was not alone. I think that I am about as tough as the most of the Reg."[329] Men like Carr sought to contest any insinuations against their manly strength by underscoring the prevalence of straggling on certain marches in inclement weather. Depicting themselves as one of many who gave out helped stragglers protect their manhood by showing that they were not unique or motivated by personal weakness, but that it was common for troops not to complete a march in the ranks due to the effects of the elements.

As seen throughout this chapter, Federals and Confederates wrote exhaustive descriptions of their numerous marches in inclement weather in letters to family and friends. Soldiers readily admitted to their difficulties and suffering and wrote in such great detail because they wanted to reveal to their loved ones how the trials and tribulations of military life were not limited to the battlefield but encompassed typical daily activities too. Troops hoped to educate civilians on the home front about the troubles of marching in adverse weather, wanting the many impediments that they faced and the toughness that they displayed to be recognized. However, at the same time, they perceived a divide between combatants and noncombatants that no number of letters could bridge.

According to soldiers, the challenges imposed by inclement weather could only be truly understood by those who had personally trudged through rain and mud, heat and dust, or cold and ice. "If some of the boys in Vermont, who think a soldier's life an easy

[329] Leo M. Kaiser, ed., "Civil War Letters of Charles W. Carr of the 21st Wisconsin Volunteers," *Wisconsin Magazine of History*, vol. 43, no. 4 (summer 1960), 266.

one, had been in the ranks with us during our various marches," Vermont private Fisk wrote in Virginia in May 1862, "they would have found a practical logic in the reality to convince them that marching is fatiguing business, even for soldiers, these hot days – and rainy ones are no better."[330] Georgia private William Stillwell reflected the opinion of men on both sides when he argued, "Nobody can tell, only the poor soldiers, what it is to march all day and night in bad weather."[331] The divide between combatants and noncombatants is most clearly seen in the anger and frustration expressed by Union troops toward U.S. politicians, newspaper editors, and other civilians who criticized the lack of movement by Federal forces.

This was more of an issue in the Union rather than in the Confederate military due to the larger war strategies of the respective sides. The U.S. aimed to defeat the Confederacy by operating offensively against enemy armies and territory, though at times civilians got impatient with Union forces for not moving more quickly to conquer the South. Such disgruntlement developed among segments of the government and public by the middle stages of the war due to a perceived lack of progress by Federal armies, especially in the Eastern Theater. Men and money had been pouring into the war effort for years, but the military had not yet caused the Confederacy to collapse through battlefield victories. Craving an end to the conflict as soon as possible, many Union civilians wanted the troops to get moving in its campaigns, irrespective of the weather.[332]

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[330] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 28.
[331] Lane, *"Dear Mother: Don't Grieve About Me. If I Get Killed, I'll Only be Dead"*, 234.
[332] James M. McPherson, *Battle Cry of Freedom: The Civil War Era* (New York: Oxford University Press, 1988), 332-335, 362-364, 568-596; Phillip Shaw Paludan, "*A People's Contest": The Union and Civil War, 1861-1865* (Lawrence: University Press of Kansas,

Federal soldiers argued back that if noncombatants critical of their efforts actually experienced the hardships of conducting operations in inclement weather, they would understand why the war was still ongoing – and the complaints and rebukes would end. New York heavy artilleryman Charles McDowell noted in mid-1864, "When some of the folks at the North thinks that [we] ain't a-doing nothing, I wished they was here and had some of our marches. I think they could go have and take a good sleep and be satisfied."[333] They were particularly irritated with civilians advocating for campaigns in the heavy rains and viscous mud of the winter months in the South. "I would like to of had every northern man that says a campaign can be successfully carried on here in the winter time with us," Capt. Henry F. Young of the 7th Wisconsin Infantry wrote to his wife after the Mud March, "It would have been the last of them and the last we would ever hear of winter campaining in this cley fine swampy land."[334] U.S. soldiers realized civilians could never fully understand the realities of moving in adverse weather, but they wished those far from the battlefronts would empathize with their difficulties rather than disparage them.

Troops in both armies sought to make it clear to family and friends that contending with the weather was an essential part of manhood – of being a capable soldier and martial man. By working to mitigate the obstacles and managing to endure

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1996), 56-58, 63-77; Donald Stoker, *The Grand Design: Strategy and the U.S. Civil War* (New York: Oxford University Press, 2010), 39, 72-84, 221-222, 239-240.

[333] Lisa Saunders, ed., *Ever True, A Union Private and His Wife: Civil War Letters of Private Charles McDowell, New York Ninth Heavy Artillery* (Westminster, MD: Heritage Books, 2004), 83.

[334] Michael J. Larson and John David Smith, ed., *Dear Delia: The Civil War Letters of Captain Henry F. Young, Seventh Wisconsin Infantry* (Madison: University of Wisconsin Press, 2019), 137.

the elements while marching, they believed that they were exemplifying the ideals of martial masculinity. Successfully completing marches in the ranks despite the elements was a point of pride among Federals and Confederates, but even those who could not protected their sense of toughness by justifying falling out. Dealing with inclement weather was as much a display of strength and resolve for Civil War soldiers as grappling with a human opponent on the field of battle. It did not matter where these contests against the elements occurred – tent encampments, marching routes, or as will be seen, bivouac sites.

Chapter 3 – Bivouacking

Introduction

In late October 1862, Capt. Eathan Allen Pinnell was encamped with his regiment, the 8th Missouri Infantry (Confederate), in northern Arkansas during a heavy snowstorm. "It has found us wretchedly prepared for its piercing blast," Pinnell penned in his diary, because his unit lacked tents. Without shelter from the wintry weather, some soldiers made campfires and sat around them throughout the day, while others lay on improvised beds of straw, covering themselves with a blanket or two, over which several inches of snow accumulated. Pinnell lamented, "our condition is wretched to a degree which I had never expected to see," and the men suffered severely from the cold that night. The Missourians were in misery and had little hope of being supplied with tents anytime soon, but Pinnell was confident that they would be strong enough to get through it. "We never expected to yield to ordinary difficulties or endurable hardships," Pinnell claimed, "any thing, which it is possible for mortals to do in the way [of] enduring hardships, we think possible for us."[335]

Most Union and Confederate soldiers' wartime service revolved around life in encampments. Usually this entailed camping in tents or more substantial winter quarters, as described in Chapter 1, but often men had to bivouac instead. Bivouacking was what Pinnell described in his journal: the practice of encamping in the open air without any tents or other significant forms of shelter. Bivouac sites were generally temporary

[335] Michael E. Banasik, ed., *Serving With Honor: The Diary of Captain Eathan Allen Pinnell, Eighth Missouri Infantry (Confederate)* (Iowa City: Camp Pope Bookshop, 1999), 21.

encampments where soldiers spent the night in between marches or other types of active operations, though at times troops remained at one location for several days or more.

Troops were forced to bivouac for a variety of reasons. One was that a unit's tents were delayed by the late arrival of supply wagons that transported those tents during marches. This occurred when the wagons had been outpaced by the troops or were delayed by muddy roads amid rainy weather, leaving the men without their tents for part or all of the night. Sometimes, though, soldiers had to bivouac even if they did have tents with them because a march did not finish until it was already night, and darkness or an inability to locate stakes prevented the men from erecting their canvas shelters. Other times, troops had to bivouac due to the fact that their tents had been lost altogether or abandoned during campaigns. And while engaged in active operations, soldiers regularly bivouacked because they were ordered to leave their tents behind, so that the armies would not be encumbered with slow-moving baggage wagons or the troops themselves weighed down by too much equipment. Lastly, a number of regiments, particularly the more poorly supplied Confederate ones like Pinnell's, went weeks to months without receiving sufficient tents from their military logistical systems or capturing any from the enemy, necessitating that they bivouac.

Regardless of the reason, Civil War soldiers became resigned to bivouacking as a necessity of military service, taking the weather as it came. When clear and moderate conditions prevailed, encamping without tents was typically simple and unchallenging, as men could rest and sleep in relative comfort with minimal equipment such as a woolen blanket. Bivouacking just as often occurred in adverse weather, however, which entailed numerous privations for tentless troops, who were completely exposed to the full brunt of

inclement conditions. Rather than fighting the enemy in battle, some Federals and Confederates came to believe that enduring weather-related pressures while bivouacking was the true epitome of wartime service. “This I think is Soldiering in reality,” Pennsylvania sergeant Jacob J. Zorn declared after spending a wet and cold night in Maryland with no tent, “if there is any thing real in Soldiering.”[336]

Zorn was not alone in seeing bivouacking in severe weather as an essential and “real” component of soldiering. To many men, bivouacking overturned any notions of war as simply a grand struggle against an enemy on the battlefield and aptly represented what being a soldier really meant: living outdoors for days and weeks with little to no shelter or protection from the weather. Successfully withstanding the elements while encamping without tents demonstrated that men were capable, veteran soldiers. Just as importantly, it bolstered their sense of manhood by serving as another display of their martial masculinity. Making bivouacking even more “real” was the fact that it was mainly the rank and file who had to camp with no tents. By virtue of their rank, senior officers often still had access to tents, while junior officers and enlisted men had to make do as best they could. That contrast would have given the rank and file a constant reminder that *they* were the ones facing the most severe adversity and were the true soldiers.

When forced to bivouac amid adverse weather, soldiers attempted to mitigate the hardships. No matter the method, the overarching goal remained the same: to endure exposure to the elements by making themselves as comfortable as possible. As Iowa

[336] Barbara M. Croner, ed., *A Sergeant’s Story: Civil War Diary of Jacob J. Zorn, 1862-1865* (Apollo, PA: Closson Press, 1999), 29.

sergeant George Remley asserted, "by repeated experience he learns one thing to perfection - that is under whatever circumstances he may be placed – to adapt himself to them as much as possible and "let come what will" to make the best of it."[337] Men wanted comfort and worked to get it, but they also needed to learn to bivouac in all manner of inclement weather if they hoped to survive the war. It would have been impossible to handle the physical and psychological strains of army life without managing to rest and sleep while encamped without tents for extended periods. For example, Lt. Emil Cornelius Knoebel of the 74th Pennsylvania Infantry reported, "For a total of 68 days we slept without tents, out in the open with no shelter, day and night, in the snow, rain and storms" while campaigning in Virginia in the fall of 1862.[338]

Bivouacking revealed the constant effort to both endure and escape the deleterious effects of the weather. Civil War troops repeatedly declared that through their experiences bivouacking, they became hardened to the difficulties to the point where they could effectively endure the vagaries of the weather. As they emphasized in their writings, only soldiers could achieve this level of toughness and fortitude to deal with the elements – not civilians, and not even themselves before they had joined the army and gone off to war. For Union and Confederate troops, bivouacking in bad weather was an unpleasant and challenging requirement of military service, but one that was a mark of their resilience as soldiers and strength as men.

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[337] Julie Holcomb, ed., *Southern Sons, Northern Soldiers: The Civil War Letters of the Remley Brothers, 22nd Iowa Infantry* (DeKalb: Northern Illinois University Press, 2004), 100.

[338] Walter D. Kamphoefner and Wolfgang Helbich, ed., *Germans in the Civil War: The Letters They Wrote Home* (Chapel Hill: University of North Carolina Press, 2006), 147.

Campfires

Lt. William C. Nelson of the 17th Mississippi Infantry echoed the thoughts of tentless troops in both armies when he wrote, "the weather…has been interfering with our comfort considerably. it has turned really cold, and what with the wind and rain, makes bivouacking rather more romantic than pleasant."[339] In these different types of conditions, the location of bivouac sites mattered to soldiers, who preferred wooded rather than open areas and especially higher ground. As South Carolina sergeant Alexander McNeill explained in a letter home, "our camp is upon a high and elevated place with all the timber cut down so that we get a full benefit of every northern blast" of the hard-blowing wind.[340] When encamped in the woods, the trees provided some protection from the elements, particularly the wind, and men were pleased when they moved from more exposed bivouac sites to timbered ones. "Delightfully situated in a dense woods, sheltered from the northern blasts" in Virginia in October 1863, Pennsylvania captain Francis A. Donaldson declared, "We are cozy without our tents. I love a bivouac in the timber."[341]

Soldiers also preferred bivouacking in wooded areas because they needed timber to fuel their campfires. Troops soaked by rain while marching to bivouac sites, or while camping without tents to shield themselves, were especially reliant on fires to dry their wet clothing and equipment once the storm ended. On a campaign in Virginia, Georgia

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[339] Jennifer W. Ford, ed., *The Hour of Our Nation's Agony: The Civil War Letters of Lt. William Cowper Nelson of Mississippi* (Knoxville: University of Tennessee Press, 2007), 101.
[340] Mac Wyckoff, ed., *The Civil War Letters of Alexander McNeill, 2nd South Carolina Infantry Regiment* (Columbia: University of South Carolina Press, 2016), 173.
[341] J. Gregory Acken, ed., *Inside the Army of the Potomac: The Civil War Experience of Captain Francis Adams Donaldson* (Lanham, MD: Stackpole Books, 1998), 374-375.

private Marion H. Fitzpatrick related, "We were drenched to the skin but by hard work got a good fire and it stopped raining and we dried off and lay down and slept sweet and sound till morning."[342] As Fitzpatrick implied, drying their sodden clothing after the rain ended allowed men to rest more comfortably in the open air than possible otherwise. Campfires could only do so much in drying soldiers and their possessions while rain continued to fall, but saturated and chilled troops still turned to them for a modicum of warmth. Since pouring rain could make it challenging to start fires, men resorted to various methods to kindle and maintain them, particularly by using their blankets. "It was not a very easy job starting said fire but by perseverance…we got one started," Pennsylvania soldier Tilton C. Reynolds wrote to his mother in early 1863, "we had to hold a gum tent [rubber blanket] over it to keep the rain from putting it out until it got to burning so well as to defy anything to put it out."[343] Even if they managed to kindle a campfire, persistent wet weather could extinguish the flames, and soldiers had to devote considerable effort to keeping their fire lit.

Unlike men with tents, bivouacking troops could not retreat into canvas shelters to avoid adverse weather and consequently remained standing or sitting by campfires all day and night, trying to make themselves comfortable. It was a normal occurrence for many, if not the majority, of the men at a bivouac site to be unable to sleep long or at all at due to the hardships imposed by hard rain or freezing cold and spend the night huddled by campfires, waiting for daylight. "Shivering over a fire with my face burning & my back

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[342] Jeffrey C. Lowe and Sam Hodges, ed., *Letters to Amanda: The Civil War Letters of Marion Hill Fitzpatrick, Army of Northern Virginia* (Macon: Mercer University Press, 1998), 94.
[343] Tilton C. Reynolds to Mother, Juliana Smith Reynolds, January 23, 1863, Tilton C. Reynolds Papers, Library of Congress.

freezing" on a cold night in North Carolina, Massachusetts corporal Samuel Storrow wrote, "Two thirds of the men were doing the same thing being entirely unable to sleep. Here we remained till dawn trying to keep warm to the best of our abilities."[344]

Relying on the protective warmth of campfires, however, could make men vulnerable to other problems. At times, soldiers noted that while they warmed the side of their body close to the fire, the other half froze, and they would have to keep turning their bodies back and forth, "alternately freezing and thawing," in the words of a Union private.[345] The most common complaint about fires was that the wind blew the smoke into their faces. "The wind comes cutting and slapping so keenly that there is no such thing as comfort around our fires in the open air," Arkansas artillery captain Thomas J. Key recorded in Georgia in February 1865, "the smoke and sparks blow in my face and the ashes fill my eyes when I approach the fire."[346] Prolonged exposure to smoke could leave soldiers' eyes irritated and inflamed for days.[347] Some men sought to lessen the impact of smoke even while benefiting from the fires' warmth. New Jersey infantryman George Bowen, for instance, "passed the night going to the warm side of the fire, where I would stay as long as I could, then shift to get the smoke out of my eyes and throat, stay there as long as I could and so back and forth all night through."[348]

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[344] Samuel Storrow to Parents, November 19, 1862, Samuel Storrow Papers, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[345] Mary Searing O'Shaughnessy, ed., *Alonzo's War: Letters from a Young Civil War Soldier* (Lanham, MD: Fairleigh Dickinson University Press, 2012), 43.
[346] Cate, *Two Soldiers*, 190.
[347] James E. Green Diary, December 15, 1863, Southern Historical Collection, University of North Carolina; Mary Warner Thomas and Richard A. Sauers, ed., *The Civil War Letters of First Lieutenant James B. Thomas, Adjutant, 107th Pennsylvania Volunteers* (Baltimore: Butternut and Blue, 1995), 264-265.
[348] "The Diary of Captain George A. Bowen, 12th Regiment New Jersey Volunteers," *The Valley Forge Journal* 2 (1984), 119.

As with tent camping, soldiers fueled their bivouac fires not only with timber collected from woodlands around encampment sites, but also with fence rails stolen from nearby civilian homes and farms. While operating in Virginia in 1862, Pennsylvania officer Knoebel noted, "In order to get wood, we tore up all the fences, of which there are many here, and used them to feed a fire that was as long as the entire front line of the company."[349]

Both armies had policies addressing the foraging of material resources from civilians for military use. In the first few years of the war, the U.S. forces followed guidelines dating from the early nineteenth century that prohibited pillaging and plundering by soldiers and also the destruction or spoilage of civilian fields, gardens, woodlands, and other private property. The military leadership understood that the army needed timber for a variety of purposes and that wood would have to be obtained from civilians, but the cutting down of trees on the lands of noncombatants and the seizure of their fence rails was only supposed to occur with the explicit authorization of commanders. Additionally, the owners were to be issued documents that would allow them to claim financial compensation from the military for their confiscated property. The Confederacy initially adopted the same policies as the U.S., and when its army formally established its own set of military regulations in 1863, the practices regarding foraging remained largely unchanged. In the conflict's middle stages, however, the Union army began shifting to a more "hard war" strategy, exerting greater pressure on material resources in Confederate territory by giving troops more latitude in the field to confiscate property needed to prosecute the war. These new policies continued to give some

[349] Kamphoefner and Helbich, *Germans in the Civil War*, 147.

protections to civilians; unauthorized foraging was still not permitted and property owners were to receive paperwork for future compensation if they were loyal to the U.S.[350]

For both armies, the restrictions on foraging and safeguards for noncombatants looked good on paper but did not prove effective in practice. First, military regulations did not enforce themselves and depended on senior officers to administer them. Some commanders complied with policies and tried to stop their men from taking fence rails and other materials from civilians without authorization, issuing orders against foraging, detailing guards to watch over private property, and punishing insubordinate troops. But other high-ranking officers tolerated or condoned their men taking the resources of noncombatants.[351] "The General commanding our brigade gave orders to use only the top rail, but the colonel in giving the order to us said 'Boys take only the top rail nothing but the top one,'" Massachusetts corporal Thomas Howland wrote home from Virginia, "He emphasized the top so much that we saw what he meant, and did take the top one until there was no top left."[352] The brigade commander was trying to ensure that the property owner's fences would not be entirely destroyed, but Howland's regimental commander undermined these efforts through the way that he issued the instructions to his men. By

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[350] Joan E. Cashin, *War Stuff: The Struggle for Human and Environmental Resources in the American Civil War* (New York: Cambridge University Press, 2018), 4, 54-55, 58, 68-71, 75-76, 82-83, and 101-102.
[351] Cashin, *War Stuff*, 85-87, 90-96, and 99-103. An example of a commander enforcing policies is Linda Foster Arden and Walter L. Powell, ed., *Letters From the Storm: The Intimate Civil War Letters of Lt. J.A.H. Foster, 155th Pennsylvania Volunteers* (Chicora, PA: Mechling Bookbindery, 2010), 21.
[352] Thomas S. Howland to Mother, November 10, 1862, Thomas S. Howland Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.

placing such emphasis on the word "top," the officer implied that his men could keep foraging rails until the fence was gone – once the uppermost rail was removed, then the one below it technically became the "top" rail and could be taken, and so on until there were no rails left. Howland's regimental officer was more concerned that his troops had plenty of fuel for their fires than respecting the property of noncombatants.

More importantly, from the beginning of the war to its end, most junior officers and enlisted men simply ignored and disobeyed the official guidelines and individual commanders' orders and foraged rails anyway.[353] As historian Joan Cashin contends, "Policy made a thin patch on the voracious needs of the two armies, which had their own momentum independent of military directives… Many soldiers perceived regulations as an annoyance that they would get around."[354] Even if a commander assigned guards, many men learned to take what they wanted before the sentries were stationed, rushing for civilian farms as soon as they encamped. In November 1862, Massachusetts lieutenant Albert A. Pope admitted, "It takes them about fifteen minutes to put the guard on, so that the smart soldiers get all they want before the guard is posted."[355] Men took and burned vast amounts of rails to make a multitude of large fires when they camped with tents, but due to their lack of canvas shelters and greater dependance on campfires to

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[353] Cashin, *War Stuff*, 3-8, 82, 85-96, and 99-103. Examples include Arnold Gates, ed., *The Rough Side of War: The Civil War Journal of Chesley A. Mosman, 1st Lieutenant, Company D, 59th Illinois Volunteer Infantry Regiment* (Garden City: Basin Publishing Co., 1987), 112; Nick Adams, ed., *My Dear Wife and Children: Civil War Letters from a 2nd Minnesota Volunteer* (Strategic Book Publishing and Rights Co., 2014), 226; Ephraim M. Anderson, *Memoirs: Historical and Personal; Including the Campaigns of the First Missouri Confederate Brigade* (St. Louis: Times Print Co. Street, 1868), 130-131.

[354] Cashin, *War Stuff*, 4 and 6.

[355] Albert Augustus Pope Diary, November 5, 1862, Civil War Times Illustrated Collection, U.S. Army Heritage and Education Center (USAHEC).

alleviate weather-related pressures, bivouacking troops' need for wood as fuel was even more urgent.

Some soldiers were distressed and appalled by the damage inflicted on private property, but most men in both armies were not troubled by it because they craved the comforting heat of campfires on a cold or wet night. As most military operations occurred in the South, Federals could at least console themselves with the knowledge that many of the rails that they took belonged to Confederate supporters. "We have got bravely over our scruples against burning rails since we left KY and our track through Tenn. is marked by a general scarcity of fences," Ohio private William G. Bentley told his family in March 1864, "It seems pretty hard to burn the farmers fences but as the owners of the land where we camp are generally secesh we don't feel much compunction for the deed."[356] But loyalties ultimately did not matter, as most men did not bother inquiring about the allegiances of the Southern civilians whose property they were taking.

Confederate soldiers were no different, seizing just as many fence rails from noncombatants as their U.S. counterparts and even rebuffing complaints from owners. In his home state, Virginia gunner William Jones recorded, "Our mess turned in and made a fire on the side of the road out of fence rails when the owner came up and commenced talking about his fence rails," but the man left after being sharply rebuked by one of

[356] Barbara Bentley Smith and Nina Bentley Baker, ed., *"Burning Rails as We Pleased": The Civil War Letters of William Garrigues Bentley, 104th Ohio Volunteer Infantry* (Jefferson, NC: McFarland & Company, Inc., Publishers, 2004), 85. Another example is Stephen W. Sears, ed., *For Country, Cause & Leader: The Civil War Journal of Charles B. Haydon* (New York: Ticknor & Fields, 1993), 284.

Jones' comrades.[357] Troops marveled at the speed and thoroughness with which regiments destroyed all the fence rails around camp and bivouac sites. Howland exclaimed, "You ought to see how fast a rail fence runs over the ground with five thousand men after it. Fifteen minutes after we halted not a fence was to be seen."[358] As will be seen, fence rails were not only used for firewood by bivouacking soldiers, and they were not the only material resources obtained from the farms and plantations of the South's civilian population.

Troops always wanted campfires at their bivouac sites in bad weather, but in certain military circumstances such as the close presence of the enemy, they were not permitted to have fires because the light could reveal their position. Consequently, men suffered intensely from the cold when temperatures dropped to bitter lows. Without fires for warmth, soldiers engaged in physical activities to try to warm themselves and, as many put it, "to keep from freezing."[359] They ran around in circles, marked time (marching on the spot without moving forward), jumped, danced, and wrestled. Men with limited options did anything they could to increase their body temperature, but their techniques could not always fully preserve their health. On a campaign in late 1863 in

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[357] Constance Hall Jones, ed., *The Spirits of Bad Men Made Perfect: The Life and Diary of Confederate Artillerist William Ellis Jones* (Carbondale: Southern Illinois University Press, 2020), 70.
[358] Howland to Mother, November 10, 1862, Massachusetts Historical Society. Another example is Warren H. Freeman, *Letters From Two Brothers Serving in the War for the Union to Their Family at Home in West Cambridge, Mass.* (Cambridge: Houghton, 1871), 38.
[359] Emil and Ruth Rosenblatt, ed., *Hard Marching Every Day: The Civil War Letters of Private Wilbur Fisk, 1861-1865* (Lawrence: University Press of Kansas, 1983), 172; Mills Lane, ed., *"Dear Mother: Don't Grieve About Me. If I Get Killed, I'll Only be Dead:" Letters from Georgia Soldiers in the Civil War* (Savannah: Beehive Press, 1977), 92.

Virginia, Sgt. Lucien A. Voorhees of the 15th New Jersey Infantry and his comrades sought to endure cold weather at their bivouac site through "vigorous exercise," but in spite of their efforts, "many froze their feet."[360] Frostbite could result when tentless soldiers were not allowed to make campfires.

Equipment

Just as campfires did, other standard pieces of equipment assumed greater significance to bivouacking soldiers in need of protection from adverse weather. Heavy clothing like overcoats were valued, for example. As Georgia artillerist George Weston declared on a chilly day in Tennessee, "Overcoats are brought into requisition."[361] But the items most generally desired by tentless troops were blankets, both woolen and rubber. Blankets served as one of soldiers' most effective weapons against rain, cold, wind, and similar forms of inclement weather. For all the same reasons that men did not have tents, however, troops could lack blankets and other crucial items when bivouacking.

Bivouacking troops in both armies wrestled with the tension between wanting to prove their endurance (and manhood) in the face of bad weather and admitting that they needed comforts at the same time. There were times, they believed, when they had to endure too much, and endurance became something more like suffering. Anguish due to a lack of needed clothing and other supplies, particularly when a unit was not involved in a

[360] Dominick Mazzagetti, ed., *"True Jersey Blues": The Civil War Letters of Lucien A. Voorhees and William Mackenzie Thompson, 15th Regiment, New Jersey Volunteers* (Madison: Fairleigh Dickinson University Press, 2011), 142.
[361] George Harry Weston Diary, August 25, 1863, Duke University.

campaign and remained encamped at the same location for an extended period of time, could cause feelings of anger and resentment to develop among soldiers. Some Federals and Confederates felt that they had become neglected and treated poorly by their general officers in these instances. "The men feel that they are treated like dogs, and are out of patience with it," Connecticut officer Samuel Fiske exclaimed while bivouacking will little equipment in western Virginia in October 1862, "Their wants are not attended to, their feelings are not regarded…[O]ur sufferings contemptuously disregarded and our lives needlessly imperiled."[362] Troops recognized that bivouacking was a requirement of war and offered an opportunity to demonstrate their manly and soldierly qualities. However, that did not mean that they wanted to continually live outdoors with few material resources when it seemed needless and preventable. Without important pieces of equipment like blankets that offered a degree of comfort, tentless soldiers would have had trouble remaining physically fit for duty over time, particularly because of an inability to sleep.

Woolen and rubber blankets were crucial to bivouacking troops when they sought to sleep at night, with men wrapping themselves in, covering themselves with, and laying on their blankets. The number of blankets that each man possessed varied depending on the circumstances; typically, they only had one or two, but at times they had more than that and at other times none at all. The utility of blankets is demonstrated by the fact that the majority of soldiers without them were able to attain little, if any, sleep due to wet or cold conditions. "I got a little sleep, but it was too cold to sleep much without a blanket,"

[362] Stephen W. Sears, ed., *Mr. Dunn Browne's Experiences in the Army: The Civil War Letters of Samuel W. Fiske* (New York: Fordham University Press, 1998), 33-34.

Massachusetts lieutenant Pope reported in Tennessee in early 1864, "I didn't sleep any the night before either for want of blankets."[363] Many of the men who spent the night sitting or standing around campfires at their bivouac sites were the same ones who did not have blankets. With the lack of equipment interfering with sleep, troops could become sleep deprived over time. This could compromise their health and was also a liability for an army that relied on the energy of its men. Bivouacking soldiers had to try to catch up on lost sleep whenever they could, snatching rest when the weather improved or when their long-needed blankets were finally supplied.

Even soldiers with blankets found it challenging to rest comfortably. In frigid weather, they tried cocooning themselves in blankets while also wearing or covering their bodies with their heavy items of clothing like overcoats. This allowed some bivouacking troops to sleep well through the night, but others could not keep warm enough and were awakened by the cold. On a windy night in Virginia, for example, Vermont private Wilbur Fisk lamented that they "Cover ourselves over ever so nicely with blankets, head, ears, toes and all, and a current of air like a current of ice cold water would feel us out, and spoil our comfort."[364] One strategy for sleeping warmer at night was for soldiers to lay close together for body heat and combine their blankets for increased protection from the elements.[365] Other men could not sleep when only blankets shielded them from the snow that accompanied low temperatures, though some actually slept through the night

[363] Pope Diary, January 22, 1864, USAHEC.
[364] Emil Rosenblatt and Ruth Rosenblatt, eds., *Hard Marching Every Day: The Civil War Letters of Private Wilbur Fisk, 1861-1865* (Lawrence: University Press of Kansas, 1983), 163.
[365] Pope Diary, December 20, 1863, USAHEC; "The Diary of Captain George A. Bowen," 120.

and awakened in the morning to discover that they were coated with snow. "I was covered up in snow as well as a great many others," Georgia lieutenant John B. Evans related from Tennessee, "I was warm while I was under the snow, but when I woked up in the morning and raised up my head the snow dropped in my bossam it was very cold. you ought to have seen me making the snow flying."[366]

Rain posed the most frequent challenge for soldiers encamping without tents. Iowa sergeant Remley described a normal experience for bivouacking troops on both sides when he informed his parents, "Sometimes we would lie down at night…and before morning would be wakened by the rain coming down in torrents and find ourselves in pretty much the same condition as 'drowned rats' are generally supposed to be."[367] Soldiers trying to sleep would cover their entire body with their blankets in an attempt to keep the rain off, but the woolen type would become soaking wet. It was hard to sleep in those situations, but troops who had become especially tired and weary from a day's exertions could still sleep soundly with saturated blankets and continued rainfall.[368] This just became in their minds another requirement of wartime service. As Pvt. Valentine C. Randolph of the 39th Illinois Infantry asserted in the Shenandoah Valley in March 1862, "This is a part of the many hardships which a soldier has to undergo."[369]

Federals and Confederates preferred rubber blankets or oilcloths for sleeping in wet weather. They could use these items for both bed and cover, wrapping themselves in

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[366] John B. Evans to Wife, January 24, 1864, John B. Evans Papers, Duke University.
[367] Holcomb, *Southern Sons, Northern Soldiers,* 104.
[368] Jerome M. Loving, ed., *Civil War Letters of George Washington Whitman* (Durham, NC: Duke University Press, 1975), 42; George Harry Weston Diary, May 1, 1862, Duke University.
[369] David D. Roe, ed., *A Civil War Soldier's Diary: Valentine C. Randolph, 39th Illinois Regiment* (DeKalb: Northern Illinois University Press, 2006), 67.

the piece of canvas in order to shield themselves from the falling rain while at the same time not having to lie directly on the wet and muddy ground. During a Mississippi storm in January 1863, Missouri (U.S.) lieutenant Henry Kircher noted, "I wrapped myself in my rubber blanket and let it rain to its heart's content without getting wet," but other men who lacked this article "were not so lucky."[370] When they had to bivouac, men in the more poorly equipped Confederate armies highly prized the waterproof equipment that they seized from Union forces. "We bivouacked under the trees and…had quite a heavy rain on us," Mississippi captain William H. Hardy wrote to his wife from Virginia, "but we had plenty of splendid oilcloths captured from the Yankees and hence did not get wet."[371] When faced with the possibility of stealing U.S. equipment, Confederate soldiers made certain to grab rubber blankets and other waterproof supplies, recognizing that these items eased the difficulties of living outdoors without tents.

As with cold temperatures, soldiers spending a tentless night in the rain often shared equipment and bedded together to better endure. In a letter home to a local newspaper in late 1863, Connecticut officer Fiske detailed a common practice: "spread out your rubber blanket, and if you have a chum as every good soldier should, lay one of your woolen blankets under you and spread the other over the two of you, and the other rubber above that and lie down."[372] Having multiple layers of blankets both above and below them regularly allowed pairs of bivouacking troops to sleep dryly and comfortably regardless of wet weather. This technique exemplified how, even though Civil War

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[370] Earl J. Hess, ed., *A German in the Yankee Fatherland: The Civil War Letters of Henry A. Kircher* (Kent, OH: Kent State University Press, 1983), 42.
[371] Robert G. Evans, ed., *The 16th Mississippi Infantry: Civil War Letters and Reminiscences* (Jackson: University Press of Mississippi, 2002), 101.
[372] Sears, *Mr. Dunn Browne's Experiences in the Army*, 211.

soldiers strove to be martial men, they still conformed to certain more restrained tenets of masculinity that encouraged mutual reliance among men when circumstances demanded. As historian James J. Broomall explains, "Although modern sensibilities may eroticize bed sharing, nineteenth-century men commonly bedded together out of necessity and for comfort."[373] Moreover, troops forged close bonds with each other through the harsh rigors of wartime service, especially of encamping without tents in all seasons of the year. Comrades became like family members, a military community of men that helped one another endure the physical and mental strains of soldiering on a daily basis.[374] Both Federals and Confederates recognized that only by working together, sharing material resources, and bedding together could they hope to protect themselves from the elements and secure a measure of comfort. To live through the privations of bivouacking for days, weeks, or months, good soldiers needed to depend on the continued help and support of other good soldiers.

Makeshift Beds and Shelters

Rainstorms made the ground at bivouac sites become waterlogged or muddy, at times flooding with several inches of water. Near Richmond in October 1864, North Carolina captain William Biggs reported, "I lay down with only one thin blanket, but found it no go, the water running in almost a perfect stream under me, & causing me to

[373] James J. Broomall, *Private Confederacies: The Emotional Worlds of Southern Men as Citizens and Soldiers* (Chapel Hill: University of North Carolina Press, 2019), 50.
[374] Broomall, *Private Confederacies*, 34, 43-44, and 49-53; David W. Blight, "No Desperate Hero: Manhood and Freedom in a Union Soldier's Experience," in *Divided Houses: Gender and the Civil War*, eds. Catherine Clinton and Nina Silber (New York: Oxford University Press, 1992), 61.

soon break that position, only to find every one else in the same fix."[375] Like Biggs, many men could not sleep with rainwater coursing beneath them and passed the hours of night on their feet. But soldiers needed to sleep if they wanted to stay fit for service, so how did they find a way to rest? Though tentless soldiers often used their blankets, particularly waterproof types, as beds to avoid contact with the ground, these were inadequate when encampments flooded in heavy rain. Some men did manage to sleep while lying in pools of water. "When I awoke I found I was in a puddle of water," U.S. sharpshooter William B. Greene wrote to his family from a bivouac in Virginia, "The rain was pouring down good and I thought I would not be drove up so I turned over out of the water and went to sleep again."[376]

It was more common for bivouacking soldiers to adapt by constructing more substantial, elevated beds. The beds took many forms, but the intended function was the same for all: to provide a higher position from which men could stay above the wet and muddy ground. Federals and Confederates utilized whatever material resources were available from the woods and especially civilian homes and farms near their bivouac sites. A diverse range of items were used for bivouac beds, including corn stalks, hay, pine boughs, straw, brush, and timber from buildings and other structures. "It is amusing to see the boys figure at night for dry beds," Illinois sergeant Charles W. Wills observed in the fall of 1861 in Missouri, "Every thing, gates, cordwood, rails, cornstalks, weeds

[375] William Biggs to Sister, October 29, 1864, Asa Biggs Papers, Duke University.
[376] William H. Hastings, ed., *Letters From a Sharpshooter: The Civil War Letters of Private William B. Greene, Co. G, 2nd United States Sharpshooters (Berdan's), Army of the Potomac, 1861-1865* (Belleville, WI: Historic Publications, 1993), 99.

and panels of fence and boards are confiscated, and genius is taxed its utmost to make the sleeping as comfortable as possible."[377]

Valued as fuel for campfires, fence rails were also widely used for beds. As Pvt. Jacob Haas of the 9th Wisconsin Infantry declared, "Fence-rails are the soldiers' featherbed and fuel."[378] Soldiers would take two to four fence rails, lay them upon the ground or lean them against a still-standing fence, and then stretch out on these improvised beds to sleep, covering themselves with their woolen or rubber blankets. Even as rain fell heavily throughout the night, many men on beds of fence rails slept soundly because they were able to keep out of the mud and water.[379] For example, New Jersey infantryman Bowen noted that one night he "slept the sleep of a weary man undisturbed by the elements" on a fence rail bed amid torrential rain and flooded ground in Virginia.[380] Bivouac beds composed of other materials such as corn stalks or boughs were often similarly effective in wet weather, and some tentless soldiers also utilized such beds to rest warmer by keeping off the cold ground in wintry conditions.[381]

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[377] Mary E. Kellogg, ed., *Army Life of an Illinois Soldier, Including a Day by Day Record of Sherman's March to the Sea; Letters and Diary of the Late Charles W. Wills* (Washington, D.C., Globe Printing Company, 1906), 29.
[378] Mark K. Christ, ed., *"This Day We Marched Again": A Union Soldier's Account of War in Arkansas and the Trans-Mississippi* (Little Rock: Butler Center Books, 2014), 63.
[379] Norman D. Brown, ed., *One of Cleburne's Command: The Civil War Reminiscences and Diary of Capt. Samuel T. Foster, Granbury's Texas Brigade, CSA* (Austin: University of Texas Press, 1980), 123; Ann K. Blomquist and Robert A. Taylor, ed., *This Cruel War: The Civil War Letters of Grant and Malinda Taylor, 1862-1865* (Macon, GA: Mercer University Press, 2000), 146.
[380] "The Diary of Captain George A. Bowen, 12th Regiment New Jersey Volunteers." *The Valley Forge Journal* 2 (1985), 189-190.
[381] William H. Runge, ed., *Four Years in the Confederate Artillery: The Diary of Private Henry Robinson Berkeley* (Chapel Hill: University of North Carolina Press, 1961), 112; Lane, ed., *"Dear Mother*, 55; Andrew R. Linscott to Parents, December 25, 1864, Andrew R. Linscott Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.

Obtaining some sleep amid bad weather encouraged soldiers to tout their strength and resourcefulness as martial men. "Wet and covered with mud, the ground cold and wet, — but pshaw! nothing to a soldier," Alabama private Hiram S. Williams boasted about bivouacking during the Atlanta Campaign, "We soon had a roaring fire, and laying some rails on the ground, I lay down [and] was soon sound asleep."[382] Both U.S. and Confederate troops took pride in their ability to defy the elements with blankets and makeshift beds. Even with a storm "almost drowning us and nearly washing us away, and roaring over us like angry gods," Haas asserted in April 1863 in Missouri, "We stretched out upon our improvised beds, pulled our wax-linen [another term for waterproof blanket] over and let the waters under the fence-rails sing our lullaby, grumbling and muttering."[383] Haas described the scene like he was listening to a thunderstorm at home while sleeping indoors in a comfortable bed, not lying outdoors on fence-rails with only a blanket shielding him from a raging storm.

Soldiers also sought to create makeshift shelters for their new beds using blankets and other accessible materials from the surrounding natural and built environments. They typically collaborated with their comrades to construct bivouac shelters and would then occupy them together. The type of shelter that they constructed was often determined by what was available, with the men making use of any materials that they could find to achieve a measure of protection from adverse weather. However, bivouac shelters were much less substantial than winter quarters, as the transient nature of bivouacking meant that they were erected in haste and only designed to last for a short time. All of the

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[382] Lewis N. Wynne and Robert A. Taylor, ed., *This War So Horrible: The Civil War Diary of Hiram Smith Williams* (Tuscaloosa: University of Alabama Press, 1993), 91-92.
[383] Christ, *"This Day We Marched Again,"* 63.

different styles of shelters were relatively simple and straightforward to build, but it was still a learning experience, with troops growing more proficient over time as they did it repeatedly and discovered which methods proved better than others. For the men in Civil War armies, part of becoming a capable soldier was learning to build their own temporary shelter from the elements with limited resources. The physical process of constructing these shelters was part of what made bivouacking an especially "manly" endeavor, as it was not just the weather itself but the need to quickly adapt to it that tested the troops and seemed like "real" soldiering.

The most prevalent form of bivouac shelter was constructed with one or two blankets stretched over poles, sticks, fence rails, or even rifle muskets. Soldiers utilized all types of blankets, but as the main purpose of blanket shelters was to shield the occupants from rain or wintry precipitation, they preferred rubber blankets or oilcloths for the roofs. The efficacy of blanket shelters was mixed. Both Confederates and Federals complained that their basic blanket shelters provided poor protection from adverse weather, making for disagreeable nights. Rainwater could leak through the stretched blanket, thoroughly drenching the occupants, while gusting wind could chill the men or blow rain in under the shelter roofs. Using blankets for tent material led to a common problem, as Sgt. John Crittenden of the 34th Alabama Infantry explained, "By the time we fixed up anything that would partially keep us dry, we would have scarcely anything to lie upon and cover with."[384] Consequently, the prospects of comfortable rest were slim. A number of troops expressed similar sentiments as Massachusetts corporal Joseph K.

[384] John Crittenden to Wife, October 31, 1863, John Crittenden Letters, Auburn University.

Taylor, who bemoaned in Virginia in November 1862 that a recent "night was the most uncomfortable one I have spent since I enlisted…the rain leaked in and blew in and I got cold and wet and fairly chilled through."[385]

Soldiers learned to build more substantial styles of blanket shelters to avoid these hardships. Writing in his diary in March 1864 in Arkansas, Wisconsin private Haas recorded a detailed description of how troops designed and constructed an elaborate type of blanket shelter:

> [F]or we had no tents, necessity is the mother of wisdom. Rain has fallen and it is raining still. Two soldiers chum together. Out came the pocket knife. We cut two forked sticks. For up we put them into the ground, about seven feet apart. Now a pole over the stick and then the two rolls of oilcloth over the pole and the sides fastened to the ground. Now brush and leaves on the ground inside. That gives room & bed for two. From the gable end we crawl in, lie down and sleep. That is soldier's bivouac. If rain is very copious, then fence rails go below the brush, and grass over the rails. Then the water can flow below. We go in and out on all fours.[386]

Soldiers like Haas aimed to ensure their blanket shelters offered more protection than the basic types by securely fastening the sides of blanket roofs to the ground and adding beds of fence rails, straw, or other materials. Many other men followed a comparable approach, and sometimes they even dug small ditches around the perimeter of their makeshift housing to try to prevent flooding. Shielded on nearly all sides from the elements, occupants reported that these methods allowed them to remain dry and comfortable, not to mention able to enjoy a night of sound and refreshing sleep. The day after his miserable night in a basic blanket shelter, Taylor was determined to not repeat

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[385] Kevin C. Murphy, ed., *The Civil War Letters of Joseph K. Taylor of the Thirty-Seventh Massachusetts Volunteer Infantry* (Lewistown, NY: Edwin Mellen Press, 1998), 65.
[386] Christ, *"This Day We Marched Again"*, 92.

the experience and built a more substantial version with a comrade.[387] Artillerists in both armies created bivouac shelters along similar lines as the elaborate blanket ones, but rather than use blankets, they stretched their tarpaulins (canvas cannon covers) as a roof to protect themselves from precipitation. Lauding such shelters, Wisconsin artilleryman William Ball observed that even though "Last evening it commenced drizzling, then sleeting and finally snowing…We slept as cosy as you please under our tarpaulins on a foot of straw."[388]

U.S. and Confederate soldiers also constructed various other forms of improvised shelters at their bivouac sites. Some men made "camp huts" of fence rails covered with foliage or corn stalks, while others put up shelters of brush or "bough houses," and still others tore boards off nearby buildings to erect "rude sheds."[389] At times, troops even stripped the bark from trees in the vicinity to build temporary quarters. One man who constructed a bark shelter, Tennessee lieutenant George W. Dillon, aptly described the determination and resourcefulness demonstrated by bivouacking soldiers trying to adapt to weather-related difficulties. In Georgia in April 1864, Dillon declared, "During our course of experience for the last 3 years we have often had occasion to witness the truth

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[387] Murphy, *The Civil War Letters of Joseph K. Taylor of the Thirty-Seventh Massachusetts Volunteer Infantry*, 65.
[388] William H. Ball to Elizabeth M. Smock, October 23, 1862, William H. Ball Letters, Auburn University.
[389] Joseph R. Reinhart, ed., *A German Hurrah! Civil War Letters of Friedrich Bertsch and Wilhelm Stängel, 9th Ohio Infantry* (Kent, OH: Kent State University Press, 2010), 124; George M. Blackburn, ed., *"Dear Carrie…": The Civil War Letters of Thomas N. Stevens* (Mount Pleasant, MI: Clarke Historical Library, 1984), 178; Norman L. Ritchie, ed., *Four Years in the First New York Light Artillery: The Papers of David F. Ritchie* (Hamilton, NY: Edmonston Publishing, 1997), 205; Holcomb, *Southern Sons, Northern Soldiers*, 95.

of this old maxim 'where there is a will there is a way.'"[390] Similar to blanket shelters, the effectiveness of these other types of bivouac quarters varied. Some soldiers complained that roof coverings of vegetation did little to shield them from pouring rain or cold temperatures, while others observed that though crude and humble, their shelters composed of timber materials protected them and proved comfortable.[391]

Troops showed little concern that the fence rails, boards, straw, and various other materials that they used for both their improvised shelters and beds were property taken from civilians. As with stealing timber for campfires, most bivouacking soldiers generally considered their own need for protection from inclement weather and desire for comfortable rest as outweighing the interests of noncombatants. "Military needs triumphed over civilian society and the prevalent values of antebellum culture," Joan Cashin argues about this kind of scavenging, "Most of the warriors in both armies – blue and gray – privileged their own needs over everything else."[392] Infantryman Caleb H. Beal, who served in both New York and Massachusetts regiments, spoke for many Federals and Confederates when we noted, "it seemed too bad" that they had to destroy civilian property for shelter, "but we're bound to lay comfortable when we can."[393] Tentless soldiers seized massive amounts of material resources from civilians throughout

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[390] George Washington Dillon Diary, April 26, 1864, Tennessee State Library and Archive.
[391] Reinhart, *A German Hurrah!*, 124; James E. McBeth to William E. Conrow, May 5, 1862, Edmond Family Collection. New York Historical Society, Civil War Primary Source Documents Collection; Holcomb, *Southern Sons, Northern Soldiers*, 95.
[392] Cashin, *War Stuff*, 3-4.
[393] Caleb H. Beal to Parents, October 1, 1861, Caleb Hadley Beal Correspondence. Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.

the war, irrespective of military policies or their commander's orders on foraging.[394] "When a camping ground is reached, no sooner are the arms stacked and ranks broken than the men rush for the nearest fences, barns, etc. yelling like so many savages," Iowa sergeant Remley explained in a letter home from Louisiana in the fall of 1863, "Whoever is quickest and gets the most boards before guards are put out is the best off. Fences, barns, negro quarters, etc. are torn down and carried to camp on short notice."[395] With the armies mainly operating in the South, it was largely the property of civilians – their farms and plantations – that was damaged and destroyed by troops.

In a similar vein, soldiers were untroubled by the environmental damage that they caused in their pursuit of comfort. At all types of encampments – bivouacs, tent campsites, and winter quarters – many of the natural resources that they utilized for fires, beds, and shelters were foraged from nearby woodlands, both private and government owned. This meant that men resisted one aspect of the environment around them by causing degradation to another. For instance, when Dillon and his comrades used tree bark to cover their makeshift shelters, "before night almost every chesnut tree near our encampment was stripped."[396] Environmental damage for the sake of temporary shelters, however, was relatively small compared to the massive quantities of wood culled from forests to fuel fires and build winter housing. Historian Megan Kate Nelson estimates, "if we assume an average of 10 acres of woodland to supply one fire a year, the Union and

[394] The intensive exploitation of civilians' material resources by Civil War soldiers is examined in Cashin's *War Stuff*.
[395] Holcomb, *Southern Sons, Northern Soldiers*, 95.
[396] Dillon Diary, April 26, 1864, Tennessee State Library and Archive.

Confederate armies annually consumed at least 400,000 acres of trees for firewood alone."[397]

Soldiers' voracious demand for timber to satisfy their fuel and shelter needs often caused the area around encampments, particularly more long-term ones, to become devoid of trees. As Nelson explains, "troops transformed huge swaths of the South's forests into landscapes of stumps."[398] With the frequent movement of armies throughout the South, deforestation occurred in numerous areas over the course of the war, but it was most extensive in regions where massive forces camped and campaigned for prolonged periods, such as central and northern Virginia.[399] "The trees outside of the camp have all been cut and used up long ago," Vermont private Fisk reported in Virginia in February 1862, "fuel has become scarce, so scarce that hardly a sound stump can be found in this vicinity which has not been chipped off close to the ground."[400] Ironically, by cutting down all the trees around their campsites, soldiers caused wood scarcity, forcing them to travel miles, including during bad weather, to find timber to haul back to camp. Beyond shortages, deforestation had an impact on the local environment, such as by increasing soil erosion and harming animal and plant species that lived in forests.[401] No matter whether they were encamping in tents, winter cabins, or bivouac shelters, Civil War soldiers raided the natural world in order to protect themselves from the natural world.

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[397] Megan Kate Nelson, *Ruin Nation: Destruction and the American Civil War* (Athens: University of Georgia Press, 2012), 152.
[398] Nelson, *Ruin Nation*, 104.
[399] Nelson, *Ruin Nation*, 134-137 and 151-152; Cashin, *War Stuff*, 104-107 and 163-164.
[400] Rosenblatt and Rosenblatt, *Hard Marching Every Day*, 8.
[401] Nelson, *Ruin Nation*, 136; Cashin, *War Stuff*, 104-105.

Psychological Adaptions

When physical responses failed to mitigate weather-related challenges, many bivouacking soldiers turned to psychological adaptions to cope. For men unable to protect their bodies from the elements, various types of coping mechanisms allowed them to better deal with adverse conditions by protecting their mental and emotional health. Some soldiers managed the stresses of bivouacking by finding solace and strength in religion, thanking God for the ability to survive relentless exposure to all kinds of weather. "God only knows how I keep up. It has rained here nearly every day for the last two weeks," Alabama private Grant Taylor reported while campaigning in Georgia in June 1864, "I get wet and let my clothes dry on me and of a night tumble down on the wet leaves or grass and get up wet next morning. The mercies of God alone keeps me up."[402] A number of troops attributed continued good health with God's will and favor. In a letter to his sister, Pvt. George Cox of the 1st Ohio Light Artillery wrote, "I can not close these few lines without thanking Divine Providence to think that myself along with some others have slept with the canopy of heaven above us for a covering and have never had a cold, not even provided with a blanket, while others who were better protected have left us forever – never more to return."[403] Although they lacked shelter from the elements, religious soldiers like Taylor and Cox believed they had God watching over them. These

[402] Ann K. Blomquist and Robert A. Taylor, ed., *This Cruel War: The Civil War Letters of Grant and Malinda Taylor, 1862-1865* (Macon, GA: Mercer University Press, 2000), 257.
[403] George B. Cox to Sister, April 24, 1862, George B. Cox Papers, Filson Historical Society.

men chose to focus on God's will over their survival but did not express the comparable belief that God had caused the harsh weather in the first place.[404]

Humor was another preferred coping tool, with tentless troops laughing and joking about the problems caused by the weather. At a bivouac in Tennessee during a rainstorm, Wisconsin sergeant James K. Newton observed the contrast between those who did and did not use humor to cope. "Some men were grumbling and growling all day long, others were laughing and joking and "carrying on" in every way imaginable to make fun, and keep up the spirits of the others," Newton wrote to his parents, "As a general rule you can expect more fun in camp on an unpleasant day than any other."[405] Men would often laugh about their misadventures involving the weather, such as their makeshift shelters leaking or even blowing down. By using humor, soldiers could distance themselves from the difficulties of their situation and pass the time enjoyably with their comrades, maintaining good morale.[406]

Many bivouacking Federals and Confederates coped by connecting their weather-related suffering with their support of their respective sides' war effort. Troops were more willing to spend nights with no shelter from the elements when they knew it was part of an ongoing military operation that could result in a success for their army, inflicting a defeat on the enemy. While pursuing Confederate forces on the Virginia Peninsula in May 1862, Rhode Island sergeant Elisha Hunt Rhodes asserted, "It rained

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[404] An example of a broader study of this sort of providential thinking in the Civil War is George C. Rable, *God's Almost Chosen Peoples: A Religious History of the American Civil War* (Chapel Hill: University of North Carolina Press, 2010).
[405] Stephen E. Ambrose, ed., *A Wisconsin Boy in Dixie: Civil War Letters of James K. Newton* (Madison: University of Wisconsin Press, 1961), 111.
[406] An example of a broader study of the use of humor in the Civil War is Cameron C. Nickels, *Civil War Humor* (Jackson: University Press of Mississippi, 2010).

hard all night, and we lay in the mud and water but felt happy, for now it was our turn to chase and the Rebels to run."[407] Other soldiers' sense of patriotism was not dampened by their uncomfortable encounters with the weather and actually helped sustain them. These men believed that the rigors of bivouacking were worthwhile and endurable because of the importance of the cause for which their side was fighting, ranging from national reunion to independence, and emancipation to slavery. "There was a time for over a week that we didn't even have a tent to cover our heads, and it rained almost all the time," South Carolina private Richard "Dick" Simpson wrote in August 1861, "But what is all that when we consider the cause for which it is done."[408] To soldiers with strong feelings of patriotism, facing inclement weather with little means of protecting themselves was a necessary sacrifice on behalf of the U.S. or the Confederacy.

Alcohol also helped men cope with adverse weather. Though a temperance movement had swept the nation before the war, some Americans in the mid-nineteenth century still held the belief that liquor had important medicinal qualities. And when the Civil War began, the Union and Confederate armies adopted policies that reflected this belief. To most military officials, the regulated consumption of alcohol maintained the health of soldiers. As historian Megan Bever explains, "Both Union and Confederate medical officials believed that liquor acted medicinally to stimulate men against illness and battle wounds, and their ideas about liquor's usefulness expanded beyond the medical departments and encouraged officers to issue rations to stave off the effects of

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[407] Robert Hunt Rhodes, ed., *All For the Union: The Civil War Diary and Letters of Elisha Hunt Rhodes* (New York: Orion Books, 1985), 64.
[408] Guy R. Everson and Edward H. Simpson, Jr., ed., *Far, Far from Home": The Wartime Letters of Dick and Tally Simpson, Third South Carolina Volunteers* (New York: Oxford University Press, 1994), 63.

exposure and fatigue."[409] Civil War physicians thought that alcohol was important as a stimulant, a substance that increases activity in the body's central nervous system, but while liquor does have some stimulant effects, it is actually classified today as a depressant, slowing down the central nervous system. As such, alcohol has a dulling impact on the senses and creates feelings of relaxation, allowing the drinker to distance themselves from difficulties and stressors that they could be facing, such as those imposed by the elements.[410]

U.S. and Confederate officers were allowed to drink and keep private stores of liquor as a privilege of their rank, while enlisted men were provided with rations of alcohol in specific situations. The distribution of spirit rations was above all dictated by the supply available to the armies, and as with other aspects of military logistics, Confederate forces were often beset by shortages. Whiskey was the favored and most prevalent type of liquor that troops received, but the armies also utilized brandy and sherry. Besides physicians in hospital settings, commanding officers, ranging from high-level generals to lower-ranking regimental and company commanders, decided when to distribute rations of alcohol to the enlisted men under their command. Rations fluctuated across time and space depending on availability and commanders' preferences, but one of the primary times when men were given a spirit ration was when they were exposed to inclement weather as they engaged in wartime activities such as camping, marching,

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[409] Megan L. Bever, *At War with King Alcohol: Debating Drinking and Masculinity in the Civil War* (Chapel Hill: University of North Carolina Press, 2022), 14.
[410] Bever, *At War with King Alcohol*, 15; Jean Hilliard, "Is Alcohol A Depressant?" *Addiction Center*, October 20, 2021, https://www.addictioncenter.com/alcohol/is-alcohol-a-depressant/; "Is Alcohol a Stimulant or a Depressant?" *EHN Canada*, September 15, 2022, https://www.edgewoodhealthnetwork.com/resources/blog/is-alcohol-a-stimulant-or-a-depressant/.

picket or fatigue duty, and bivouacking.[411] "Sometimes we get two rations in a week, at other times one ration in two months," Massachusetts private Warren Freeman informed his parents from a bivouac in Virginia in September 1864, "After a long march in a rain or snow-storm, or sleeping in the mud or on the wet ground, we are apt to get a ration of whiskey."[412]

Soldiers of all ranks agreed that the consumption of alcohol was beneficial to their physical health by mitigating the effects of cold and wet weather. However, modern studies have shown that this was a mistaken belief and that drinking while exposed to adverse weather posed health risks. Federals and Confederates appreciated the warmth that drinking spirit rations seemed to provide amid colder temperatures, but liquor actually only gives a false sensation of warmth in the body. Alcohol dilates the blood vessels just below the surface of the skin, increasing the blood flow to the body's periphery and causing that false feeling of warmth. The greater flow of blood to the skin's surface takes heat away from vital organs and decreases the core temperature of the body. The body normally defends itself against the cold by constricting blood vessels in order to restrict blood flow to the skin and thereby maintain a warm core temperature. Alcohol overrides this function, and studies have also found that drinking liquor reduces

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[411] Bever, *At War with King Alcohol*, 14-16 and 22; U.S. War Department, *Revised United States Army Regulations of 1861* (Washington: Government Printing Office, 1863), 247; War Department of the Confederate States of America, *Regulations for the Subsistence Department of the Confederate States of America* (Richmond: n.p., 1861), 45; War Department of the Confederate States of America, *Regulations for the Subsistence Department of the Confederate States of America* (Richmond: n.p., 1862), 13.

[412] Freeman, *Letters From Two Brothers*, 143.

the ability to shiver, one of the body's physiological mechanisms for keeping warm in cold weather.[413]

Consuming alcohol, however, was still useful for its psychological effects. For troops trying to endure exposure to harsh weather as they bivouacked or engaged in other aspects of wartime service, rations of whiskey and other types of liquor could help relieve their mental and emotional strains. Not all men drank alcohol, but many did and valued the relief that it seemed to offer them amid bad weather. While campaigning in Virginia, Federal soldier Beal observed, "till lately the whole army has had two rations a day on account of the severe weather and poor water, but it is stopped for the present and the soldiers miss it."[414] Given their belief in the medicinal properties of liquor, soldiers on both sides unsurprisingly sought to obtain alcohol outside of their rations. "Over the course of the war, soldiers adapted these official uses to fit their individual health and recreational regimens," historian Bever argues, "Liquor, they believed, fortified their bodies and minds and kept them able to serve in and survive the war."[415]

Troops commonly relied on alcohol to cope with wet and cold weather even when official rations of liquor were not issued. Officers were permitted to keep their own stores of liquor, while enlisted men procured them from various sources such as camp sutlers and local civilian sellers, despite the efforts of military officials to limit such transactions.

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[413] Ashley Williams, "How Drinking Alcohol Makes You Vulnerable in Cold Weather," *AccuWeather*, December 28, 2018, https://www.accuweather.com/en/weather-news/how-drinking-alcohol-makes-you-vulnerable-in-cold-weather-2/433881#:~:text=New%20research%20has%20revealed%20a%20link%20between%20binge,Alcohol%20increases%20blood%20flow%20and%20relaxes%20blood%20vessels.
[414] Beal to Uncle, August 25, 1864, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[415] Bever, *At War with King Alcohol*, 7.

During a snowstorm in 1862, North Carolina private Louis Leon recorded in his diary, "We got some whiskey into camp, which tasted very good and made us forget the cold."[416] Drenched, mud-covered, and chilled, Corp. Samuel Storrow of the 44th Massachusetts Infantry was suffering intensely on an expedition in North Carolina when he received a drink of applejack from a comrade. "Never did I taste anything which did me the good that that did," Storrow wrote home, "It was just the occasion on which such medicine & such alone is beneficial. It gave me new life warmth & vigor as nothing else could have."[417] Men may not have fully understood all the effects of consuming alcohol, but for many, it was a way of finding a degree of physical and psychological relief and comfort amid cold or stormy conditions.

Different segments of American society and ideals of manhood in the mid-nineteenth century promoted disparate behaviors when it came to drinking alcohol, including advocating for temperance. But within the U.S. and Confederate armies, a large number of troops embraced a definition of masculinity that allowed for the consumption of liquor for health purposes.[418] To these individuals, alcohol was a tool that martial men and capable soldiers could use, both by strictly and loosely following military policies, when needed in order to help preserve their wellbeing and especially combat the impact of inclement weather. From soldiers' perspective, spending the night without tents for shelter from heavy rain or bitter cold was a perfectly reasonable time to drink alcohol as a form of self-care. With the widespread use of liquor in the military, men naturally

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[416] Louis Leon, *Diary of a Tar Heel Confederate Soldier* (Charlotte: Stone Publishing Company, 1913), 12.
[417] Samuel Storrow to Parents, November 26, 1862, Samuel Storrow Papers, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[418] Bever, *At War with King Alcohol*, 35-37.

misused and abused alcohol, and problems and disturbances related to drunkenness plagued Civil War armies. Most officers and enlisted men accepted alcohol use as a necessary part of military life, but they had little tolerance for overdrinking and condemned those who allowed liquor to interfere with their duties and responsibilities. Ultimately, the perceived health-promoting qualities of whiskey and other spirits outweighed military authorities' concerns over intoxication, and both sides continued to rely on alcohol for medicinal purposes throughout the war.[419]

Toughened by Exposure and Manhood

Bivouacking soldiers claimed that through their time spent encamping with no shelter, they were able to better endure the elements because they grew accustomed to the hardships. Amid wintry conditions in Virginia, Beal declared, "we have got so accustomed to it that when the weather is at a freezing point that we sleep in the open air with nothing over us but "The canopy of Heaven" and a Blanket and a fire at our feet, and sleep very comfortable at that."[420] Other men agreed with Beal that they learned over time how to sleep with little protection from either cold or wet conditions. "I have got so that I do not care anymore for rain than anything else now if I can get under something to shelter my face," Georgia lieutenant Ujanirtus Allen informed his wife in May 1862, "I can sleep under as many adverse circumstances as anyone I know."[421] Some troops

[419] Bever, *At War with King Alcohol*, 13-14, 27-28, 34.
[420] Beal to Parents, December 23, 1862, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[421] Randall Allen and Keith S. Bohannon, ed., *Campaigning with "Old Stonewall": Confederate Captain Ujanirtus Allen's Letters to His Wife* (Baton Rouge: Louisiana State University Press, 1998), 93.

marveled at how inured to exposure that they became, particularly considering how they would have felt about living outdoors in such bad weather before joining the army. Although waking one morning in Virginia "covered with a frost like snow," Massachusetts corporal Andrew Linscott had "slept warm and comfortable," writing to his parents that, "I should have thought it rather hard at home to go out at this time in the year to sleep on the ground but one can get used to most any thing I find."[422]

In part, claims about growing used to the rigors of bivouacking stem from acclimatization, the process by which their bodies physiologically adapted to deal with hotter or colder conditions through repeated exposure. For example, spending nights outdoors amid the bitter cold on a recurrent basis would have led to enhanced heat production by men's bodies, reducing the physical stress imposed by the elements. With psychological adjustments occurring concurrently with the physiological ones, soldiers' perceptions of comfort and discomfort regarding the weather and particularly the temperature evolved over the course of their service.[423] Beyond acclimatization, Federals and Confederates emphasized that they had hardened to the point that they could effectively deal with the full brunt of the weather even without shelter. "The fact of it is, those who are here are all iron," New York sergeant Hermon Clarke reported while campaigning in South Carolina in August 1863, "They have been through enough already

[422] Andrew R. Linscott to Mary, October 12, 1863, Andrew R. Linscott Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[423] Marcel Schweiker, Gesche M. Huebner, Boris R. M. Kingma, Rick Kramer, and Hannah Pallubinsky, "Drivers of Diversity in Human Thermal Perception – A Review for Holistic Comfort Models," *Temperature* 5, no. 4 (2018), 321; Pamela Smith and Cristián Henríquez, "Perception of Thermal Comfort in Outdoor Public Spaces in the Medium-Sized City of Chillán, Chile, During a Warm Summer," *Urban Climate* 30 (2019).

to kill anything but the toughest."[424] Soldiers on both sides took pride in attaining comfort and sleep at their bivouacs despite the limited options available to them, frequently boasting that they could "stand anything."[425] Writing in the Shenandoah Valley, Pvt. Irby Scott of the 12th Georgia Infantry bragged, "Lay down at night on the ground without a tent, with my clothes perfectly wet in a single blanket and sleep as sound as if on a feather bed…I have become so hardened as to stand anything."[426]

Civil War soldiers' thoughts on this matter are most clearly demonstrated in their discussions of sickness and health. Similar to camping with tents, men believed that prolonged exposure to drenching precipitation and laying on saturated or cold ground, normal facets of bivouacking, could result in illness.[427] However, many argued that their military service toughened them to the extent that they were able to fight off illness and maintain good health no matter the weather. Troops commented that situations that would likely have previously caused them to become sick when they were civilians at home no longer effected their physical wellbeing at all now that they were soldiers at war. "If a man was exposed one day at home to what our boys have to endure continually, it would be considered almost a miracle if he was not sick," Massachusetts lieutenant Charles

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[424] Harry F. Jackson and Thomas F. O'Donnell, ed., *Back Home in Oneida: Hermon Clarke and His Letters* (Syracuse: Syracuse University Press, 1965), 100-101.
[425] Josiah Marshall Favill, *The Diary of a Young Officer Serving with the Armies of the United States During the War of the Rebellion* (Chicago: R.R. Donnelley & Sons Company, 1909), 235; Evans, *The 16th Mississippi Infantry*, 131.
[426] Johnnie Perry Pearson, ed., *Lee and Jackson's Bloody Twelfth: The Letters of Irby Goodwin Scott, First Lieutenant, Company G, Putnam Light Infantry, Twelfth Georgia Volunteer Infantry* (Knoxville: University of Tennessee Press, 2010), 79.
[427] Robert C. Plumb, ed., *Your Brother in Arms: A Union Soldier's Odyssey* (Columbia: University of Missouri Press, 2011), 34; Coralou Peel Lassen, ed., *Dear Sarah: Letters Home from a Soldier of the Iron Brigade* (Bloomington: Indiana University Press, 1999), 49.

Brewster observed in Virginia, "here we get soaked through + through and lie down and sleep in them, and are obliged to, and yet we live through it all."[428] A number of troops were surprised that they could bear the pressures of the weather on a recurring basis without falling sick, and some of them proudly claimed that their health actually got better, not worse. Exposed to rain and cold for a week in November 1862, South Carolina sergeant McNeill asserted, "I did not for a moment imagine I could stand up under such continued exposure and fatigue, but my health has improved under it all, and I now feel much stouter than I have for several months."[429] By writing so much about how their ability to endure the weather had changed, soldiers heavily implied that civilians could not physically or mentally handle the hardships imposed by adverse conditions as well as they did.

Federals and Confederates filled their letters home with descriptions of their struggles against inclement weather at bivouac sites throughout the conflict in an effort to teach their families and friends about the realities of wartime life, or in the words of one man, "what old soldiers call soldiering."[430] Men believed that civilians far from the battlefronts and surrounded by the comforts of home could not possibly comprehend the challenges that encamping without tents entailed. "I wish the good folks at home could see us now. I rather think they would have a different idea of what a soldier's life is," Capt. Richard Cary of the 2nd Massachusetts Infantry explained to his wife, "Of course

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[428] David W. Blight, ed., *When This Cruel War Is Over: The Civil War Letters of Charles Harvey Brewster* (Amherst: University of Massachusetts Press, 1992), 148-149.
[429] Wyckoff, *The Civil War Letters of Alexander McNeill*, 169-170.
[430] Donald C. Elder III, ed., *Love Amid the Turmoil: The Civil War Letters of William and Mary Vermilion* (Iowa City: University of Iowa Press, 2003), 208.

we have pretty hard times – much harder than most people snug at home imagine."[431] Some men claimed that even if a civilian had been present at a bivouac, the noncombatant would not have been able to grasp how the combatants could tolerate harsh weather with only minimal protection. "If he were fresh from home and had been obliged to bivouac with us that night he might have thought it affliction enough to be in the army for it was a cold night," Massachusetts corporal Linscott related, "yet being used to this kind of life I slept warm and soundly on my couch of fragrant pine boughs."[432]

U.S. and Confederate troops may have desired families and friends to understand the hardships that they faced as they bivouacked, but just as importantly, they wanted civilians to recognize that a soldier's capacity to adapt and withstand adverse weather far surpassed that of noncombatants. In their view, the strength and resilience needed to endure inclement weather without tents or other significant forms of shelter was only possible for those like themselves who had experienced the trials of life in an army at war. Utilizing available equipment, building makeshift beds and shelters, employing coping strategies, toughening it out – all of tentless soldiers' responses to the weather contributed to their belief in their own sense of manhood. Troops could not always mitigate the difficulties caused by the elements, but as they stressed in their detailed accounts to those at home, they still managed to overcome the weather by enduring and surviving, and by doing so, proved that they were adhering to the ideals of martial

[431] Richard Cary to Wife, April 21, 1862, Richard Cary Letter, Massachusetts Historical Society.
[432] Linscott to Mary, December 26, 1864, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.

manhood. The men in Civil War armies aimed to make abundantly clear that being a good soldier was about standing against natural foes as well as human ones.

Chapter 4 – Manning Sentry Posts and Field Fortifications

Introduction

Massachusetts private George A. Hitchcock was posted as a picket by the Rappahannock River in Virginia for two hours on a January day in 1863. Exposed to a storm of piercing wind and driving snow, Hitchcock bundled up in his overcoat and blankets and tried to keep warm. "I trotted swiftly back and forth on my beat until completely exhausted I would sink down in the snow and rest for a few moments, then up and go it again," he wrote in his diary. Those two hours were brutally long and hard, and though Hitchcock had been soldiering for over five months, he was certain that he never suffered as much from the cold. By the time he was relieved and could return to camp, Hitchcock thought that he was in danger of perishing, admitting "I felt as if I could not have held out much longer."[433] Eleven months later, Hitchcock was stationed with his unit in a series of defensive positions dug into the earth around Knoxville, Tennessee. "Our condition can be better described than understood," he attested – it rained without interruption, pools of water collected in their shallow earthen fortifications, and they had to lay on the flooded ground to be shielded from enemy fire. Hitchcock and his comrades became "wet to the skin" and did not get "a wink of sleep for nearly thirty six hours."[434]

As Hitchcock's diary entries suggest, Civil War soldiers had to engage in many more military activities in adverse weather than just encamping and marching. One of the most common tasks that troops were assigned was standing guard or picket. Guard duty

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[433] Ronald G. Watson, ed., *"Death does seem to have all he can attend to": The Civil War Diary of an Andersonville Survivor*" (Jefferson, NC: McFarland & Company, 2014), 63.
[434] Watson, *"Death does seem to have all he can attend to,"* 127-128.

and picket duty during the war were similar, but the two assignments had distinct differences. Guards provided internal army policing, with men stationed on the perimeters of and at key points within campsites to maintain discipline and order. Pickets had the more important function of protecting military encampments from a surprise outside attack. Soldiers on picket duty were posted on the extreme outer edges of the encampment, even miles away from the main force. By forming multiple lines of security and defense, pickets usually had time to alert the army of an enemy attack.

Typically, entire regiments were assigned to guard or picket duty and were divided into three groups, or "reliefs." One party of soldiers would be required to stand alert at their posts, either walking back and forth on specified beats or manning positions in camp or forward outposts outside it, while the other two reliefs were permitted to rest. As Indiana corporal William B. Miller related, the men on active duty "are relieved every two hours which makes two hours out of Six or 'two on and four off' as is known in the Army."[435] The rotation of the reliefs would continue for shifts that generally lasted between twenty-four to seventy-two hours. These practices were standard for both the U.S. and Confederate armies, but they did vary at different times and places throughout the war. In early 1863 in Virginia, for example, New Jersey infantryman George Bowen noted, "The detail was divided into 4 reliefs, each to stand [picket] guard 6 hours."[436] During their hours off, soldiers could sometimes retire to tents within the encampment or to substantial types of shelter outside it, but oftentimes, particularly for pickets, they had

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[435] Jeffrey L. Patrick and Robert J. Willey, eds., *Fighting for Liberty and Right: The Civil War Diary of William Bluffton Miller, First Sergeant, Company K, Seventy-fifth Indiana Volunteer Infantry* (Knoxville: University of Tennessee Press, 2005), 75-76.
[436] "The Diary of Captain George A. Bowen, 12th Regiment New Jersey Volunteers," *The Valley Forge Journal* 2 (1984), 122.

to try to rest in the open air at reserve positions. The burdens of picket and guard duty fell on junior officers and enlisted men; higher-ranking officers were exempt as a privilege of their rank. Even then, lower-ranking officers such as sergeants and captains benefited from their status by only having to station the sentries, periodically inspect the different posts, and remain at the reserve positions. It was mainly privates and corporals who had the most difficult responsibility – manning the outposts or pacing beats for hours on end.

Soldiers had to stand guard or picket irrespective of the weather, and as with other aspects of military service, the difficulty of this assignment was closely connected with the prevailing meteorological conditions. Most men did not mind performing picket or guard duty in fair weather featuring clear skies and moderate temperatures, and some even genuinely liked it. These men could enjoy gazing at the stars and meteors while at their posts on clear nights, or they may find it pleasant to bask in good weather at picket reserves while surrounded by the sights and sounds of wildlife.[437] In inclement conditions, however, Iowa private William H. H. Clayton spoke for many when he asserted that of the tasks given to troops while encamped, "Standing guard [or picket] is the hardest part of soldiering. It is not very pleasant to stand guard while the rain is pouring down, nor of a night when it is freezing right hard."[438] Federals and Confederates pacing a beat or manning a post inside or outside campsites had little to no protection

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[437] Patrick and Willey, *Fighting for Liberty and Right*, 90; A. Gibert Kennedy, ed., *A South Carolina Upcountry Saga: The Civil War Letters of Barham Bobo Foster and His Family, 1860-1863* (Columbia: University of South Carolina Press, 2019), 161; Kurt H. Hackemer, ed., *To Rescue My Native Land: The Civil War Letters of William T. Shepherd, First Illinois Light Artillery* (Knoxville: University of Tennessee Press, 2005), 46; Charles Barnard Fox to Ruth Ann Prouty, April 11, 1862, Charles Barnard Fox Papers, Massachusetts Historical Society.

[438] Donald C. Elder III, ed., *A Damned Iowa Greyhound: The Civil War Letters of William Henry Harrison Clayton* (Iowa City: University of Iowa Press, 1998), 32.

from the elements and simply had to, as several put it, "stand and take it."[439] Many pickets and guards also had to spend their hours off-duty and on reserve without any significant shelter from adverse weather.

Guard and picket duty was not the only time that Civil War soldiers had to remain in place as they contended with bad weather; troops occupying field fortifications could not move from their positions either. Also known as fieldworks, field fortifications were built from dirt and wood and were meant to be temporary, only being used for the duration of a single battle or campaign. Although the defenses that ringed major cities (like Washington, D.C., and Richmond) and other important places across the country were more semipermanent, designed to last the entire war, they were also technically field fortifications. Fieldworks typically consisted of features such as an earthwork (a ditch and a dirt parapet), breastwork (a fortification made of piled logs, fence rails, or other materials built to breast height), and entrenchments (long deep holes dug out of the ground). Ahead of the main fortified line, armies sometimes dug a series of rifle pits, a single hole for one or more men posted as pickets (guarding the army's front) or skirmishers (harassing the enemy with musket fire).[440] "When the armies remained within

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[439] Jesse Hyde Diary, July 30, 1862, Kentucky Historical Society; George H. Cadman to Wife, June 30, 1863, George Hovey Cadman Papers, Southern Historical Collection, University of North Carolina.

[440] Information on Civil War field fortifications drawn from Earl J. Hess, *Field Armies and Fortifications in the Civil War: The Eastern Campaigns, 1861-1864* (Chapel Hill: University of North Carolina Press, 2005); Earl J. Hess, *Trench Warfare under Grant and Lee: Field Fortifications in the Overland Campaign* (Chapel Hill: University of North Carolina Press, 2007); Earl J. Hess, *In the Trenches at Petersburg: Field Fortifications and Confederate Defeat* (Chapel Hill: University of North Carolina Press, 2009); Earl J. Hess, *Fighting for Atlanta: Tactics, Terrain, and Trenches in the Civil War* (Chapel Hill: University of North Carolina Press, 2018). A list of Civil War fortification terminology available at "A Glossary of Fortification Terms," *American Battlefield Trust*, https://www.battlefields.org/learn/articles/glossary-fortification-terms.

musket range of each other for several days, officers and men indulged their desire for protection by digging elaborate fieldworks," historian Earl J. Hess explains, "Proximity to the enemy and exposure to danger were key factors driving the use of field fortifications."[441] Field fortifications were utilized in many campaigns throughout the war in both the East and West, but they became a major facet of operations in 1864, when the opposing armies in Virginia and Georgia stayed in close contact for extended periods of time.[442]

The use of fieldworks became increasingly sophisticated over the course of the conflict, but the experience of enlisted men and junior officers remained the same in terms of their interactions with the natural environment. Soldiers constructed the field fortifications and were stationed in them for anywhere from hours, days, even weeks at a time, in all manner of weather. Fieldworks provided protection from enemy bullets and artillery shells, but not from inclement conditions like intense heat or torrential rain. Echoing a common refrain among troops manning fortified lines, Tennessee lieutenant John Earnest reported, "Remained in the trenches all day without the slightest shelter from rain or sun" in May 1863 during the Vicksburg Campaign.[443]

Federals and Confederates manning guard posts, picket reserves, and field fortifications did what they could to mitigate harsh weather and make themselves as comfortable as possible, but they still faced a unique challenge compared to other military activities: they had to remain still. They could not march away from a muddy

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[441] Hess, *Field Armies and Fortifications in the Civil War*, 312.
[442] Hess, *Fighting for Atlanta*, xiii.
[443] Charles Swift Northern III, ed., *All Right Let Them Come: The Civil War Diary of an East Tennessee Confederate (*Knoxville: University of Tennessee Press, 2003), 93.

road or anticipate finding a better place to encamp on a stormy night, as the men on the move did. They were physically stuck, which meant they were also mentally stuck as well, with less feeling of control over their situation. No matter how they tried to alleviate the hardships, the essence of their duty in these positions was simply to endure the weather. Troops could not adequately fulfill their jobs unless they withstood the pressures of the weather for however long their duty lasted, be it hours, days, or weeks, making it one of the greatest mental tests that they faced as they served in an army at war.

The confines of a guard post, a picket reserve position, or a field fortification were a battlefield, just one where soldiers grappled with a natural adversary rather than a human one. Confederate and U.S. troops filled their letters with accounts of their encounters with the elements in their determination to show that enduring the weather was a duty of soldiering, one that was as necessary and important as guarding the perimeter of a military encampment or holding a fieldwork in the presence of the enemy. To successfully stand the rigors of manning picket posts or field defenses amid inclement weather was to once again prove that one epitomized the qualities of a good soldier and a martial man.

Guard and Picket Posts

Weather conditions that were wet, cold, or both overwhelmingly posed the most problems for guards and pickets.[444] In rainstorms, men on duty were often soaked and

[444] At times, to simply reach their picket posts outside of encampments and later return, troops had to walk, possibly for several miles, amid inclement weather and its effects on the landscape. These movements could be as difficult, unpleasant, and fatiguing as a regular march in similar types of adverse weather.

buffeted by the wind as they stood or walked their beats on damp or muddy ground. U.S. sergeant Charles Bowen described the experiences of many when he noted that taking the rain without any covering left him, "Wet through so that the water ran in streams from every part of my clothes."[445] Hours at their posts in wet weather could produce feelings of misery and discouragement. "We were soon in a most wretched plight," Maine private John Haley lamented in late 1864 in Virginia, "We felt very much like disposing of ourselves for old, dirty rags, and passed the night in a state of severe depression and intense desire for daylight."[446] A rubber blanket or oilcloth was the most desired piece of equipment for avoiding such mental distress by allowing pickets and guards to stay relatively dry during their shifts. As Ohio private Henry G. Shedd recorded in Tennessee, "A rubber blanket is the best thing a soldier can have to protect him when on picket in bad weather."[447] Cold temperatures and wintry precipitation presented greater challenges, even life-threatening ones, to soldiers performing guard or picket duty. Comfort was essentially an impossibility, and men commonly struggled in vain to stay warm. Pvt. J. Watson Henderson of the 30th Mississippi Infantry related the thoughts of troops in both armies when he claimed, "it was so cold and windy that I almost froze" after a long shift on guard in April 1863.[448]

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[445] Edward K. Cassedy, ed., *Dear Friends at Home: The Civil War Letters and Diaries of Sergeant Charles T. Bowen* (Baltimore, MD: Butternut & Blue, 2001), 194.
[446] Ruth L. Silliker, ed., *The Rebel Yell & the Yankee Hurrah: The Civil War Journal of a Maine Volunteer* (Lanham, MD: Down East Books, 1985), 229.
[447] Henry G. Shedd Diary, April 10, 1864, Civil War Times Illustrated Collection, U.S. Army Heritage and Education Center (USAHEC).
[448] J. Watson Henderson to Wife, April 4, 1863, J. Watson Henderson Collection, University of Mississippi Libraries.

One of the primary reasons that men suffered so much in cold weather was because of a lack of fires to provide warmth. In some instances, guards were permitted to have fires, but most of the time, particularly on the outer picket line, fires were strictly prohibited because they could reveal sentinels' position to the opposing side and attract enemy gunfire. No fires meant excruciating shifts for soldiers on duty amid low temperatures. Suffering could reach the point that some men disobeyed orders by kindling fires at their post. "It was a keen frosty night & the men were wide awake," Michigan lieutenant Charles Haydon observed while inspecting forward pickets near Washington, D.C., in December 1861, "They kept small fires, but well covered, swearing they would rather be shot than freeze to death."[449] Having fires was a matter of survival to these troops, even if it placed them at risk of being punished by their commanding officers or fired on by the enemy.

Most pickets and guards did follow orders regarding no fires, and consequently had to rely solely on their clothing and equipment to protect them from cold and wintry conditions. Many were ill-prepared for their hours on duty, lacking adequate overcoats, blankets, or shoes. Although these men undoubtedly fared worst, even troops who did possess appropriate equipment – overcoats and waterproof blankets – found that they were not enough in severe winter weather. "I was so cold, wet and stiff that I could hardly move," Virginia artillerist Henry R. Berkeley complained after a four-hour shift in rain and sleet, "and my oilcloth, which I had over my overcoat around my shoulders, and my hat were covered thick with ice."[450] To try to warm their bodies, guards and pickets

[449] Stephen W. Sears, ed., *For Country, Cause & Leader: The Civil War Journal of Charles B. Haydon* (New York: Ticknor & Fields, 1993), 156.
[450] Runge, *Four Years in the Confederate Artillery*, 64.

commonly turned to physical activity. Men assigned to walk beats would move at a much brisker pace than usual for the entirety of their shifts. Their goal was not to make themselves comfortable, but simply to stay warm enough to, in the words of numerous troops, "keep from freezing."[451]

In a letter to his older sister, New Jersey private Alonzo B. Searing described dealing with the difficulties of a frigid night on duty in Virginia in late 1863. Though the men wore overcoats and wrapped their woolen blankets tightly around themselves, Searing explained, "It was so very cold that we had to keep walking our picket beat steadily all night long and before morning we were so completely chilled that we could hear each other's teeth chattering."[452] As Searing implied, troops hurriedly walking their beats still suffered terribly in the cold, but they were actually the fortunate ones. Many pickets and guards were stationed at a specific post and could not move away from it, particularly when close to the opposing army. These men had to remain mostly still as they kept an eye on the nearby enemy, watching for any threats, and could not try to warm themselves through physical exertions. Reflecting on the plight of stationary pickets at fireless outposts in freezing conditions, Massachusetts private Edward L. Edes concluded, "I should have thought that they would have perished."[453]

Physical adaptions were few, but men on duty could utilize psychological ones to help endure cold and wet weather. A number of pickets and guards coped by linking their

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[451] Sears, *For Country, Cause & Leader*, 141; Kenneth C. Turino, ed., *The Civil War Diary of Lieut. J. E. Hodgkins, 19th Massachusetts Volunteers, From August 11, 1862 to June 3, 1865* (Camden, ME: Picton Press, 1994), 16.
[452] Mary Searing O'Shaughnessy, ed., *Alonzo's War: Letters from a Young Civil War Soldier* (Lanham, MD: Fairleigh Dickinson University Press, 2012), 126.
[453] Edward L. Edes to Sister, April 6, 1863, Edward Louis Edes Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.

struggles against the weather to a higher purpose – service to either the Union or Confederate cause. For some, this meant their sense of personal duty and responsibility as soldiers fighting on behalf of their country. On picket in a snowstorm in early 1864, Pvt. Charles H. Lynch of the 18th Connecticut Infantry wrote in his diary, "The duty must be attended to no matter how severe it may be. This is a soldier's life. War is cruel."[454] Lynch noted on another occasion during a rainstorm, "Between the rain and the mud we are in misery. Duty must be attended to…We are enduring hardships for our country."[455] War was not supposed to be an easy or pain-free endeavor, as men like Lynch observed, and soldiers had no choice but to face such disagreeable situations as part of serving their respective side's war effort.

As Massachusetts private Warren Freeman declared, "It is rather tough these cold and stormy nights, but a soldier is expected to stand it without flinching – that is duty."[456] This understanding of the rigors of war – that there was a reason for their suffering – helped sustain men during their long hours exposed to the elements. Other guards and pickets coped with the difficulties by keeping in mind that they were protecting their encampments from enemy attacks. "The cold chilly frost of Heaven falls Merciless upon the poor Centrie [sentry]…," Alabama private William C. McClellan recorded in Virginia in October 1861, "But in doing this I am conscious of occupying One of the most responsible positions it is possible for man to occupy Watching over The lives of

[454] Charles H. Lynch, *The Civil War Diary, 1862-1865, of Charles H. Lynch, 18th Conn. Vol's* (Hartford: Case, Lockwood & Brainard Co., 1915), 43.
[455] Lynch, *The Civil War Diary*, 58.
[456] Warren H. Freeman, *Letters From Two Brothers Serving in the War for the Union to Their Family at Home in West Cambridge, Mass.* (Cambridge: Houghton, 1871), 7.

thousands."[457] These men may have been in physical misery, but they could mentally comfort themselves with the knowledge that their time on duty was necessary and meaningful, as the safety of their comrades depended on their watchfulness.

Despite these efforts to stay mentally focused, the weather became too much for some sentries to endure. They left their posts for a time, seeking shelter and warmth within tents or nearby structures or towns and intending to return to their position before their relief arrived.[458] "While on my beat I suffered severely from the cold, but a teamsters tent near my beat had a magnetic power over me as well as the sentinel next my beat," Massachusetts private Hitchcock confessed to his diary, "so we took turns in keeping guard over the tent, one to keep off intruders and the other to take care of the fire inside."[459] Men abandoned their posts at their own peril, however, because if caught by superior officers, they could be court-martialed for neglect of duty and subjected to severe punishment, including execution. Soldiers in agony from the weather may have believed that leaving their position was excusable in such harsh conditions, but the military justice system was not so forgiving.

Some pickets and guards who remained at their posts fell victim to cold-related disorders affecting their bodies. Men suffered frostbite to their extremities. "While I was standing on guard facing the Ohio river on that cold New Year in 1865 my feet froze and they had to carry me off duty," Pvt. Peter Bruner of the 12th U.S. Colored Heavy Artillery

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[457] John C. Carter, ed., *Welcome the Hour of Conflict: William Cowen McClellan and the 9th Alabama* (Tuscaloosa: University of Alabama Press, 2007), 97.
[458] Kevin E. O'Brien, ed., *My Life in the Irish Brigade: The Civil War Memoirs of Private William McCarter, 116th Pennsylvania Infantry* (Cambridge: Da Capo Press, 2003), 97-98.
[459] Watson, *"Death does seem to have all he can attend to,"* 47.

recalled, "My feet froze so badly that my toe nails came off."[460] Other soldiers were afflicted by a much more serious ailment – hypothermia. Hypothermia is caused by prolonged exposure to very cold weather or immersion in cold water. Wearing clothing that is not warm enough for the weather, being unable to remove wet clothes, or move to a warm, dry location – all normal situations for Civil War troops – increases the risk of hypothermia. The medical condition occurs when the body loses heat faster than it can be produced, leading to lower body temperature, which prevents various organ systems from functioning properly. Hypothermia is especially dangerous because body cooling first affects the brain, interfering with a person's ability to think clearly. The victim therefore may not be aware of their condition and not take any action to reverse their falling body temperature. Other symptoms include excessive shivering, slurred speech, slowed breathing, disorientation, lack of coordination, tiredness, and loss of consciousness. If not treated, hypothermia can result in heart and respiratory system failure, and eventually to death.[461]

The term "hypothermia" was first recorded in the later nineteenth century, but Civil War soldiers described men suffering from the condition, which they referred to as nearly or actually freezing to death, while on duty in wintry weather. Some troops were reportedly so incapacitated by the cold that they needed to be carried from their posts, as they were unable to walk. Pennsylvania private William McCarter provides a vivid

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[460] Peter Bruner, *A Slave's Adventures Toward Freedom. Not Fiction, but the True Story of a Struggle* (Oxford, OH: s. n., 1918), 46.
[461] Lauralee Sherwood, *Human Physiology: From Cells to Systems*, 9th Edition (Boston: Cengage Learning, 2016), 634; Mayo Clinic Staff, "Hypothermia," *Mayo Foundation for Medical Education and Research*, https://www.mayoclinic.org/diseases-conditions/hypothermia/symptoms-causes/syc-20352682.

account in his memoir, as he appeared to experience hypothermia himself while standing picket on an intensely cold and stormy night in Virginia in late November 1862. "I entered upon my trying and lonely duty with a fear which I cannot describe…," McCarter recalled over a decade later, "I truly feared that I would be frozen to death on my post."[462] Required to remain within the short bounds of his post, McCarter could do little to keep warm by moving around and increasingly suffered as his shift progressed. McCarter explained, "I soon felt an unusual sleep sensation creeping over me and a desire to lay down on the cold, wet ground. It was with great difficulty that I did not do so."[463] He determined to perform his duty until relieved, but the next thing that he remembered was awakening in a local building being used as a headquarters and reserve post for the units on picket. McCarter's fears had almost been realized, he had nearly frozen to death.

McCarter learned later that his relief had found him in a stooped posture at his post, debilitated and barely responsive. He had been carried to the picket headquarters, where he was placed on a bale of cotton near a blazing fire. A regimental surgeon then had the unconscious McCarter covered up with woolen blankets. All of these measures are known to be effective at treating hypothermia, as they help warm the victim's body temperature back to normal levels.[464] McCarter eventually regained consciousness eight hours after he had been found, and noted, "My limbs were stiff and painful. My ears

[462] O'Brien, *My Life in the Irish* Brigade, 97.
[463] O'Brien, *My Life in the Irish* Brigade, 98.
[464] Mayo Clinic Staff, "Hypothermia."

seemed dead to feeling and touch."[465] He was given a full cup of hot coffee, another efficient way to help warm the body.

McCarter was fortunate to have survived, but others were not as lucky. Soon after McCarter woke up, the bodies of three pickets who had died of hypothermia at their posts were brought to the headquarters. "The arrival of these corpses created feelings of sorrow and melancholy in all present," McCarter related, "I was particularly affected when I reflected upon my own narrow and providential escape from a similar death."[466] Although hypothermia was never as widespread as other weather-related ailments, pickets were reported to have died or been rendered unfit for duty for days after exposure to severe cold throughout the winter months of the Civil War.[467] Soldiers could suffer hypothermia in any aspect of wartime service, but the exigencies of picket and guard duty – remaining relatively motionless with essentially no means of protecting oneself from the elements – left men especially vulnerable to the dangerous condition.

Picket Reserves

During the off-duty portion of their shifts, guards could regularly retreat to the relative comfort of tents within the camp. For this reason, many agreed with Indiana corporal William Miller when he asserted, "Camp Guard is a little easier than picket duty [outside encampments]. We go to our Tents when relieved and the Corporal of relief

[465] O'Brien, *My Life in the Irish* Brigade, 99.
[466] O'Brien, *My Life in the Irish* Brigade, 99-100.
[467] Sears, *For Country, Cause & Leader*, 219; John B. Southard to Sister, December 5, 1863, Southard Family Collection, Civil War Primary Source Documents Collection, New York Historical Society; Samuel R. Watkins, *"Co. Aytch," Maury Grays, First Tennessee Regiment* (Chattanooga: Times Printing Company, 1882), 29-30.

comes and calls us out when our times come to go on duty."[468] This was not the case for pickets during their hours off, as they were stuck on the far edges of campsites, resting but ready for action in case of an enemy attack. As McCarter mentioned in his memoir, regiments on picket occasionally utilized nearby buildings as places where the troops on reserve could pass the time indoors, shielded from the elements, until it was their turn to man a forward outpost.[469] Structures used by pickets included farm outbuildings, industrial buildings, and houses; some had been abandoned and others were occupied regardless of the property owners' thoughts on the matter.[470]

This is why some scholars argue that the Civil War eroded any ideas about the sanctity of the private home in nineteenth century America. As historian Joan Cashin contends, "Both armies came to view houses in utilitarian fashion…[T]hey seized homes to serve as hospitals, observation posts for the signal corps, headquarters, or living quarters."[471] For Union and Confederate pickets, the interests of the military typically took precedence over those of civilians. "It was then snowing very fast," South Carolina captain L. Perrin Foster wrote home from Virginia, "My comp [company] was on the reserve which was stationed at the house of an old woman who had little enough feeling to attempt to keep us out of her farm house but it was no use. We went in and piled down on her hay and slept finely until morning."[472] Some soldiers may have regretted invading

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[468] Patrick and Willey, *Fighting for Liberty and Right*, 82.
[469] O'Brien, 95.
[470] "The Diary of Captain George A. Bowen," 122-123; George Harry Weston Diary, March 29, 1862, Duke University.
[471] Joan E. Cashin, *War Stuff: The Struggle for Human and Environmental Resources in the American Civil War* (New York: Cambridge University Press, 2018), 108 and 110.
[472] A. Gibert Kennedy, ed., *A South Carolina Upcountry Saga: The Civil War Letters of Barham Bobo Foster and His Family, 1860-1863* (Columbia: University of South Carolina Press, 2p019), 307.

the homes of noncombatants, but most were willing to fully exploit civilian property to protect themselves from bad weather.

Sheltering in buildings was often not an option for off-duty pickets, however, and they were mostly stationed at outdoor positions between the forward sentinels and the main campsite. Reserve shifts were opportunities to rest and sleep, but for the men remaining in the open air, this could be complicated by inclement weather. Both the difficulties that pickets endured and their responses to them were comparable to when they had to bivouac in adverse conditions. For instance, some men tried to make themselves comfortable with their blankets or any other protective equipment that they carried with them, and while some managed to sleep, they were in the minority.[473] Falling rain, wet or muddy ground, and low temperatures all interfered with troops' ability to sleep. "It was a cold night - a heavy cold dew fell, & we had a cold time of it lying out with only our blankets…," Wisconsin captain Thomas Stevens related from Mississippi in March 1863, "Had to get up every little while & jump, run & stamp around to get warm & couldn't do it at that. I have heard of but one man among us who slept warm."[474] Stevens was not alone in resorting to physical activity to combat the cold, but other pickets turned to fires whenever the weather was chilly or stormy. Fires were allowed at most reserve positions, and many men unable to sleep spent their time huddled by the flaming logs or fence rails, seeking any warmth and comfort that they could.[475]

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[473] Albert Augustus Pope Diary, December 30, 1862, Civil War Times Illustrated Collection, USAHEC; Philip N. Racine, ed., *"Unspoiled Heart": The Journal of Charles Mattocks of the 17th Maine* (Knoxville: University of Tennessee Press, 1994), 6.
[474] George M. Blackburn, ed., *"Dear Carrie…": The Civil War Letters of Thomas N. Stevens* (Mount Pleasant, MI: Clarke Historical Library, 1984), 70.
[475] Julius F. Ramsdell Diary, February 18, 1864, Southern Historical Collection, University of North Carolina; Sears, *For Country, Cause & Leader*, 292.

Soldiers sought relief from these conditions by joking and laughing at times, just as they did when bivouacking, but nothing made pickets' reserve shifts more bearable than sleep. Federals and Confederates often served as pickets for several days at a time, rotating on and off duty, and if adverse weather persisted, they could easily become sleep deprived. Sleep deprivation was a liability for armies at any time, but it was especially a problem for pickets, as it was their job to stay alert and vigilant. It was vital for pickets to find a way to sleep while on reserve, no matter the weather conditions. Similar to bivouacking, pickets utilized their equipment and materials from the surrounding area to construct makeshift beds and shelters.[476] These picket shelters and beds took the same forms as bivouac ones, meaning that soldiers' experiences building protection from the elements when encamping without tents aided them when they served as sentries, and vice versa.

And as with the bivouac versions, the efficacy of improvised shelters was mixed. Rough houses built with pine boughs and brush were common at reserve positions, likely because they were simple to build with natural resources that were readily available, but men complained that they did little to shield them from storms. "[T]hey are not of much use as the rain comes through them as though a sive," Massachusetts corporal John Gallison observed in Virginia, "so the consequence was we got wet though to the skin, overcoat blankets…then we had to stand frozen almost stif as a board & dript wet…we

[476] Fox to Prouty, May 4, 1862, Massachusetts Historical Society; George T. Blakemore Diary, May 24, 1862, Civil War Collection, Tennessee State Library and Archives; Robert G. Evans, ed., *The 16th Mississippi Infantry: Civil War Letters and Reminiscences* (Jackson: University Press of Mississippi, 2002), 40.

could not dry our clothes or get any sleep" for nearly two days.[477] Other pickets had better luck, passing their reserve shifts in relative comfort and managing to sleep. Soldiers who used blankets, especially the rubber type, as roofs for their shelters or as covers for their beds of fence rails, straw, or other materials stayed mostly dry in rainy weather.[478] One particularly effective tactic to stay warm and dry was to kindle large fires in front of or in the center of these crude quarters. New Jersey private Searing noted in early 1864, "We cut it [wood] in lengths about ten feet long, pile it up in the center of our brush house, and the heat from the fire makes it warm enough so that we can sleep very comfortably under our woolen blankets even on the coldest nights."[479] As with encamping, most pickets on reserve were unconcerned with seizing resources from and inflicting damage to civilian homes or the natural environment in their quest to build shelters and fires. Their priorities were mitigating the rigors imposed by the weather, getting some comfortable rest, and successfully completing their shifts on the picket line.

Field Fortifications

Exposure to inclement weather was even worse for Civil War soldiers occupying field fortifications. Although the different components of fieldworks had specific names,

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[477] John B. Gallison to Mother, January 25, 1863, John B. Gallison Papers, Massachusetts Historical Society.
[478] Thomas S. Howland to Sister, April 4, 1864, Thomas S. Howland Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society; Stephen W. Sears, ed., *Mr. Dunn Browne's Experiences in the Army: The Civil War Letters of Samuel W. Fiske* (New York: Fordham University Press, 1998), 191; Richard P. Galloway, ed., *One Battle Too Many: The Writings of Simon Bolivar Hulbert, Private, Company E, 100th Regiment, New York State Volunteers, 1861-1864* (Published by editor, 1987), 67.
[479] O'Shaughnessy, ed., *Alonzo's War*, 138.

most men paid little attention to using the proper terminology. As historian Hess explains, "The average soldier used "rifle pits," "breastworks," and "ditches" to signify the same thing: earthworks made for infantry use."[480] Regardless of the terms that they used, troops found that the grueling work that went into building these defensive positions was made even more arduous while combating adverse weather and difficult terrain. Constructing fieldworks involved excavating dirt for trenches and ditches, cutting down trees, and piling these materials together to form defensive features such as parapets, breastworks, or artillery emplacements. Additionally, troops had to clearcut the ground for some distance in front of the fortifications to deny an attacker cover and to fashion obstructions. Field defenses varied greatly in sophistication throughout the war, but any given line typically stretched for several hundred yards to many miles in length. They were also continually improved and strengthened while the army held the position. All this backbreaking work was completed with rudimentary hand tools, including shovels, picks, and axes.[481] A heat wave, or torrential downpour, only made this work more difficult.

Soldiers were required to complete their labor assignments, even on days of blistering heat and nights of bitter cold or driving rain. "In the afternoon we began to throw up breastworks and felling trees in front of them," Tennessee lieutenant George Dillon reported in his home state in 1863, "in some places we was compelled to work in

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[480] Hess, *Field Armies and Fortifications in the Civil War*, 333.

[481] An overview of fortifying in the Civil War, specifically during the Atlanta Campaign, is provided in Hess, *Fighting for Atlanta*, 295-315. Fieldwork construction, particularly the clear-cutting of forested areas and the use of timber in defensive features, contributed to the environmental destruction caused by Civil War armies. This damage is discussed in Megan Kate Nelson, *Ruin Nation: Destruction and the American Civil War* (Athens: University of Georgia Press, 2012), 138-144.

mud and water shoe mouth deep often deeper notwithstanding the rain was often falling freely we continued through the entire night being relieved every two hours."[482] For Dillon and many others, a common problem while building fieldworks was the weather's impact on the ground. In the words of two Confederates, dirt became "almost hard as a brick" in hot and dry weather, while the earth was "frequently frozen to the depth of a foot" in wintry conditions.[483] Heavy rain turned the clayey soils predominant across the South into the glutinous mud that men on both sides detested to march through. They felt similar about digging in such conditions and trying to form the viscous mud into fortifications. Working on a defensive line in Georgia in June 1864, Illinois lieutenant Chesley Mosman exclaimed, "But the mud, it was awful and we had to shovel that mire into a ridge for a breastwork. If a man stood still in one place to shovel he would find himself stuck six inches."[484] Long campaigns often demanded that men build several lines of field fortifications, especially as the army advanced or fell back to new ground. During the Atlanta Campaign between May and September 1864, the opposing armies each dug over fifteen major fieldwork systems, totaling hundreds of miles of earthworks.[485] The hours of work on defenses, undertaken during inclement weather and

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[482] George Washington Dillon Diary, June 29, 1863, Tennessee State Library and Archive.
[483] Kenneth Wiley, ed., *Norfolk Blues: The Civil War Diary of the Norfolk Light Artillery Blues* (Shippensburg, PA: Burd Street Press, 1997), 134; James Fitz James Caldwell, *The History of a Brigade of South Carolinians, Known First as "Gregg's," and Subsequently as "McGowan's Brigade"* (Philadelphia: King & Baird Printers, 1866), 196.
[484] Arnold Gates, ed., *The Rough Side of War: The Civil War Journal of Chesley A. Mosman, 1st Lieutenant, Company D, 59th Illinois Volunteer Infantry Regiment* (Garden City: Basin Publishing Co., 1987), 220.
[485] Hess, *Fighting for Atlanta*, xvi and 2-5.

in the midst of active operations, thoroughly exhausted troops and drove them to the limits of their endurance.

Among Union forces, the undesirable work of constructing fortifications was disproportionally given to U.S. Colored Troops. Even after Black soldiers fought with distinction in numerous battles, many white commanders possessed the widespread racism of the nineteenth century and believed that African Americans were better suited to perform labor duties, rather than combat ones. These generals not only thought that USCT would prove inferior to white regiments in battle, but also that Blacks were naturally predisposed to work in the heat of the South. Their attitudes reflected a prevailing racial belief in the U.S. at the time of the Civil War: that race and skin color were connected to weather tolerance. The idea that African Americans were conditioned to withstand hot climates was used by proslavery Southerners as justification for their enslavement, but this basic belief was widely held by whites across the country too, including Northern army officers. In the minds of various Federal commanders, Black troops would be superior laborers in scorching Southern climates than their white counterparts.[486]

Consequently, in numerous theaters of the war, USCT were assigned an excessive amount of fatigue labor, which included digging trenches and building defensive works as well as other menial tasks like cleaning camps and latrines or loading and unloading

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[486] John David Smith, "Let Us All Be Grateful That We Have Colored Troops That Will Fight," in *Black Soldiers in Blue: African American Troops in the Civil War Era*, ed. John David Smith (Chapel Hill: University of North Carolina Press, 2002), 40-41; Amy Murrell Taylor, "How a Cold Snap in Kentucky Led to Freedom for Thousands: An Environmental Story of Emancipation," in Stephen Berry, ed., *Weirding the War: Stories from the Civil War's Ragged Edges* (Athens: University of Georgia Press, 2011), 198-199.

supply ships, trains, and wagons.[487] Forced to work in all types of weather, Black soldiers criticized the unequal distribution of such loathsome and strenuous labor details. "We are not Soldiers but Labourers working for Uncle Sam for nothing but our board and clothes," Corp. Thomas D. Freeman of the 54th Massachusetts Infantry complained in March 1864 in Florida, "it is nothing but work from morning till night Building Batteries Hauling Guns Cleaning Bricks clearing up land for other Regiments to settle on…now do you call this Equality if so God Help such Equality."[488] In a letter to President Abraham Lincoln from Louisiana, USCT infantryman Nimrod Rowley similarly wrote, "Instead of the musket It is the spad and the Whelbarrow and the Axe…Men are Call to go on thes fatiuges wen sum of them are scarc Able to get Along."[489]

Other Black troops commented on the difficulty of the work and lamented its heavy toll on their units, defying white racist arguments that they were well suited to such labor. "Our situation is almost unbearable," George E. Stephens, a sergeant of the 54th Massachusetts, observed in the late summer of 1863 while employed in constructing entrenchments in South Carolina, "During the day the sun is intensely hot, and this makes the sand hot; so we are sandwiched between the hot sun and the hot sand."[490] After these operations continued for two months, Stephens declared, "The health of our regiment is

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[487] Ira Berlin, Joseph P. Reidy, and Leslie S. Rowland, eds., *The Black Military Experience* (Cambridge: Cambridge University Press, 1982), 484-485; Smith, "Let Us All Be Grateful," 40-41.
[488] Nina Silber and Mary Beth Sievens, eds., Y*ankee Correspondence: Civil War Letters Between New England Soldiers and the Home Front* (Charlottesville: University Press of Virginia, 1996), 48.
[489] Nimrod Rowley to Abraham Lincoln, August 1864, quoted in Berlin et al., *The Black Military Experience*, 501.
[490] Donald Yacovone, ed., *A Voice of Thunder: A Black Soldier's Civil War* (Urbana: University of Illinois Press, 1997), 252.

bad. We average one hundred and fifty sick per day, caused no doubt, by excessive fatigue duty."[491] Stephens' statements demonstrate how African American soldiers found it no easier to work on fortifications than white troops did. In mid-1864, around a year and a half after Black enlistment began, Federal military officials issued orders instructing commanders to assign fatigue duties equitably among soldiers of both races, but USCT continued to be ordered to perform a higher proportion of manual labor than their white comrades.[492]

When not actively building or expanding them, U.S. and Confederate troops manned the field fortifications. How long an army held their line of fieldworks changed throughout the war, ranging from a day or two, to weeks and even months. The rank-and-file soldiers were stationed in those defenses for a comparable length of time. During prolonged operations, such as the Petersburg-Richmond Campaign from June 1864 to April 1865, units usually rotated in and out of the trenches and were given a chance to rest in rear areas. Troops often occupied the front lines for shifts lasting twenty-four hours to a week or more, but they could stay on duty even longer if the army lacked enough manpower to hold fortifications and rotate regiments out for rest. This was a common problem for Confederate forces, especially in the later stages of the war. When in the trenches for prolonged periods, men were not required to stay constantly awake and alert; they were given opportunities to rest and get whatever sleep they could. For the entirety of their time in fieldworks, however, soldiers had to remain relatively still in a single position while exposed to all kinds of weather. As Pvt. Philip Daingerfield

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[491] Yacovone, *A Voice of Thunder*, 277.
[492] Berlin et al., *The Black Military Experience*, 485-486; Smith, "Let Us All Be Grateful," 41.

Stephenson of the Washington Artillery (Louisiana) recalled, "Sun and rain, heat and cold, storm and mud and water, come what may, we took in in the trenches. The trenches were our home…by day and night."[493] With field fortifications affording little protection from the elements, men made do as best they could in these positions and struggled to endure the strain caused by the weather.

While hot and dry conditions posed few difficulties for troops at guard and picket posts, the opposite was the case when they were stuck in the trenches. In a letter from the Petersburg lines in June 1864, North Carolina captain William Biggs noted, "The sun is pouring down with all its power upon our almost unprotected heads…[W]e are almost burnt up. The days are so long, they seem never to come to an end."[494] Men on both sides made similar complaints, remarking that they were stifled by dust and sweltered in their cramped positions that offered no shade from the sun. Limited access to drinking water while occupying fieldworks only made their situation worse. "We suffered very much while in the pits from a want of water, which it was impossible to procure during the day," Iowa captain Chester Barney wrote about the Siege of Vicksburg in mid-1863, "Each man filled his canteen therefore previous to entering the pit, but the water after being exposed to the hot rays of the sun a few hours became too hot for use."[495] No matter how distasteful, thirst left men with little alternative but to drink warm water.

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[493] Nathaniel Cheairs Hughes, Jr., ed., *The Civil War Memoir of Philip Daingerfield Stephenson, D. D.: Private, Company K, 13th Arkansas Volunteer Infantry, and Loader, Piece No. 4, 5th Company, Washington Artillery, Army of Tennessee, CSA* (Baton Rouge: Louisiana State University Press, 1995), 185.
[494] William Biggs to Sister, June 27, 1864, Asa Biggs Papers, Duke University.
[495] Chester Barney, *Recollections of Field Service with the Twentieth Iowa Infantry Volunteers; or, What I Saw in the Army* (Davenport, IA: Printed for the Author at the Gazette Job Rooms, 1865), 190.

Troops on trench duty for shorter shifts often had to try to make the water in their canteens last all day, though this was only about 1/4th the quantity of water that the modern National Academy of Medicine recommends an adult man should consume each day.[496] When posted in fieldworks for days at a time, soldiers had to replenish their canteens, but this was a dangerous undertaking. Men would be detailed to carry water to the defensive works or take a unit's empty canteens to the rear to get refilled. But by leaving the safety of the fortifications, these troops exposed themselves to enemy fire. New York private John B. Foote reported that to "get water it was like running the gauntlet and many have been shot while doing such things."[497] Any drinking water was prized in the trenches on hot days, but men never had enough to stay adequately hydrated.

The high temperatures combined with dehydration made the occupants of earthworks vulnerable to heat injuries. Some suffered heat exhaustion, but others fell victim to heatstroke, with many dying as a result. Operating around Petersburg in July 1864, Capt. Augustus Brown of the 4th New York Heavy Artillery claimed, "heat is killing more men than the "Johnnies" [slang term for Confederate soldiers] are," noting a few days later, "the deaths from sunstroke continue to be numerous."[498] Soldiers fortunate enough to avoid heat illnesses were still worn out by days of duty in the hot sun with little water. New York infantryman Hiram Barton and his comrades were on the

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[496] Institute of Medicine of the National Academies, *Dietary Reference Intakes for Water, Potassium, Sodium, Chloride, and Sulfate* (Washington, D.C.: The National Academies Press, 2005), 5 and 73.
[497] John B. Foote to Sister, July 6, 1864, John B. Foote Papers, Duke University. Another example is "The Diary of Captain George A. Bowen, 12th Regiment New Jersey Volunteers," *The Valley Forge Journal* 2 (1985), 193.
[498] Augustus C. Brown, *The Diary of a Line Officer* (New York, 1906), 91-92.

verge of collapse after a long stretch in the Petersburg lines. Barton informed his sister, "last night when we come out of the trenches we could not go straight we was so weak the weather is so hot we sweat from sunris till sun down it takes the strength out of a man."[499] Sleep deprivation could also become a problem for men in the trenches, as the heat made it difficult to rest when they were given the chance. Many declared that it was impossible to sleep in the daytime because it was too hot, while persistent heat, sporadic firing, and orders to stand alert hindered sleep at night.[500]

Soldiers looked for any ways to relieve the severity of hot weather. They cut down all the trees in front of their fieldworks, but not always the ones that stood along or behind their fortified lines, appreciating the shade that these trees provided on warm days.[501] When defenses ran through open areas, many Federals and Confederates tried to alleviate the heat by creating shade of their own. Men stretched blankets or canvas tent pieces across poles as awnings or erected brush arbors over the trenches to protect themselves from the scorching rays of the sun. "It is aufuly hot in the works," Indiana private Theodore F. Upson observed while outside Atlanta in August 1864, "The boys have built a shade over them with bushes and that helps some."[502] A number of soldiers sought to escape the sun by digging small cavelike holes, sometimes only large enough for a single person, where they could rest in and around the trenches. "You ought to see

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[499] Hiram H. Barton to Sister, July 8, 1864, Barton Family Correspondence, University of Vermont Libraries.
[500] Foote to Sister, July 6, 1864, Duke University; Isaac H. Carpenter to Family, June 30, 1863, Civil War Letters of Isaac H. Carpenter, Carpenter Museum Collections.
[501] Andrew R. Linscott to Parents, July 4, 1864, Andrew R. Linscott Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[502] Oscar Osburn Winther, ed., *With Sherman to the Sea: The Civil War Letters, Diaries & Reminiscences of Theodore F. Upson* (Baton Rouge: Louisiana State University Press, 1943), 122.

my hole I have dug in the ground," Biggs proudly wrote home, "It is very hot down here but not as much as it is up above where there is nothing but sun shine and dust…[H]ere I generally stay, when not required in the trenches."[503] Other men searched for relief in bombproofs, underground structures covered with heavy logs and dirt that were little more than cellars.[504] Bombproofs protected troops from artillery fire, but opinion on whether they offered comfort in hot weather was divided. Some men thought bombproofs were cool and pleasant, sheltering them from the sun, but others found the structures uncomfortably warm.[505]

Soldiers struggled to keep cool in the fortifications during the summer heat, but it was even harder to stay warm amid the cold and frost of winter months. In some cases, actively manning their position in the trenches required men to lay on the freezing ground for hours, unable to move around and warm their bodies through physical activity. "We almost freeze. I havent been out of my place which is not more than 4 feet squre all day," North Carolina lieutenant James E. Green recorded in November 1863 in Virginia, "I havent straightened my self to day. I have been lying in a cold damp ditch from day break till dark. it seames like Toes will Freeze."[506] Wintry weather did cause frostbite among

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[503] Biggs to Sisters, July 2, 1864, Duke University.
[504] "A Glossary of Fortification Terms," *American Battlefield Trust*; Hess, *In the Trenches at Petersburg*, 66-67.
[505] Simeon McCord to Friend, August 24, 1864, Simeon McCord Letters, Earl M. Hess Collection, USAHEC; Amos M. Judson, *History of the Eighty-Third Regiment Pennsylvania Volunteers* (Erie, PA: B. F. H. Lynn, 1865), 105; Linda Foster Arden and Walter L. Powell, ed., *Letters From the Storm: The Intimate Civil War Letters of Lt. J.A.H. Foster, 155th Pennsylvania Volunteers* (Chicora, PA: Mechling Bookbindery, 2010), 246.
[506] James E. Green Diary, November 29, 1863, Southern Historical Collection, University of North Carolina.

troops on fieldwork duty, and trenches regularly became filled with snow, ice, and freezing water.[507]

Campaigning in such painful conditions took a psychological toll on soldiers. New Jersey officer George Bowen reflected the thoughts of many when he declared, "The cold fatigue and exposure appears to take all the life out of one."[508] The elements broke the will of some men to remain crouched in their defensive positions, despite the danger posed by the enemy. While lying in forward lines at Petersburg, Maine private Daniel W. Sawtelle heard one of his comrades say that he had to get off the ground even "if they shoot me" because he was so uncomfortably cold. "Before anyone could remonstrate, he stood straight," Sawtelle recalled, "I looked toward him and he was in the act of stretching. I heard a gun crack in front and he gave a scream, dropped to the ground."[509] The cries of this mortally wounded soldier must have given his brethren renewed resolve to stay low and still in their positions no matter how much they shivered and shook from the cold.

Unlike normal picket posts, men were generally permitted to have fires in defensive works, including in the forward rifle pits, to help combat the cold. However, the blazes had to remain small due to the narrow space of these positions, the availability

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[507] Robert H. Ferrell, ed., *Holding the Line: The Third Tennessee Infantry, 1861-1864* (Kent, OH: Kent State University Press, 1994), 20; Kenneth Wiley, ed., *Norfolk Blues: The Civil War Diary of the Norfolk Light Artillery Blues* (Shippensburg, PA: Burd Street Press, 1997), 178-179; George D. Harmon, ed., "Letters of Luther Rice Mills – A Confederate Soldier," *North Carolina Historical Review* 4 (1927), 304.
[508] The Diary of Captain George A. Bowen, 12th Regiment New Jersey Volunteers," *The Valley Forge Journal* 2 (1985), 215.
[509] Peter H. Buckingham, ed., *All's for the Best: The Civil War Reminiscences and Letters of Daniel W. Sawtelle, Eighth Maine Volunteer Infantry* (Knoxville: University of Tennessee Press, 2001), 139.

of firewood for use in the trenches, and the proximity of the enemy. The fires' warmth consequently could only do so much in relieving the cold, especially for poorly clad men. At the Petersburg lines in late 1864, Lt. Luther Rice Mills of the 26th Virginia Infantry lamented, "Many of the men were entirely destitute of blankets and overcoats and it was really distressing to see them shivering over a little fire made of green pine wood."[510] As many Confederate units were ill-equipped to deal with wintry weather, Mills was thankful that his regiment was soon supplied with blankets and shoes, concluding "it is to be hoped that our men will do better."[511] Heavy clothing and blankets were the best defenses against bitter temperatures and piercing winds available to men in fieldworks, but just as with sentry duty, it was impossible for these protective items to keep troops warm and comfortable during prolonged shifts.

Occupying field fortifications in rainy weather was just as miserable and onerous for soldiers as the heat or the cold. Men became soaking wet, but that was the least of their problems, as their defensive positions, especially the shallower rifle pits, flooded with rainwater. This forced the occupants to stand, sit, or lie in water varying from several inches to more than a foot deep. Posted in rifle pits outside Petersburg, Maine private Haley complained, "By midnight our holes were about half full of water. Said holes are four feet deep and connected with a sap, which certainly is rightly named, for during a rainstorm it *saps* water from the adjoining lands, making cess-pools of our holes."[512] Additionally, the rain often transformed the dirt floor of the trenches into deep and sticky mud that covered men from head to toe. "Rain falls almost every day, which

[510] George D. Harmon, ed., "Letters of Luther Rice Mills – A Confederate Soldier," 303.
[511] Harmon, "Letters of Luther Rice Mills – A Confederate Soldier," 304.
[512] Silliker, *The Rebel Yell & the Yankee Hurrah*, 216.

makes the entrenchments more like hog wallows, than the habitations of men," Mississippi private Isaac Foster penned while manning lines at Atlanta in August 1864, "The men's clothing & even their skin is of a red cast from continued wallowing in the red earth."[513]

Federals and Confederates stuck in the trenches longed to escape the mud and water that was seemingly on all sides. At times, men were able to rest outside flooded fieldworks, but mostly they could not leave without risking injury or death by exposing themselves to enemy fire. On a rainy night in May 1864 in Georgia, Tennessee corporal James M. Morey noted that their trenches were "full of water so that we either had to stand in the water or get out of our works which was not so pleasant as the enemy were continually picking at us."[514] Some men fled from the defensive works anyway, not caring that they could be targeted by enemy shooters because they craved relief from the muddy morass so badly.[515] Safety compelled the majority of troops to remain in the fortifications, but the appalling conditions still provoked feelings of disgust and dejection among the occupants. They declared that the rain and mud rendered the trenches "very disagreeable," "almost intolerable," and even "almost unlivable."[516] But to get through their shifts in the fieldworks, those same men regularly had to live through such situations for days at a time.

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[513] Isaac Gaillard Foster Diary, August 8, 1864, James Foster and Family Correspondence, Louisiana State University.
[514] James Marsh Morey Diary, May 11, 1864, Tennessee State Library and Archive.
[515] Wilfred W. Black, ed., "Marching with Sherman Through Georgia and the Carolinas: Civil War Diary of Jesse L. Dozer, Part I," *Georgia Historical Quarterly* 52, no. 3 (Sept. 1968), 327.
[516] Black, "Marching with Sherman Through Georgia and the Carolinas," 315 and 327; Wiley, *Norfolk Blues*, 175; Foster Diary, August 20, 1864, Louisiana State University.

Some soldiers settled for laying in the water and muck that collected on the trench floor when given a chance to rest, wrapping themselves with or laying on their blankets, preferably a waterproof type, if they had them.[517] As men could have trouble sleeping in these uncomfortable conditions, others worked to ease the hardships. Troops tried to bail the water out of flooded earthworks or placed timber poles across the trench so that they could sit or lay down above the deep mud and slop.[518] Just as with the hot sun, other men sought to ward off the rain by stretching blankets across their positions with sticks. Massachusetts sergeant Henry W. Tisdale observed that these makeshift coverings could make "quite comfortable abodes – for soldiers" while holding lines at Knoxville in November 1863, claiming "with our rubber blankets stretched the top made merry at the rain and rebels."[519]

Troops who sheltered in bombproofs may have hoped that these structures would protect them from rainstorms, but they were wrong. "It has been very bad weather for bomb proofs lately," Sgt. George Fowle of the 39th Massachusetts Infantry explained during the summer operations at Petersburg, "– so much rain that they would be full of water and there would be no way of draining most of them."[520] Rainwater leaked through the roofs of bombproofs, soaking the interior and making for a damp living space. More

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[517] Graham T. Dozier, ed., *A Gunner in Lee's Army: The Civil War Letters of Thomas Henry Carter* (Chapel Hill: University of North Carolina Press, 2014), 121; Blackburn, *"Dear Carrie,"* 128; Edwin W. Bearse to Mother, August 16, 1864, Edwin W. Bearse Letters, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[518] Jesse L. Henderson Diary, June 2, 1864, J. D. Williams Library, University of Mississippi; William B. Westervelt, *Lights and Shadows of Army Life: As Seen by a Private Soldier* (Marlboro, NY: C. H. Cochrane, Book and Pamphlet Printer, 1886), 73.
[519] Henry W. Tisdale Diary, November 28, 1863, Boston Public Library.
[520] Margery Greenleaf, ed., *Letters to Eliza From a Union Soldier, 1862-1865* (Chicago: Follet Publishing Company, 1970), 134.

significantly, however, the structures could actually become death traps in heavy enough rain. After a torrential rain in early 1865 at the Petersburg lines, North Carolina captain Henry A. Chambers reported, "Bomb-proofs, revetments and traverses had fallen down and trenches filled to the depth in some places of two feet with mud and water," with several men killed or wounded by the collapsing bombproofs.[521] Soldiers utilizing cavelike holes that they dug in the trenches fared no better, as rain soaked the clayey soils and could cause the walls to crumble, smothering the unfortunate occupants.[522]

Health, Acclimatization, and Resilience

In a letter to his family in January 1862, Vermont sergeant Ransom Towle wrote that standing picket in stormy conditions left his unit "Sleepy, dirty, and covered with mud from head to foot, wet and soaked," and consequently, "Today many of the Boys came in sick as might be expected."[523] Towle's final words – "as might be expected" – hints at how widespread a belief it was among mid-nineteenth Americans that sickness was connected to environmental factors such as inclement weather. With their lack of accurate knowledge about disease causation, soldiers attributed various types of illnesses to their shifts on picket lines or in fieldworks. After a wet day and night occupying a trench during the Atlanta Campaign, Ohio private Jacob Andervount recorded, "We got a

[521] T. H. Pearce, ed., *Diary of Captain Henry A. Chambers* (Wendell, NC: Broadfoot's Bookmark, 1983), 240.
[522] Buckingham, *All's for the Best*, 113.
[523] Ransom W. Towle to Sister and Parents, January 20, 1862, Ransom W. Towle Correspondence, University of Vermont Libraries.

little sleep this morning in the mud and rain…We got up some saying 'oh how my head aches'. Others complaining of sore throats and cold."[524]

Although subscribing to the belief that bad weather resulted in illness, many men also declared that soldiering had hardened them to the point where they no longer needed to concern themselves with such fears. Troops on both sides boasted that the hardships of army life changed their physical health and tolerance, making them more resistant to sickness even as they spent days and nights fully exposed to the elements while standing guard or manning earthworks. Regardless of the severity of the weather, soldiers claimed that they felt no ill effects, remaining in good health and fit for service.[525] In early 1863 in Tennessee, Ohio corporal Mungo P. Murray's regiment stood picket on a night of rain and snow. Murray bragged to his mother, "nothing can phase us. I should not wonder if we should remain in the army six months longer we will become as impregnable to heat, fatigue and storm as the native alligators."[526] Similar to bivouacking, men perceived a clear difference between the prewar and wartime impact that harsh weather had on their physical well-being. They believed that if they had undergone the same level of exposure as civilians that they regularly do while completing soldierly duties, they would have been wracked with illness. "Now if I had been half as much exposed to cold, wet & outdoors sleeping before I enlisted as I am now," U.S. sergeant Bowen wrote about

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[524] Jacob Andervount Diary, June 18-19, 1864, Antebellum and Civil War Collection, Atlanta History Center.
[525] Barry Popchock, ed., *Soldier Boy: The Civil War Letters of Charles O. Musser, 29th Iowa* (Iowa City: University of Iowa Press, 1995), 54; Harry F. Jackson and Thomas F. O'Donnell, ed., *Back Home in Oneida: Hermon Clarke and His Letters* (Syracuse: Syracuse University Press, 1965), 38-39.
[526] Mungo P. Murray to Mother, January 27, 1863, Mungo P. Murray Letters, Civil War Times Illustrated Collection, USAHEC.

standing guard in Virginia in 1862, "I should have had a winters sickness to pay for it, which goes to show that I am stronger & healthyer than ever."[527]

Other troops argued that over time they grew inured to dealing with inclement weather while engaged in picket or fieldwork duty, allowing them to complete their shifts with much less trouble than earlier in their military service. Manning positions in such conditions was still unpleasant to these men, but they considered the difficulties more bearable. In a letter from Tennessee, Georgia lieutenant William R. Montgomery asserted, "I had the pleasure of standing six hours on post while it was snowing very hard & was on picket in it three days, but we got used to it now & we take it all easy."[528] Soldiers were shocked that they could obtain rest, if not comfort, in circumstances that would have seemed impossible when they were civilians. "Six months ago I should have hesitated to go to bed in damp sheets," Michigan officer Haydon journaled in August 1861, "I can now lie down out doors with clothes wringing wet & sleep all night without the least inconvenience."[529]

Soldiers' thoughts about becoming accustomed to the weather were once again connected to the physiological and psychological processes of acclimatization that result from extensive exposure to the heat or the cold. Some recognized these physical and mental transformations and reflected on how much they had changed over the course of the war. Writing from field fortifications during the Atlanta Campaign, Sgt. George F. Cram of the 105th Illinois Infantry declared, "The weather is hot but we are so well

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[527] Cassedy, *Dear Friends at Home*, 192.
[528] George F. Montgomery, Jr., ed., *Georgia Sharpshooter: The Civil War Diary and Letters of William Rhadamanthus Montgomery, 1839-1906* (Macon, GA: Mercer University Press, 1997), 103.
[529] Sears, *For Country, Cause & Leader*, 70.

acclimated that it does not trouble us anymore than it did when we lived in the civilized North."[530] Most Northerners who served as Union troops entered the war unfamiliar with the heat of the South, but as Cram indicates, months and years of service led their minds and bodies to steadily adjust, reducing the strain that such oppressively hot conditions imposed. Southern heat was nothing new for most Confederate soldiers, but nearly every soldier in the war was unaccustomed to holding fixed positions while fully exposed to all types of weather. As many other facets of military life – tent camping, bivouacking, marching – required protracted encounters with the elements, being stuck on sentry or trench duty in foul or uncomfortable weather for hours or days on end only expedited the acclimatization process for Federals and Confederates. The result of these adaptions was that soldiers found they were better physically and mentally equipped to endure the weather-related pressures of military life, including pacing a picket beat in the freezing cold or occupying an earthwork in the relentless heat.

The stark divide that soldiers perceived between combatants and noncombatants when it came to harsh weather continued to be on display in their boasts about growing used to the challenges of guard and fieldwork duty and maintaining good health. Reflecting their convictions about their own masculinity, Federals and Confederates thought that only soldiers like themselves, men who had been toughened by war, were strong enough to stand such grueling exposure to adverse conditions with their health intact. "It rained and snowed and sleeted forty hours out of the forty-eight that we were out…," New York private Charles Biddlecom wrote to his wife from Virginia, "If any of

[530] Jennifer Cain Bohrnstedt, ed., *Soldiering with Sherman: Civil War Letters of George F. Cram* (DeKalb, IL: Northern Illinois University Press, 2000), 117.

the folks at home were to take a week's time of such life as we live here all the time, I am sure it would be the death of them."[531] Moreover, many believed that truly grasping the reality of remaining in a single position with few means of protecting oneself from drenching rain, bone-chilling cold, or scorching sun was limited to the men in uniform. As Maine private Abial H. Edwards' proclaimed, "no one can tell what it is to be a soldier until they have passed through the mill."[532] Of course, this belief did not stop troops from devoting considerable ink and paper to recounting their shifts to their families and friends, asking them to picture themselves living in the trenches or manning a guard post.[533] "Think of the poor sentinel as he paces his lonely walk in a cold, wet night, shivering at every blast yet not allowed to seek a fire or leave his post," Georgia lieutenant Josiah Patterson penned home in December 1861, "And I think you will conclude that it is not a light thing to be a soldier."[534] Men wanted their loved ones at home to sympathize with their plight, recognizing the difficulties that these seemingly mundane duties entailed.

Whenever Civil War troops were tasked with occupying sentry posts, picket reserves, or field fortifications, it also became their job to withstand whatever the weather threw at them. It was a test of their physical strength, but even more so, it was a test of

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[531] Katherine M. Aldridge, ed., *No Freedom Shrieker: The Civil War Letters of Union Soldier Charles Freeman Biddlecom, 147th Regiment New York State Volunteer Infantry* (Ithaca: Paramount Market Publishing, 2012), 114.
[532] Beverly Hayes Kallgren and James L. Crouthamel, eds., "*Dear Friend Anna": The Civil War Letters of a Common Soldier from Maine* (Orono, ME: University of Maine Press, 1992), 13.
[533] Foote to Sister, October 20, 1864, Duke University.
[534] Mills Lane, ed., *"Dear Mother: Don't Grieve About Me. If I Get Killed, I'll Only be Dead": Letters from Georgia Soldiers in the Civil War* (Savannah: Beehive Press, 1977), 89.

their mental resilience. Soldiers adapted to the elements using any methods they could, but the requirements of these duties – staying relatively still in their assigned places for hours, days, or weeks – afforded men with only minimal ways of mitigating the privations. They continually struggled against the weather, they often suffered, but what was most important was that they endured until relieved from duty. Men proved themselves as physically and psychologically hardened soldiers by successfully fulfilling their duties on the picket line or in fieldworks. But to do that, they did not have to eliminate the problems caused by inclement weather, they simply had to survive and get through their shifts. For troops on both sides, completing these assignments was by itself a form of victory over their natural adversaries.

Chapter 5 – Fighting in Battle

Introduction

Although most soldiers' military service was spent off the battlefield in encampments or on the march, thoughts of combat always loomed large in their minds. Between 1861 and 1865, the U.S. and Confederate armies engaged in hundreds of military actions across the country. The vast majority took place in the South, but campaigns ranged into Northern territory, and even the far reaches of the West. These engagements took many forms – ranging from minor skirmishes with only a few units, to massive battles where armies clashed with tens of thousands of men across broad landscapes. To both Federals and Confederates, fighting enemy combatants was their most important job as soldiers; they understood that the outcome of the war would be decided on the field of battle. Moreover, the battlefield was the most conspicuous setting for them to exhibit their masculinity. By experiencing the terrors of combat, fighting courageously, and performing with distinction, troops believed that they unequivocally demonstrated that they were competent soldiers as well as martial men.[535]

Battles frequently were twin struggles – one against a human adversary and another against an environmental one. Men fought on days of relentless sun and on others

[535] Civil War soldiers' beliefs about the connections between combat and masculinity are examined in Catherine Clinton and Nina Silber, editors, *Divided Houses: Gender and the Civil War* (New York: Oxford University Press, 1992); Reid Mitchell, *The Vacant Chair: The Northern Soldier Leaves Home* (New York: Oxford University Press, 1993); James M. McPherson, *For Cause and Comrades: Why Men Fought in the Civil War* (New York: Oxford University Press, 1997); Lorien Foote, *The Gentlemen and the Roughs: Violence, Honor, and Manhood in the Union Army* (New York: New York University Press, 2010); James J. Broomall, *Private Confederacies: The Emotional Worlds of Southern Men as Citizens and Soldiers* (Chapel Hill: University of North Carolina Press, 2019).

when unceasing rain poured down; in brutally hot temperatures and in the freezing cold; on fields transformed into pits of viscous mud and on grounds slicked with snow and ice. According to historian Kenneth Noe, "bad weather played an important if not decisive role in more than half of Civil War battles and campaigns…Roughly four out of ten were shaped significantly by inclement conditions."[536] Soldiers had to grapple with the elements during every stage of battle – maneuvering against enemy troops, standing or laying in massed formations, engaging in firefights and hand-to-hand combat, while suffering from wounds, and when spending the night on the field during the lull between days of fighting or in the aftermath of the engagement. Memories of such battles were not soon forgotten. After the Battle of Hatcher's Run in Virginia in February 1865, New Jersey captain George Bowen asserted, "This has been a very trying day…The cold, rain, snow and sleet, and having to dodge the bullets, made it a day long to be remembered."[537]

Throughout much of their military service, the weather was experienced in common by soldiers, but it could also be a differentiator when battles erupted, as the effects of the elements were not always the same for both the Federals and Confederates at the same time. At different points in the engagements, the weather seemed to take sides, aiding the efforts of one army by only causing difficulties for the other. Inclement conditions, in particular, impeded the military forces that were on the move across battlefields. This meant that the army that was on the offensive was often the

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[536] Kenneth W. Noe, "Fateful Lightning: The Significance of Weather and Climate to Civil War History," in Brian Allen Drake, ed., *The Blue, the Gray, and the Green: Toward an Environmental History of the Civil War* (Athens: University of Georgia Press, 2015), 24.

[537] "The Diary of Captain George A. Bowen, 12th Regiment New Jersey Volunteers," *The Valley Forge Journal* 2 (1985), 217.

disadvantaged one, as the nature of their operations generally required greater mobility than the side fighting on the defensive. With its uneven impact on combatants, weather influenced the course and outcome of various Civil War actions. The soldiers themselves had very few methods that they could employ to mitigate weather-related problems. All they could do was strive to withstand the adverse conditions and take advantage of those moments when the weather was an asset to them at the expense of their opponents.

Marching into Combat

Struggles against the elements began well before the first shots were fired. Armies did not necessarily begin a battle in close proximity to each other; forces sometimes had to march long distances before meeting in combat. After moving around fifteen miles on a hot day in July 1861, Massachusetts lieutenant John C. Robertson wrote home, "you can judge some yourself of how fit we were to go into battle when we arrived" at Bull Run in Virginia, "well without giving us any time to rest each Regiment was formed into column and advanced to the fight."[538] With units depleted by straggling and the remaining men far from full strength, armies entered battle in a weakened state.[539] Additionally, they could be at a disadvantage if the opposing side did not have to

[538] John C. Robertson to Wife, July 27, 1861, Tufts-Robertson Papers, Massachusetts Historical Society.
[539] Michael E. Banasik, ed., *Serving With Honor: The Diary of Captain Eathan Allen Pinnell, Eighth Missouri Infantry (Confederate)* (Iowa City: Camp Pope Bookshop, 1999), 159; Julius F. Ramsdell Diary, August 18, 1864, Southern Historical Collection, University of North Carolina; David W. Blight, ed., *When This Cruel War Is Over: The Civil War Letters of Charles Harvey Brewster* (Amherst: University of Massachusetts Press, 1992), 311.

complete a similarly difficult march. Those troops were fresher when the bullets started to fly and ready to exert themselves to the fullest on the battlefield.

A comparable dynamic occurred during clashes that stretched for multiple days over vast areas. Commanders sometimes ordered part of their forces to undertake large-scale movements across the battlefield in the hope of striking a vulnerable section of the rival army. As the goal was to surprise the enemy, these offensive maneuvers were typically conducted at night. The weather, however, did not always cooperate with commanders' plans, and inclement conditions like heavy rain severely hindered efforts to march miles in the darkness. At the very least, men were wearied and dejected from slogging across the muddy battlefield while soaked by the rain before even engaging the enemy.[540] At the worst, marching units fell into confusion in the stormy darkness, with the advance delayed and the men's combat capacity diminished to the point that the proposed attack had to be canceled. In the latter instance, the army acting defensively in the engagement was given an opportunity to counter the attempted enemy maneuver, such as by redeploying forces so that no part of its position was vulnerable to attack. Bad weather was not conducive to long marches either to or on the battlefield, and as it was usually the troops on the offensive completing such movements, they were the side most negatively affected.

Fighting in Stationary Lines

[540] Kenneth C. Turino, ed., *The Civil War Diary of Lieut. J. E. Hodgkins, 19th Massachusetts Volunteers, From August 11, 1862 to June 3, 1865* (Camden, ME: Picton Press, 1994), 85.

Though combat during the Civil War changed and evolved with each battle, at some points units remained in relatively stationary lines of battle – deployed in linear formations across diverse landscapes – as they exchanged musket and artillery fire with the enemy. Junior officers and enlisted men fought in open fields, rugged country, wooded areas, and behind field fortifications. These troops were not only exposed to enemy bullets and shells, but also were continually exposed to the vagaries of the weather. "I know by experience how uncomfortable it is to be under fire in a rainy day unable to protect yourself at all from the wet," Massachusetts corporal Andrew Linscott wrote home after over two years of service, "if a man can keep his temper when wet to the skin with the bullets whistling around him, standing at the same time in mud ankle deep he is…a man of much patience."[541]

Troops often had to lay down on the wet and muddy ground for protection from the enemy's fire, increasing their discomfort while reducing the risk of injury or death.[542] In a clash near Richmond in October 1864, Pvt. Daniel W. Sawtelle of the 8th Maine Infantry noted, "We were hugging the ground for dear life…while the rebs were picking away at us from behind their breastworks and the rain was drenching us."[543] Men in earthworks fared no better, as rain flooded the trenches and forced the occupants to engage the enemy while standing in various depths of water and muck. Lying on the ground in rainy weather was unpleasant for troops, but it became painful when battles

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[541] Andrew R. Linscott to Parents, October 2, 1864, Andrew R. Linscott Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[542] Jennifer Cain Bohrnstedt, ed., *Soldiering with Sherman: Civil War Letters of George F. Cram* (DeKalb, IL: Northern Illinois University Press, 2000), 112.
[543] Peter H. Buckingham, ed., *All's for the Best: The Civil War Reminiscences and Letters of Daniel W. Sawtelle, Eighth Maine Volunteer Infantry* (Knoxville: University of Tennessee Press, 2001), 316.

raged amid the low temperatures, sleet, and snow of winter. Tennessee private George W. Dillon stated that during the Battle of Fort Donelson in Tennessee in February 1862, "It appeared to me like we would all Freeze any way as we was so very cold & compelled to lie so close to the snow & frozen ground while their Boms & balls came as thick as hail over or near our heads."[544] Soldiers hugged the wintry ground for safety, but as Dillon reveals, they could find it as hard and distressing as dealing with the enemy fire.

Soldiers in static battle lines suffered just as much in severely hot weather. "We had to lie flat on the ground and it seem the hotest day I ever experienced," Georgia private George W. Hall related about the third day of fighting at Gettysburg in July 1863, "the vertical rays of the sun pored down upon us and the explosion of so much gunpowder het the air and rendered the heat more hot than it would have been otherwise."[545] For gunners, the backbreaking work of moving, loading, and firing artillery pieces was worsened by the heat. It was not uncommon for crew members to become too tired to continue serving their cannon, dropping to the ground from sheer fatigue.[546] "In this action I got more exhausted than at any time previously in my life, for we were not full handed and it was hard work running up the gun," Pvt. George Perkins of the 6th New York Battery wrote about a battle in Virginia in the spring of 1864, "Besides the thirst caused by the gunpowder was awful."[547]

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[544] George Washington Dillon Diary, February 15, 1862, Tennessee State Library and Archive.
[545] George Washington Hall Diary, July 3, 1863, Library of Congress.
[546] Earl J. Hess, *Civil War Field Artillery: Promise and Performance on the Battlefield* (Baton Rouge: Louisiana State University Press, 2023), 193.
[547] Richard N. Griffin, ed., *Three Years a Soldier: The Diary and Newspaper Correspondence of Private George Perkins, Sixth New York Independent Battery, 1861-1864* (Knoxville: University of Tennessee Press, 2006), 218.

Men sweated profusely on the battlefield, and as Perkins implied, dehydration only added to the dangers of their situation. In most engagements, access to water was limited to the supply that soldiers carried in their canteens, but this was nowhere near enough to keep them hydrated in combat, especially for long hours amid high temperatures. Some men did not even enter battle with full canteens, particularly if they had to undergo a hasty march to the field. After the first day at Gettysburg, North Carolina lieutenant James Green reported, "it was a very hot day & our men sufered very mutch for Water for they were marched in quick time for severel miles before they got to the Battle field & did not have the chance of getting Water in their Canteens so they do without."[548] Many commented that they fought all day with scarcely any water, and it was a normal occurrence for contending troops to be, as Illinois sergeant Tighlman Jones put it, "half choked by thirst."[549] Inadequate hydration sapped their strength and made them more susceptible to heat-related injuries.

Both Federals and Confederates agreed that it was agonizing to fight in a prone position in the blistering heat with little water, but some troops explicitly connected enduring such trials to their sense of manhood. Describing a failed Union assault on the defenses at Port Hudson, Louisiana, in June 1863, Massachusetts private Isaac H. Carpenter boasted in a letter home, "We layed on a sandy road in the burning sun 24 hours. I never knew what it was to suffer before, but we bore it like men."[550] For soldiers

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[548] James E. Green Diary, July 1, 1863, Southern Historical Collection, University of North Carolina.
[549] Glenn W. Sunderland, ed., *Five Days to Glory* (New York: A.S. Barnes and Company, 1970), 152.
[550] Isaac H. Carpenter to Family, June 30, 1863, Civil War Letters of Isaac H. Carpenter, Carpenter Museum Collections.

like Carpenter, being a martial man was about having the physical and mental toughness to withstand the weather and enemy fire. Troops wanted family and friends to realize that they demonstrated their masculinity on the battlefield in numerous ways – and clashing with the rival combatants was only one of them.

No matter how determined troops were to endure all the hardships of combat, some of them still succumbed to the heat and thirst. "We lay there about two hours, the sun beaming down hotter than I ever felt in my life," Sgt. Samuel A. Valentine of the 54th Massachusetts Infantry wrote about fighting near Charleston, South Carolina, in July 1864, "there were a great many men sun-struck, and one man in the 54th died from the effect of the heat."[551] Similar observations about men falling victim to heat-related ailments while lying in battle lines were made about numerous engagements of the war.[552] Even if they were not debilitated on the battlefield, long exposure to hot conditions could leave troops worn down near to the point of physical breakdown. Iowa corporal Charles O. Musser was one such soldier after manning fieldworks in the Battle of Helena in mid-1863 in Arkansas. "I have not been right well since the day of the battle, i was so completely out done. i have been tired before, but that day was the hardest day on me i ever saw," Musser informed his father, "it was very hot, and the excitement of the battle, and lying on the hillside in the rifle pits, where not a particle of air stired to

[551] Edwin S. Redkey, ed., *A Grand Army of Black Men: Letters from African-American Soldiers in the Union Army, 1861-1865* (New York: Cambridge University Press, 1992), 67.
[552] Mark Grimsley and Todd D. Miller, ed., *The Union Must Stand: The Civil War Diary of John Quincy Adams Campbell, Fifth Iowa Volunteer Infantry* (Knoxville: University of Tennessee Press, 2000), 101; Edward G. Longacre, ed., *From Antietam to Fort Fisher: The Civil War Letters of Edward King Wightman, 1862-1865* (Cranbury, NJ: Associated University Presses, 1985), 204.

cool us, and the water we had was very warm."[553] Musser may have endured the heat at Helena, but he did not escape unscathed, as it seemed like he would have been unfit for service for days afterward.

When men in both armies were fighting in stationary lines of battle, they generally faced comparable challenges imposed by inclement weather, with neither side favored over the other. But there were exceptions. During engagements in heavily wooded landscapes amid periods of dry weather, the gunfire and explosion of artillery shells could set the trees and brush on fire. Flaming stretches of woodland intensified the dangers of the battlefield, but the threats they posed depended on their location. Men not only had to try to avoid getting burned, but also cope with the smoke and heat from the forest fires. "We remained for 2 hours fighting the enemy and the fire, which had started in the dry leaves of the forest," New Jersey officer Bowen related about the Battle of Spotsylvania Court House in Virginia in May 1864, "The dry leaves and brush had taken fire and blazed and smouldered making a dense smoke that nearly smothered us, rendering it impossible to see five yards in front of us. Beside the heat of the day, the fire made it still hotter."[554] Men distracted by the close presence of flaming woods, while choking on and being blinded by smoke, could not effectively fight, thereby giving their opponents a major advantage in the ensuing contest.

Fighting on the Move

[553] Barry Popchock, ed., *Soldier Boy: The Civil War Letters of Charles O. Musser, 29th Iowa* (Iowa City: University of Iowa Press, 1995), 69.
[554] "The Diary of Captain George A. Bowen," 183.

While adverse weather typically had equal effects on unmoving lines of battle, the opposite occurred when Civil War armies employed more mobile tactics. During battle, armies usually alternated between holding in place and moving across the field. For example, one army could push forward in a steady advance or charge against a defensive line held by the opposing forces, or troops could pull back to a new position or flee to the rear after being overwhelmed or flanked by the enemy. In most engagements, the weather caused greater difficulties for the army in motion, no matter if they were moving forward or in retreat.

Soldiers soon learned that advancing against the enemy's lines, especially at a quick pace, was even harder in hot conditions than fighting in a prone position. The physical demands of running and fighting their way forward combined with the heat and lack of water was too much for many men. Some suffered heat exhaustion, but many others were incapacitated by the more serious heatstroke.[555] Lt. Edmund Patterson of the 9th Alabama Infantry experienced the former while moving across the Chancellorsville battlefield in May 1863 in Virginia, writing "I was almost dead when we got there from excessive heat, and no sooner had we stopped than I fainted."[556] Most victims of heat-related illnesses were troops fighting on foot, but those on horseback were not immune. "I rode into the battle" on the first day at Spotsylvania, Massachusetts captain George M. Barnard wrote home, but while changing horses during a lull in the action, "I was Sun

[555] Mary Ann Anderson, ed., *The Civil War Diary of Allen Morgan Geer: Twentieth Regiment, Illinois Volunteers* (New York: Cosmos Press, 1977), 96; Civil War Journals of Captain Daniel E. Turney, July 22, 1864, Kentucky Historical Society.
[556] John G. Barrett, ed., *Yankee Rebel: The Civil War Journal of Edmund Dewitt Patterson* (Chapel Hill: University of North Carolina Press, 1966), 101.

Struck which disabled me for a few hours. It was fearfully hot."[557] Debilitated men were fortunate if they received help from comrades, who bathed their heads with water and gave them something to drink to try to treat the ailment and carried them to a place of safety away from the combat zone.[558]

Soldiers afflicted by heat exhaustion could recover relatively quickly, as all they needed was to rest and cool their bodies down in the rear, but heatstroke had a longer lasting impact on victims' health, if they even survived. Following his collapse from heatstroke, Barnard explained, "my head boiled for two days afterward but I have since suffered no in convenience from it, although many other officers who were Sun Struck that day are not out of the hospital yet."[559] Northerners and Southerners joined the army with the understanding that they might be wounded or killed in battle, but the prospect of becoming a casualty because of the weather, rather than the enemy combatants, likely never crossed their mind. Once they soldiered for a time, however, and experienced the outsized role of the elements in their daily lives, they should have begun to recognize that possibility. As the heat and other types of adverse conditions posed hardships and perils when on the march or in field fortifications, they would have come to understand that it would be no different on the battlefield.

Even if they managed to stay in the ranks, advances against the enemy on hot days thoroughly exhausted soldiers. Moving across the field was no easier in wet

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[557] George M. Barnard to Father, May 14, 1864, George Middleton Barnard Correspondence, Civil War Correspondence, Diaries, and Journals at the Massachusetts Historical Society.
[558] George A. Mitchell to Parents, June 12, 1861, George A. Mitchell Collection, Civil War Primary Source Documents Collection, New York Historical Society; Barrett, *Yankee Rebel*, 101.
[559] Barnard to Father, May 14, 1864, Massachusetts Historical Society.

weather, but due to its impact on the terrain. Many fought in water and mud that was knee deep, and in the words of an Illinois lieutenant, "the men were fairly mired" as they pushed through the morass.[560] It was fatiguing for infantrymen but worse for artillerists, who struggled to move their heavy guns and horses in support of advances and not get bogged down.[561] And when those cannons fired, the recoil buried them to their axles in the muddy ground. Artillery crews had to put their shoulders to the wheels and push to extricate the guns before they could be aimed and fired again. Pvt. Theodore C. Tracie of the 19th Ohio Battery noted that while campaigning in Georgia in June 1864, "The ground which the Battery occupied was soft and yielding, and at every discharge of the guns they sank into the soft earth, requiring considerable hand force to run them forward into position."[562] Thick mud also interfered with cannons' proper recoil, increasing the stress on the axle of gun carriages and causing them to fracture or break while firing. Artillery pieces disabled by broken axles were out of action for the remainder of an engagement and had to be either repaired later or abandoned on the field.[563]

The most difficult offensive tactic in both wet and hot conditions was an assault on fortified defensive lines. Regiments had to charge hundreds of yards or more, all the

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[560] Arnold Gates, ed., *The Rough Side of War: The Civil War Journal of Chesley A. Mosman, 1st Lieutenant, Company D, 59th Illinois Volunteer Infantry Regiment* (Garden City: Basin Publishing Co., 1987), 220. Other example is Banasik, *Serving With Honor*, 160.

[561] Gates, *The Rough Side of War*, 220; Fletcher L. Elmore, Jr., ed., *Diary of J. E. Whitehorne, 1st Sergeant, Co. "F", 12th VA. Infantry, A.P. Hill's 3rd Corps, Army of Northern Va.* (Utica, KY: McDowell Publications, 1995), 102.

[562] Theodore C. Tracie, *Annals of the Nineteenth Ohio Battery Volunteer Artillery* (Cleveland: J. B. Savage, 1878), 346.

[563] Hess, *Civil War Field Artillery*, 78-79 and 193; Kenneth W. Noe, *The Howling Storm: Weather, Climate, and the American Civil War* (Baton Rouge: Louisiana State University Press, 2020), 291-292.

while enemy bullets and shells tore into them, before reaching and attempting to storm their opponent's position. In an attack on a Union line near Petersburg in August 1864, Virginia artillerist John Walters noted, the Confederates "rushed with a yell, but owing to the distance, and the fact that the rain the night previous had rendered the ground very heavy, the men are coming up with the line of battle too exhausted to do anything."[564] Soldiers fighting behind defensive works already had a significant advantage over an attacking force, but the casualties and weariness caused by inclement weather further stacked the odds in their favor, increasing their chances of repelling an assault. Just as with larger movements and maneuvers, the side operating defensively on the battlefield was not as badly affected by the weather as the offensive army.

Rainy conditions during combat favored stationary and defensive forces in additional ways. During assaults on defensive positions, attackers sought to rapidly reach the opposing lines to minimize their exposure to enemy fire. It was hard to move quickly across soggy and muddy terrain, which allowed defenders to pour more musketry and artillery fire into their adversary's ranks than they could have done in dry conditions. These moments on the battlefield were likely the few times in their military service that soldiers cheered the way that the rain transformed the clayey soils of the South, rather than cursed it. Given the many advantages they enjoyed in adverse weather, defenders often bloodily repulsed assaults on their lines, particularly when those positions were fortified. But in some engagements, offensive tactics were successful – attacking forces

[564] Kenneth Wiley, ed., *Norfolk Blues: The Civil War Diary of the Norfolk Light Artillery Blues* (Shippensburg, PA: Burd Street Press, 1997), 145.

could possess overwhelming numbers, they could surprise or flank the enemy position, or wet weather could occasionally undermine defenders' ability to resist (discussed below).

Whatever the case, when soldiers had to fall back across a muddy battlefield, they encountered the same weather-related problems faced by troops moving forward. Retreating troops became more vulnerable to enemy fire, as they were unable to escape across wet and miry terrain swiftly and move out of their opponent's range. Some men decided to surrender instead of risking their lives in attempting to flee through muddy fields. In a letter to his wife, Wisconsin corporal Andrew S. Parsons described overrunning a Confederate position during the Battle of Nashville in December 1864. "Our Regt took the most of them & without firing a gun," Parsons wrote, "It was a splendid scene to see them scatter in confusion through a cornfield that was so muddy that it almost was impossible to travel, & then to see them turn back as we supposed to stand and fight but only to surrender."[565] Due to the obstacles posed by the mud, these Federals were able to augment the success of their attack by capturing a sizable number of prisoners.

Firearm Failures

Wet weather had a devastating effect on firearms in various military actions, rendering them faulty or even inoperable. Perhaps the most well-known advancement in military technology during the Civil War was the widespread adoption of the rifle musket by infantry forces, replacing the smoothbore muskets that had previously dominated the

[565] Andrew S. Parsons to Wife, December 23, 1864, Andrew S. Parsons Papers, William L. Clements Library, University of Michigan.

battlefield. But when it came to the weather, a different technological innovation was more important. In earlier American conflicts, muskets had used a flintlock firing system, in which a piece of flint was hammered into a metal plate to ignite the main powder charge and discharge the weapon. As the powder was exposed to sparks in an exterior pan, flintlocks were unreliable in wet conditions; the water and dampness ruined the powder and caused the musket to misfire. During the Civil War, most troops carried rifle muskets that utilized the percussion firing system, a method in which a small metal cap containing a tiny quantity of an explosive compound called fulminate of mercury was placed over a hollow nipple or cone, with a tube leading into the breech. When the trigger was pulled, a spring-loaded hammer struck the percussion cap, igniting this primer, which in turn fired the main charge. The percussion system was more dependable than its predecessor and typically functioned well in adverse weather.[566]

When the Civil War began, however, both the U.S. and Confederate governments struggled to manufacture and procure adequate weapons to outfit their massive new armies numbering in the hundreds of thousands. A result of these supply problems was that in the first year of the conflict, some soldiers went into battle with outdated firearms,

[566] Earl J. Hess, *The Rifle Musket in Civil War Combat: Reality and Myth* (Lawrence: University Press of Kansas, 2008), 25-26; Robert K. Krick, "An Insurmountable Barrier between the Army and Ruin: The Confederate Experience at Spotsylvania's Bloody Angle," in *The Spotsylvania Campaign*, ed. Gary G. Gallagher (Chapel Hill: University of North Carolina Press, 1998), 87; Webb Garrison, *The Encyclopedia of Civil War Usage: An Illustrated Compendium of the Everyday Language of Soldiers and Civilians* (Nashville: Cumberland House, 2001), 79 and 190; Graham Smith, *Civil War Weapons: An Illustrated Guide to the Wide Range of Weaponry Used on the Battlefield* (New York: Skyhorse Publishing, 2022), 124-126.

including flintlock muskets from early in the century.[567] This was a greater problem for Confederate forces, and in several of the first engagements of the war, precipitation caused men's flintlocks to malfunction. At Fort Donelson, Tennessee private Dillon reported, "Many of our Guns became so wet while we was loading them on the snow that lay thick on the ground that they refused to fire when we desired to shoot."[568] Soldiers attempted to dry their flintlocks enough that they would fire, but these efforts amid the havoc of combat were often in vain and the muskets remained unserviceable. "The rain was descending in torrents and our flint lock muskets were in a bad condition; not one in three would fire," Tennessee sergeant James Cooper wrote about the Battle of Mill Springs in January 1862 in Kentucky, "Mine went off once in the action and although I wiped the 'pan' and primed a dozen times it would do so no more."[569] With the wet weather blunting their firing capabilities, these Confederates had little chance of inflicting casualties on enemy troops whose weapons were not similarly impaired, giving the latter a seemingly insurmountable advantage in such one-sided firefights. It should come as no surprise that at both Mill Springs and Fort Donelson, the Union forces were victorious.

As the war progressed, both sides dramatically improved their systems of manufacturing weapons and purchasing them from foreign markets, and most military units were gradually equipped with percussion rifle muskets or other modern small

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[567] Margaret E. Wagner, Gary W. Gallagher, and Paul Finkelman, eds., *The Library of Congress Civil War Desk Reference* (New York: Simon & Schuster Paperbacks, 2002), 485-486.
[568] Dillon Diary, February 15, 1862, Tennessee State Library and Archive.
[569] William T. Alderson, ed., "The Civil War Diary of Captain James Litton Cooper: September 30, 1861 to January, 1865," *Tennessee Historical Quarterly* 15 (June 1956), 146.

arms.[570] Percussion weapons' resistance to the elements meant that wet conditions rarely interfered with combat firing, but they were not completely impervious either and weather-related misfires did occur on some battlefields. Affected troops' thoughts on such weapon failures varied depending on the outcome of the engagement. Massachusetts sergeant George Fowle, for example, complained "if it had not rained a good many more would have got hit" when his unit repelled an enemy cavalry force in late 1864, "but a good many guns would not go on account of being wet."[571] Other men lamented that inoperable muskets prevented them from offering serious resistance to their opponents, particularly when trying to defend fortified positions. While holding an entrenched line during the Atlanta Campaign, Lt. Hamilton Branch of the 54th Georgia Infantry "made my boys fire as often as they could during the rain so as to try and keep their loads dry," though it did not matter because when the enemy advanced, "the men tried to fire but not a gun would fire."[572]

Branch and his comrades fell back and avoided capture, but other regiments in similar situations did not get a chance to withdraw and were taken prisoner. Although percussion rifle misfires due to wet weather were sporadic and unpredictable, when those moments hampered one side's defensive abilities, attacking forces could attain more success than would have been possible otherwise and at less cost in lives. Soldiers whose weapons remained operable may not have recognized their advantage in the

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[570] Wagner, Gallagher, and Finkelman, *The Library of Congress Civil War Desk Reference*, 485-486.
[571] Margery Greenleaf, ed., *Letters to Eliza From a Union Soldier, 1862-1865* (Chicago: Follet Publishing Company, 1970), 146.
[572] Mauriel Phillips Joslyn, ed., *Charlotte's Boys: Civil War Letters of the Branch Family of Savannah* (Berryville, VA: Rockbridge Publishing Company, 1996), 252.

pandemonium of battle, but as Iowa cavalryman Lyman B. Pierce declared, "we now had it all our own way" against an enemy whose means of fighting back had been reduced by pervasive wetness.[573]

Spotsylvania – A Case Study

The battle at Spotsylvania Court House reveals how weather had a differing impact on armies when they met in combat.[574] For nearly two weeks in mid-May 1864, the Army of the Potomac and the Army of Northern Virginia, the two premier fighting forces of the U.S. and the Confederacy, clashed at the small Virginia crossroads. For most of the engagement, the Federals were on the offensive, trying to overwhelm the defensive positions held by their opponents. The first few days at Spotsylvania were hot and dry, and as discussed previously, these weather conditions imposed various challenges for the rival armies. The Union army eventually planned to launch a massive concerted strike on a salient, a section of defensive works that jutted out from the rest and was thus more vulnerable to attack, in the Confederate line on May 12. But in the later hours of May 11, the weather dramatically shifted, and rain began to fall in torrents.

Thousands of soldiers had to march several miles that night to reach the launching off point for the assault, and between the darkness, rain, and mud, they only managed to

[573] Lyman B. Pierce, *History of the Second Iowa Cavalry* (Burlington: Hawkeye Steam Book and Job Printing, 1865), 113.
[574] Summary of the Battle of Spotsylvania drawn from Cameron Boutin, "Contending with the Elements: The Role of Weather in the Battle of Spotsylvania Court House," *Civil War History* 67, no. 3 (Sept. 2021): 200-228; Gordon Rhea, *The Battles for Spotsylvania Court House and the Road to Yellow Tavern, May 7-12, 1864* (Baton Rouge: Louisiana State University Press, 1997), 214-307; Gordon Rhea, *To the North Anna: Grant and Lee, May 13-25, 1864* (Baton Rouge: Louisiana State University Press, 2000), 8-34 and 65-94.

do so with the utmost difficulty. “We felt the need of rest very much as it was a hard, wearisome march,” Massachusetts sergeant Joseph E. Hodgkins wrote in his diary, but the men were only given around an hour or so to rest before they were ordered to assemble for the attack.[575] In the early morning hours of May 12, the U.S. forces charged across the waterlogged ground at the Confederate salient while the rain persisted. Attackers in such wet conditions were typically at a disadvantage, but in a reversal of roles, the stormy weather actually aided their efforts by undermining the enemy’s defense. The Confederates attempted to stop the Federals with musketry but as a Virginia lieutenant remembered, “The penetrating mist [and rain] which had been falling all night had wet the powder in the tubes, and the guns could not be fired.”[576]

With the weather rendering a significant number of the Confederates’ rifles unserviceable, the attacking troops avoided heavy losses as they charged the salient and did not encounter serious opposition, allowing them to swiftly overrun the enemy works and capture large numbers of prisoners. The assault on the salient was the most successful part of the battle for the Union forces, but they could not sustain their forward momentum and the advance soon stalled as other Confederate units hastily responded to the onslaught. These men would have been much less tired than their Federal counterparts who had spent hours trudging through the foul weather before the fighting even started. The Confederates counterattacked, while additional Union units also joined the fray, initiating a back-and-forth struggle in the rain and mud at Spotsylvania that would rage for around twenty hours.

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[575] Turino, *The Civil War Diary of Lieut. J. E. Hodgkins*, 85.
[576] W. S. Archer, “Letter to Editor of Richmond Times,” in *Southern Historical Society Papers, Volume 21,* ed. R. A. Brock (Richmond: Southern Historical Society, 1893), 243.

The churned-up mud on the battlefield impeded the mobility of the troops even as they fought at close range. "Soon the Yanks made a determined charge with fixed bayonets, but the mud fought for us," Pvt. David Holt of the 16th Mississippi Infantry recalled. With mud hampering the Federal advance, Holt declared, "Many of them were shot dead and sank down on the breastworks without pulling their feet out of the mud."[577] No matter the distance involved, the inability to move forward at fast pace through the viscous mud made soldiers more susceptible to enemy fire. Troops at Spotsylvania were similarly affected when they had to fall back across the wet terrain. At one point in the battle, U.S. sergeant Charles Bowen's regiment needed to withdraw after being outflanked by Confederates. "We were stiff with cold, the ground was soft & we could hardly move – to run across an open field was the only way to avoid capture," Bowen recorded, "We broke across it balls whistling on all sides. At every moment I could hear the dull peculiar thud sound of a ball as it entered some poor fellow."[578] Bowen was fortunate to escape without injury, but many of his comrades were killed or wounded. Fighting in the mud for hours thoroughly fatigued infantrymen on both sides, and artillerists were also exhausted from handling their guns in the wet conditions.

The combat at the salient ultimately became a bloody stalemate that only ended in the early hours of May 13, when the Confederates retreated to a new defensive line. The two battered armies spent the day trying to recover from the brutal bloodletting of May 12 as the rain continued to fall at Spotsylvania, but the Federals were soon on the move

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[577] Thomas D. Cockrell and Michael B. Ballard, ed., *A Mississippi Rebel in the Army of Northern Virginia: The Civil War Memoirs of Private David Holt* (Baton Rouge: Louisiana State University, 1995), 256.
[578] Edward K. Cassedy, ed., *Dear Friends at Home: The Civil War Letters and Diaries of Sergeant Charles T. Bowen* (Baltimore: Butternut & Blue, 2001), 463.

again. Half of the army was ordered to conduct a march of several miles during the night of May 13-14 and attack a lightly defended portion of the Confederate position. However, the Union flanking maneuver devolved into chaos because of the torrential rain and resulting "sea of mud" and had to be called off. "It rained like torment & was dark as pitch. The roads beat everything I ever saw before as regards mud," Bowen penned in his diary, "It was full a foot deep on the average & full two feet in some places. Sometimes so thick & sticky we could hardly lift our feet & at other times thin as water nearly."[579] Massachusetts captain Barnard exclaimed, "I saw men in the ranks so utterly wretched that they threw themselves in the middle of the road wallowing in the mud under the horses' feet, howling and crying like mad men."[580] After this, the soldiers were exhausted and in no shape to fight on May 14, thwarting their chance to exploit a weakness in the enemy line and allowing the Confederate forces to end that vulnerability by shifting troops to the area.

Combat at Spotsylvania resumed several days later once the wet weather finally abated, but the battle concluded in a draw, and the two armies would soon confront each other again at another point in Virginia. The action at Spotsylvania between May 11-14 demonstrates how inclement weather was often more of an impediment to whichever army was engaged in mobile tactics on the battlefield. The rainy weather was critical to the initial success of the assault on the Confederate salient by impairing the defenders' rifle muskets, but that was a rare and lucky occurrence for the Federals. For much of the

[579] Cassedy, *Dear Friends at Home*, 466.
[580] Barnard to Father, May 14, 1864, Massachusetts Historical Society.

battle, the U.S. forces found their movements and attacks across the field hindered or completely ruined by the wet and muddy conditions.

Wounded in Combat

Adverse weather universally intensified the suffering of wounded men on both sides. The gravity of combat injuries differed from man to man; some were able to walk to the rear under their own power or were taken by comrades, but many others had to remain where they fell while the armed struggle raged around them. Even when firing ceased, armies regularly remained in close contact, ready to resume the engagement the next day or continue the larger campaign, while large numbers of wounded were trapped between the opposing lines. There they remained without succor until one side withdrew from the area or a truce was arranged to remove them. Leaving injured troops on the field was an unavoidable reality of prolonged confrontations between rival forces, but that was small consolation to men who were scorched by the heat, drenched by the rain, or chilled by the cold as they lay in pain or dying from their wounds. After the Battle of the Crater at Petersburg in July 1864, Pennsylvania sergeant Jacob Zorn "went up opposite the Scene of action this P.M. and Seen there were many Scattered over the Side of the hill wounded and unable to get off the field and compelled to lay there under a burning Sun until Death would end their Day of trouble & pain."[581] As Zorn observed, between unrelenting exposure to the elements and no medical treatment for their wounds, many troops perished long before they could be taken off the field.

[581] Barbara M. Croner, ed., *A Sergeant's Story: Civil War Diary of Jacob J. Zorn, 1862-1865* (Apollo, PA: Closson Press, 1999), 127.

Others wounded in combat lost their lives in a more immediate and gruesome manner due to the weather's impact on the landscape. The day after the clash in the muddy salient at Spotsylvania ended, Massachusetts lieutenant Charles Brewster saw among the piled-up bodies of the enemy dead and injured, one man "completely trodded in the mud so as to look like part of it and yet he was breathing and gasping."[582] This Confederate was fortunate to have survived, but certainly many soldiers in both armies who were wounded and became trapped in the mire at Spotsylvania and similarly muddy battlefields were not so fortunate. If the injured troops lacked the strength to pull themselves from the deep mud and were not saved by their brethren, they likely drowned in the pits of ooze. Other wounded men could not escape from the wildfires that broke out during some engagements in dry weather and burned to death. "As the forest fires…drew nearer and nearer to the poor unfortunates who lay between the lines, their shrieks, cries and groans, loud, piercing, penetrating, rent the air," Pennsylvania corporal John L. Smith wrote about the Battle of the Wilderness in Virginia, "the men of both sides perished in the flames, because there was no helping hand to succor, no yielding of the stern necessities of war."[583] Soldiers who remained fit to fight understood that there was little they could do for their injured comrades strewn across the field due to the threat posed by the enemy and the possibility of renewed combat, but that did not keep them from sympathizing with the wounded's plight or wish to alleviate their suffering.

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[582] Blight, *When This Cruel War Is Over*, 296.
[583] John L. Smith, *History of the Corn Exchange Regiment, 118th Pennsylvania Volunteers, from Their First Engagement at Antietam to Appomattox* (Philadelphia: John L. Smith, 1888), 403.

Federals and Confederates did try to help when circumstances permitted, carrying the incapacitated men within or near their lines to safe places in the rear and hopefully being able to provide a modicum of relief from the elements. "Last night our troops took all the wounded within reach and laid them in rows upon the ground, both friend and foe were placed together," Tennessee captain Robert D. Smith wrote during the Battle of Stones River in Tennessee in the winter of 1862-1863, "They then made fires between each row to prevent the poor fellows from freezing – many a brave soldier's life was saved in this way – our troops kept the fires up all night."[584] As Smith reveals, soldiers did show compassion toward enemy wounded, but it was common for them to do so only after their own injured had received attention.

Moreover, on some battlefields, racism kept some injured enemy forces from receiving any assistance at all. Wounded U.S. Colored Troops were vulnerable. They could expect no care from Confederates, who often refused to recognize them as lawful combatants in the first place. The most notorious example was the Battle of the Crater in 1864, during which the Union army detonated an underground mine to breach the enemy defenses at Petersburg. The subsequent assault by U.S. forces became bogged down in the crater formed by the explosion, however, and amid swelteringly hot weather, Black troops trapped in the huge pit were shown no mercy by their opponents.[585] Maine private

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[584] Jill K. Garrett, ed., *Confederate Diary of Robert D. Smith* (Columbia, TN: United Daughters of the Confederacy, 1975), 44.

[585] Overview of the Battle of the Crater in Richard Slotkin, *No Quarter: The Battle of the Crater, 1864* (New York: Random House, 2009); Earl J. Hess*, Into the Crater: The Mine Attack at Petersburg* (Columbia: University of South Carolina Press, 2010); Kevin M. Levin, *Remembering the Battle of the Crater: War as Murder* (Lexington: University Press of Kentucky, 2012); A. Wilson Greene, *A Campaign of Giants - The Battle for Petersburg, Volume 1: From the Crossing of the James to the Crater* (Chapel Hill: University of North Carolina Press, 2018).

John Haley lamented, "Who can describe the horrors of heat and thirst as the wounded [African Americans] lay in the broiling sun? The Confederates allowed none of the courtesies to these troops, which they might have extended to white men."[586] Some of the USCT at the Crater perished from their wounds and exposure, but many other injured or surrendering men were murdered by Confederate troops. Wounds made Black soldiers even more vulnerable to racial violence, with injured USCT similarly massacred by Confederates in various other engagements.[587]

Regardless of individual soldiers' thoughts on the matter, efforts to aid the wounded of either side were limited as long as the confrontation between opposing armies continued. At the Battle of Chickasaw Bayou in December 1862 in Mississippi, Tennessee officer Favel Barber reported that after the day's fighting had ended, "the poor wounded wretches who lay on the ground writhing in pain, exposed to the pitiless soaking rain" near their lines were taken to places of shelter. Many of the injured were too far from the Confederate position to be reached, however, and Barber noted that "all through that long and dreary night their groans and cries for help resounded in the ears of our guards."[588] To the soldiers within earshot, the yells of the wounded must have served as a grim warning of what could happen to them if they were seriously hurt in combat. The men in agony from their wounds and exposure while left on the field must have

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[586] Ruth L. Silliker, ed., *The Rebel Yell & the Yankee Hurrah: The Civil War Journal of a Maine Volunteer* (Lanham, MD: Down East Books, 1985), 187.
[587] An example of a broader study of racial massacres in the Civil War is Gregory J. W. Urwin, ed., *Black Flag Over Dixie: Racial Atrocities and Reprisals in the Civil War* (Carbondale: Southern Illinois University Press, 2004).
[588] Robert H. Ferrell, ed., *Holding the Line: The Third Tennessee Infantry, 1861-1864* (Kent, OH: Kent State University Press, 1994), 85.

desperately yearned for an end to their ordeal, one that could last for days and nights before relief came or death claimed them.

When injured troops either made their own way or were taken by comrades to aid stations near the battlefield, their struggles against adverse weather often persisted. Aid stations were initial treatment sites where medical personnel dressed bleeding wounds, applied tourniquets, administered medications, and prepared the patients to be moved to larger field hospitals farther from the combat zone.[589] But at these stations, the injured men regularly had to spend the night outdoors with little to no protection from the elements. Some soldiers carried their knapsacks, blankets, and other equipment with them into battle, but others left most of these items in the rear or lost them in the fighting. As a result, many of the wounded had few means to mitigate their exposure to harsh weather and passed uncomfortable nights at the edges of battlefields.

Corp. William Miller of the 75th Indiana Infantry described one such night at an aid station in his diary. Struck by a bullet in both legs at Chickamauga in Georgia in September 1863, Miller was eventually brought to a nearby aid station where his wound was dressed and he encountered two other members of his regiment. Miller still had possession of his blankets, but his comrades had lost their equipment in the battle and many other patients seemed to be in a similar situation. "The night is cold and lots of our wounded men will chill to death," Miller observed, "There is wounded men all around me and the moans and cries are heart rending."[590] Miller helped his two brethren by

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[589] Alfred Jay Bollet, *Civil War Medicine: Challenges and Triumphs* (Tucson: Galen Press, 2002), 99-102.
[590] Jeffrey L. Patrick and Robert J. Willey, eds., *Fighting for Liberty and Right: The Civil War Diary of William Bluffton Miller, First Sergeant, Company K, Seventy-fifth Indiana Volunteer Infantry* (Knoxville: University of Tennessee Press, 2005), 145.

sharing his blankets with them and consequently "Slept cold," but he likely fared much better than the injured men who lacked any defense against the chilly temperatures.[591] Miller's experiences at an aid station were not uncommon; after a battle during the Peninsula Campaign in 1862, Massachusetts officer Brewster wrote that the wounded "lay all night lying in the mud, with no covering, and rainy and bitter cold it was horrible to hear their groans…Many of them died during the night."[592] The injured soldiers who managed to survive the hardships at aid stations were later transported to field hospitals and, if need be, to general hospitals for more advanced medical treatment.[593]

Lulls and Aftermath

In the lulls between action during multi-day engagements and in the immediate aftermath of clashes, Civil War soldiers often had to spend nights on the battlefield. The men basically had to bivouac with any protective equipment they had, but as mentioned previously, many left behind or lost most of these items and therefore had few ways to shield themselves from inclement weather. Having to remain loosely within their lines of battle, troops tried to find a measure of comfort amid wet and cold conditions, but they could not turn to makeshift beds or shelters, and they could only sometimes kindle campfires due to the nearby presence of the enemy. After exerting themselves on the

[591] Patrick and Willey, *Fighting for Liberty and Right*, 145.
[592] Blight, *When This Cruel War Is Over*, 130.
[593] Tribulations caused by the weather could continue for wounded men while moving to and at these different treatment centers, especially the makeshift field hospitals, but generally the ones that they went through when first hurt on the field and at aid stations remained worse.

battlefield during the day, nights were an opportunity for soldiers to rest and sleep, replenishing their energy for the resumption of operations in the morning.

Many attempted to snatch what rest they could, but bad weather and its effects on the ground that soldiers were using as beds often prevented them from sleeping well or long, particularly if they lacked blankets.[594] In any theater or year of the war, New York corporal Edward K. Wightman's night on the field after fighting near Richmond in May 1864 would have been deemed typical by men on either side. "Heartily fatigued with the labors of the day, flopped down in the mud and, with the rain still falling upon them, slept," Wightman wrote about his regiment, "All day long our clothes had been saturated and our muskets dripping. At about two o'clock in the morning most of us awoke, chilled and chattering."[595] Uncomfortable nights with little sleep nights left soldiers ill prepared to fight and march with vigor when battle renewed. Soldiers simply had to hope that lack of rest would not impair their combat effectiveness and that they would be able to sleep better the following night.

Long nights exposed to the elements only added to the physical and psychological rigors of battle, and troops considered them harder to endure than normal bivouacking, though some seemed to link the difficulties to their notions of masculinity. After the Battle of Fredericksburg in December 1862 in Virginia, U.S. sergeant Bowen told friends

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[594] Civil War Journals of Captain Daniel E. Turney, January 2, 1863, Kentucky Historical Society; George H. Cadman to Wife, October 13, 1862, George Hovey Cadman Papers, Southern Historical Collection, University of North Carolina; Adam H. Pickel Diary, May 5, 1863, People's Contest Digital Collections, Pennsylvania State University Libraries.

[595] Edward G. Longacre, ed., *From Antietam to Fort Fisher: The Civil War Letters of Edward King Wightman, 1862-1865* (Cranbury, NJ: Associated University Presses, 1985), 180.

at home, "when we crossed the river & lay on our face in the mud thirty six hours without a wink of sleep…& no blankets, I tell you it was tough. to say the least…Then at night if we did not keep rolling around once in a while we would find ourselves froze fast in place, & this was not comfortable."[596] By emphasizing how "tough" nights on the field could be, Bowen implied that the men themselves were tough. To Bowen and others like him, these moments demonstrated how soldiers needed to possess the strength to withstand inclement weather on the battlefield even when they were not required to contend with the enemy.

In the aftermath of successful engagements, it was common for Confederate forces to comb battlefields, scavenging equipment from dead or captured U.S. soldiers. Federals occasionally took needed items from enemy casualties, but in the Confederate army, it was a widespread and vital means of supplying men with food, new weapons, and perhaps most importantly, equipment that provided protection from the weather. Confederates supplied themselves with wool and rubber blankets, overcoats, canteens, shoes and boots, shelter tents, and more. "I went all over the Battlefield" at Chancellorsville, Georgia lieutenant John Evans wrote to his wife, "you ought to have ben here to see the dead and wounded yankees and to see what they had, and seen our boys robing thire knapsacks of the dead yankees…[S]ome pull off thire boots and shoes and hats and caps. the boys got blankets india rubber cloths and yankees flies."[597]

As seen in previous chapters, U.S. equipment was highly valued by Confederates for its versatility and usefulness in confronting the many privations of wartime life in

[596] Cassedy, *Dear Friends at Home*, 205.
[597] John B. Evans to Wife, May 8, 1863, John B. Evans Papers, Duke University.

adverse weather. Confederates felt no compunctions about robbing prisoners of war or stripping items from bullet-riddled or mangled Federal corpses, as otherwise they would have to do without. Sgt. James J. Kirkpatrick of the 16th Mississippi Infantry admitted that stealing from the dead was "a thing we do in almost every battlefield."[598] At Mine Run in Virginia in late 1863, Kirkpatrick claimed that Confederate troops were actually upset that a battle against U.S. forces was averted. "Our soldiers are severe in censuring…[the Federals] for not giving us an opportunity of getting a supply of blankets, overcoats, etc.," Kirkpatrick recorded in his diary, "The weather is so severe and our supply so scant that we needed an engagement very much."[599] Kirkpatrick's comments show how many rank-and-file Confederates looked to the enemy army for needed equipment, not their own military's logistical system. Soldiers suffering from exposure became so desperate for better protection from the elements that they were willing to put their lives and limbs at risk on the battlefield in the hopes of obtaining it.

A number of men in the Union army complained that their protective equipment was damaged in combat, diminishing its ability to shield them from foul weather. Minnesota artillerist Thomas Christie asserted that his unit's gun tarpaulin, which the men used as shelter when bivouacking, had the poor luck of always getting hit by enemy fire. "The old one we turned over at Atlanta had 11 ball holes through it, and now this new one is completely ruined for rainy weather by these shot holes through it," Christie penned in Georgia in early 1865, "This thing of having a fellow's wigwam riddled with air holes, though fine for ventilation, is not very desirable when these southern torrents

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[598] Robert G. Evans, ed., *The 16th Mississippi Infantry: Civil War Letters and Reminiscences* (Jackson: University Press of Mississippi, 2002), 130.
[599] Evans, *The 16th Mississippi Infantry*, 222.

pour on the canvas."[600] Christie seemed more concerned that the enemy fire had impeded his battery's future chances of resting comfortably under the tarpaulin than that any of those shots could have struck their desired target – the gunners themselves or their cannon.

Corp. Henry Waite of the 4th Vermont Infantry expressed comparable sentiments after a bullet cut over two dozen holes through his shelter tent and rubber blanket during a battle in Virginia in October 1864. Waite was initially thankful that he escaped with his life, writing to a friend, "they shot my tent which was on top of my Knapsack. if it had not of hit my Blanket. it would of went through my Neck. and probaly Killed me instantly."[601] Within only a few days, however, Waite began to change his tune, regretting that his tent had been damaged. "My tent leakes some where it was shot," Waite informed his friend, "dont you think they was too bad to shoot my tent all to pieces. if they had of hit me. it would of healed. but the tent will not."[602] Waite was insisting that the condition of his tent was more important than his actual health, and though he was certainly joking, his words only further confirm the value that men placed on effective shelter from the weather. Troops locked in battle with human opponents could only endeavor to endure the elements, but once the firing stopped, preoccupations quickly shifted. As Evans and Kirkpatrick, Christie and Waite, all reveal, soldiers' thoughts were consumed by a pressing issue in the aftermath of engagements – personal protection from the weather.

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[600] Thomas D. Christie to Friend, January 1, 1865, Christie Family Letters, Minnesota Historical Society.
[601] Henry O. Waite to Friend, October 25, 1864, Henry O. Waite Letters, Civil War Document Collection, U.S. Army Heritage and Education Center.
[602] Waite to Friend, October 27, 1864, U.S. Army Heritage and Education Center.

Conclusion

Victory or defeat in the Civil War was determined in battle, and while that undoubtedly mattered to junior officers and enlisted men, so did the circumstances of their everyday lives in the army. And that was continually shaped by their encounters with the prevailing weather conditions. For men who lacked a privileged position in the upper ranks of the military, the more methods available to successfully adapt to the elements, the better. The frequency of combat for individual soldiers fluctuated at different times and places, but every day and everywhere, they had to deal with the weather. Soldiers had to be able to fight against human adversaries on the battlefield, but they could not fulfill their wartime service without being able to take on meteorological ones both in and out of combat too.

The centrality of struggles against the weather are aptly summed up by Illinois sergeant Tighlman Jones in a letter to his family on the eve of the Atlanta Campaign. Jones learned that his younger brother was thinking about enlisting in the U.S. Army and vehemently tried to dissuade him. Outlining the pressures and dangers of military life, Jones, a veteran of two years, did not warn his brother about strict military discipline or being injured or killed by enemy fire – he warned him about the weather. "The changes of the weather and the duty of a soldier seems blended," Jones asserted, "The state of the weather in no case is called into account. Nothing is taken into consideration. If the duty is needed, it must be done. Rain or shine." He feared for his brother's health and survival, writing "To leave home and all the privilege of civil life at this time of the year and commence a military life in a different climate (and one that promises to be unhealthy) needs men of a strong constitution and one that is physically able to endure hardships."

Jones essentially stated that he did not think his brother possessed the qualities of a martial man – strength, resilience, fortitude – needed to endure a march in the heat, to sleep on wet ground, or to withstand exposure to frigid temperatures. Jones went on to list the numerous diseases that seemingly resulted from such harsh interactions with the element, implying that his sibling could not become tough enough to avoid these illnesses. In Jones' opinion, not everyone could handle military service, and the weather was a deciding factor.[603]

As Jones and this entire dissertation have demonstrated, soldiering in the Civil War looks very different when positioning Federals and Confederates in the natural world rather than just a military one. In many ways, their existence in the army revolved around the environment and the weather, with their thoughts and actions often consumed by these unrelenting encounters and their efforts to adapt and endure. For most men, facing the elements while in camp, on the march, at bivouacs and sentry posts, or on the battlefield was the reality of war, so it is impossible to grasp the reality of their experiences without placing the same emphasis on the weather as they did. Stating that the weather had a major role in the wartime service of soldiers sounds obvious, but the breadth and depth of the relationship between the two gets at the core of what it was like to live, struggle, survive, and die in the armies of the Union and Confederacy.

The rank and file troops on the front lines of the Civil War were not unique when it came to the weather – neither during that conflict nor in other wars throughout history. Seeing soldiers as one cog in a vast natural world provides a much deeper understanding

[603] Glenn W. Sunderland, ed., *Five Days to Glory* (New York: A.S. Barnes and Company, 1970), 130.

of what day-to-day life was like for men at war, especially before the era of more mechanized warfare. It did not matter where or when they served or who their opponents were, if they were at war, they spent most of their time living, moving, and fighting outdoors amid natural landscapes. Struggles against all kinds of weather were the inevitable result. Placing the environment front and center instead of relegating it to the background can tell us more about the experiences of common soldiers in the army than battles and campaigns alone ever will. And it can also tell us how they survived.

Living up to the ideals of nineteenth century manhood during the Civil War became more complicated when considering the environment. Scholars have long discussed how masculinity was closely connected to military service, both in 1861-1865 and in other American conflicts, but the focus has been on American men proving themselves by overcoming the trials of combat against a human opponent, not a natural one. “Enduring the Elements” has shown that for the soldiers in the field, there could be little difference between the two in terms of demonstrating their manly prowess and toughness. Adherence to standards of martial manhood encompassed the entirety of military service, not just battlefield settings, as the troops themselves made abundantly clear in their letters to family and friends.

The environment adds another layer to what it meant to be a martial man, broadening definitions of gender and masculinity beyond those typically considered in Civil War America. But there is no reason to restrict the interplay between manhood, military service, and the environment to just those four years, as similar dynamics likely came into play in American conflicts throughout the nineteenth century as well as in wars before and after. How did the ideals of masculinity that were prevalent at the time

influence privates, noncommissioned officers, and junior officers in those other wars? How did it shape their perceptions of weather-related struggles and their responses to them? These are questions for future studies, not to mention in what ways the natural world factored into masculine values and practices among civilians in peacetime society throughout the Civil War era.

Beyond any scholarly insights, focusing on Civil War soldiers' struggles against the weather serves as an avenue for increasing the general public's engagement with history. As a national park ranger at a Civil War site, I know how hard it can be to get visitors invested in the distant past. The people, places, and events just seem too far removed for those with only a casual interest in history. But everyone has experienced inclement weather – they have been soaked in the rain, sweated on a hot day, shivered on a wintry night, or simply watched a violent thunderstorm from the comfort of their home. The weather is a topic that resonates with nearly all people, allowing it to be used to connect modern audiences with the Civil War. When listening to tales about soldiers' difficult and varied encounters with the elements, the public can more easily place themselves in their shoes. Most visitors' level of exposure to bad weather has been nowhere near as constant or severe as the troops of the U.S. and Confederate armies, but that does not matter. The important thing is that they can imagine how it must have felt, how challenging it was, what it must have taken to endure and survive – that is what bridges the gap of one hundred and sixty years, that is what piques their interest in the larger narrative and themes being discussed, that is what gets them to remember these stories. And ultimately, that is what encourages them to learn more about the Civil War and the hundreds of thousands of individuals involved in it.

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Professional Positions

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May 2018-July 2018
Summer Fellow for Newport Historical Society
May 2017-August 2017
Research Assistant for Northeastern University – School of Criminology & Criminal Justice
September 2013-May 2016

Professional Publications

"Contending with the Elements: The Role of Weather in the Battle of Spotsylvania Court House," *Civil War History* 67, no. 3 (Sept. 2021): 200-228.
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