

The Army Mountain Warfare School and the Past, Present, and Future of Military Mountaineering

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The concept of military mountaineering has continuously evolved throughout the history of armed conflict, and the Army Mountain Warfare School (AMWS) in Jericho, VT, will continue to lead the way in the instruction of skills needed for U.S. forces to fight and win in those environments. Fighting in the mountains has historically proven difficult for any military unit due to challenges to maneuver, sustainment, and communications. In the future, the U.S. Army will continue to require units that can effectively conduct operations on vertical terrain and in cold temperatures. Due to these realities, the U.S. Training and Doctrine Command (TRADOC) depends on the AMWS to serve as the premier provider of the training of our maneuver leaders in alpine fieldcraft. AMWS instructors excel within that role and will continue to teach our warfighters to overcome the challenges inherent to mountain operations.

The AMWS is the executive agent for military mountaineering for its proponent, the U.S. Army Infantry School (USAIS). The ultimate objective for the school's instruction is to teach mobility in mountainous terrain and in cold weather. It is the only school in the U.S. armed forces that teaches basic, advanced, and specialty mountain warfare courses as well as additional mission-specific training to U.S. and foreign military forces. Along with the Northern Warfare Training Center (NWTC), they are the only TRADOC schoolhouses authorized to issue the Skill Qualification Identifier (SQI)-E (Military Mountaineer) to service members upon completion of the Basic Military Mountaineer Course (BMMC). Students who complete the basic course can return to continue their alpine education in the Advanced Military Mountaineer Course (AMMC). The school also offers three specialty courses — the Rough Terrain Evacuation Course (RTEC), Mountain Rifleman Course (MRC), and the Mountain Planner Course (MPC). The Soldiers and leaders who receive this instruction return to their units with the lessons that they've learned and pass those skills on to others in order to improve the mountain competency of their organizations.

Looking to the Past

A quick study of the history of military mountaineering offers clear evidence of its importance to today's Army. Traditionally, infantry forces have strived to occupy difficult alpine terrain in order to take advantage of the protection that ground provides as well as the tactical benefits it offers to those that control it. One of the first examples of strategic mountain operations occurred in 218 B.C. during the Second Punic War when Hannibal crossed the Alps with more than 60,000 Carthaginian infantry and cavalry troops in an attempt to conquer Rome.¹ The fact that an estimated 13,000 of his men died during the trek over the Pyrenees attests to the challenges that such efforts in the mountains present. The development of mountain warfare as an art didn't become evident until the Middle Ages when the Swiss utilized the mountains to successfully defend their homeland. They did this by taking advantage of elevation and observation and fighting in small mobile formations from defensive positions



Soldiers attending the U.S. Army Mountain Warfare School climb Smugglers' Notch as part of their final phase of the Basic Military Mountaineer Course on 19 February 2015. (Photo by TSgt Sarah Mattison, U.S. Air National Guard)

on the high ground against the European monarchies that threatened them.² It was evident to the Swiss that the mountains and the harsh conditions that they presented were as much of a threat to their forces as the enemy. Unforgiving weather, jagged terrain, and the virtual impossibility of alpine logistics provided challenges that became unsurmountable for formations that were not specially trained in those conditions.³ Force ratios needed to win engagements were cut in half for units which occupied dominant terrain and operated against forces that used predictable valley mobility corridors and then had to fight uphill. Italian Alpini units were among the first that could be considered experts in military mountain operations after their formation in 1872 to defend their northern mountainous borders in the Alps.⁴ After seeing the Italians' success, other European nations with mountainous terrain followed suit and formed specialized units to fight on elevated ground.⁵ In America, cold weather and mountain operations have been part of every conflict since the Revolutionary War, most famously when George Washington and the Continental Army reconsolidated on the frigid plateaus of Valley Forge, PA. The Civil War also had dozens of engagements involving units that utilized vertical terrain to their advantage including the Battle of Missionary Ridge and the Little Round Top engagement during the Battle of Gettysburg.

The concept of specialized mountain and cold weather units first entered into the minds of American military leaders in 1939 after studying the results of the Winter War where numerically inferior Finnish forces defended effectively against an invasion by the Soviet Union.⁶ The Finns used superior knowledge of cold weather operations to inflict massive losses upon the Soviets and, in doing so, were able to maintain their sovereignty with the signing of the Moscow Treaty of 1940. Operating in extremely harsh winter conditions, Finnish forces destroyed two Soviet divisions and killed more than 120,000 enemy soldiers, often conducting operations on skis. At the time, U.S. Army decision makers were concerned that we did not possess the ability to defend against a German invasion that they anticipated would present itself through the Appalachian Mountains. Those decision makers took notice of Finnish success and immediately made plans to develop their own mountain fighters versed in cold weather operations.

On 15 November 1941, the 87th Mountain Infantry Battalion was activated at Fort Lewis, WA, and became the first American unit of specialized alpine soldiers. The next year the unit expanded to a regiment and relocated to Camp Hale in Colorado before it gained its first operational experience deploying to the Aleutian Islands of Alaska in the summer of 1943. Upon their return they were assigned to the newly formed 10th Light Division (Alpine), which was later renamed the 10th Mountain Division in December 1943. In 1944 and 1945, the 10th Mountain Division, composed of the 85th, 86th, and 87th Mountain Infantry Regiments, utilized mountain skills in Northern



Soldiers in 3rd Battalion, 172nd Infantry Regiment prepare to load onto a UH-60 Black Hawk after a mission in Paktya Province, Afghanistan, on 1 May 2010. (U.S. Army photo)

Italy, most notably during the victories over German defenses on Riva Ridge and Mount Belvedere in the Apennine Mountains. The 10th Mountain Division was deactivated after the war but was eventually reactivated in 1985 at Fort Drum, NY, reconnecting the unit to its historical accomplishments. The 10th Mountain Division currently operates as a light infantry division without a specifically tasked mission to conduct mountain operations and, since its reactivation, has become the most deployed unit in the Army. The only currently active U.S. Army unit that is specifically tasked to conduct mountain operations is the 86th Infantry Brigade Combat Team (Mountain) out of Jericho, VT, that deployed to Iraq in 2004, Afghanistan in 2010, and multiple other locations across the Middle East, Africa, and the Balkans in 2021. The 3rd Battalion, 172nd Infantry from the 86th is one of the only National Guard units to be awarded the Valorous Unit Award for its actions fighting in the mountains of eastern Afghanistan in 2010 while attached to the 3rd Brigade Combat Team (Rakkasans) of the 101st Airborne Division.⁷

Although active Army units specifically tasked with mountain operations were deactivated after World War II, Army training schools continued to teach those critical alpine skills to individuals and units. The first Army alpine school was the Mountain Training Center at Camp Hale, which was initially stood up in 1942 using cadre from the newly formed 87th Mountain Infantry Battalion. It was tasked with providing cold weather and mountain training to units preparing to head overseas to fight in World War II. Following the inactivation of 10th Mountain Division in 1945, the War Department understood that maintaining mountain warfare capabilities was critical to our success in future conflicts and kept those alpine training centers open. The Army later stood up the Army Mountain and Winter Warfare School in 1946 at Camp Carson in Colorado, using returning 10th Mountain veterans as instructors. The school continued to instruct those skills between Camp Carson and Camp Hale until 1957. The Army also opened up the Arctic Training Center in 1948 at Big Delta, AK, which eventually was renamed Fort Greely. After training ended in Colorado in 1957, the center in Alaska was first renamed the Army Cold Weather and Mountain School and then became the Northern Warfare Training Center in 1963, which is the name that remains today. NWTC, now in Black Rapids, AK, is the Army's primary provider of cold weather training and instructs individuals and units the skills needed to operate in arctic and mountainous terrain.

The Army's Arctic Strategy

Looking to the future, does the Army need a continued focus on cold weather and mountain operational proficiency? A quick study of the Earth's geography and changing climactic conditions in the Arctic clearly answers that question. With 25 percent of the world's surface and more than 38 percent of the world's landmass being classified as mountainous, we can be certain that the U.S. Army will continue to need units that can operate proficiently on vertical terrain and in cold weather.¹⁰ Arctic ice has continued to dissipate at exponentially growing rates, and

as a result, access and shipping routes into and through the Arctic have begun to open. It is also estimated that the Arctic contains 15 percent of the world's oil and 30 percent of the planet's natural gas.¹¹ Arctic and sub-Arctic nations, including our near-peer adversaries, have begun to expand claims into these environments to increase power projection, access these resources, and decrease shipping costs using these newly opened shipping lanes. One only needs to look at your office globe from directly above to see that the Arctic also provides the most direct approach for our peer adversary, Russia, to access U.S. territory in any future conflict.

As a result of these circumstances, both of our near-peer contemporaries, Russia and China, have begun to make bold moves to increase their Arctic presence. The Arctic is essential to Russia's military and international presence and they have invested billions in the development of infrastructure and military bases in the expanses north of their territorial borders.¹² This is a clear effort to expand power and influence into the Arctic region and gain access to the region's resources. China's attention to the Arctic region is primarily an effort to create a northern "Polar Silk Road" that would greatly decrease the oceanic travel distance and the cost of bringing its exports to the west when compared to its current shipping path in the south through the Suez Canal.¹³ Both Russia and China's ambitions in the Arctic make it clear that they have strategic aims for the area. What does that mean for the U.S. Army and the Mountain Warfare School in Vermont? The answer to that question becomes clear as one reads the Army Arctic Strategy published by the Department of Army in January 2021. The document, titled "Regaining Arctic Dominance," clearly states our expanding national objectives in the cold environs to our north and a path to attain those goals. The AMWS was mentioned explicitly in the Arctic Strategy as being a key player in the development and instruction of the skills needed to operate in that unforgiving domain and address the growing opportunity that exists in the Arctic north.¹⁴

The Army's current modernization efforts intend to transform our organization into a multidomain force by 2035. Traditionally, armed conflict has existed in three domains: ground, sea, and air, but in the last few decades it has become evident that we must be able to operate in two new domains, space and cyber. Our solution to this needed evolution exists within the concept of the multidomain task force (MDTF). Each of these MDTFs increase



An instructor at the Army Mountain Warfare School demonstrates a casualty evacuation technique on 19 January 2022. (Photo by SFC Whitney Hughes)

our ability to provide strategic deterrence and fight when called upon, in all five domains: ground, air, sea, space, and cyber. The Army has near-term plans to increase the current number of MDTFs from two to five, and one of those is earmarked for Alaska to counter Russian expansion into the Arctic.¹⁵ This will dramatically increase the number of units and individuals who will need to be trained in cold weather operations. As stated in the Arctic Strategy, “This rejuvenated Arctic capability will increase the Army’s ability to operate in cold-weather, mountainous, and high-altitude environments. This strategy poises the Army to adapt how it generates, postures, trains, and equips our forces to execute extended, multi-domain operations in extreme conditions in support of the Joint warfighter.”¹⁶

Additionally, the June 2022 activation of the 11th Airborne Division in Alaska to become our third airborne division, alongside the 82nd and 101st, provides clear evidence of our expanding Arctic vision. This will only increase the demand for our service schools, including the AMWS, to continue to provide cold weather and mountain training to our Soldiers. Finally, the 10th Mountain Division recently added more military mountaineer positions to its modified table of organization and equipment (MTOE) in efforts to improve the unit’s competency in the area that gives it its name. Adding these mountaineer slots will also profoundly increase the instructional requirement that lays at the feet of the AMWS.

Army Mountain Warfare School

In 1983 the Vermont National Guard activated Alpha Company in Jericho with the mission to serve as the state’s mountain infantry unit. At the same time, the state also established the Mountain Warfare School to train members of that unit. The school initially occupied a small tin shack on Camp Ethan Allen, and together, the company and school served as the initial component of the Army Regimental Mountain Concept Plan. The evolution of the Mountain Infantry in Vermont continued as Alpha Company expanded to become the 3rd Battalion, 172nd Infantry and eventually was flagged as the 86th Infantry Brigade Combat Team (Mountain) in 2006. Throughout that time the school continued to provide mountaineering training to Soldiers in that formation. In 1986, TRADOC approved the Mountain Warfare School’s program of instruction (POI), which validated its instructional content. In 1987, an actual schoolhouse was built in the lower valley at Camp Ethan Allen, and in 1994 it was designated as the proponent of the military mountaineer skill identifier, called the “Ram’s Head” device. The school was renamed the U.S. Army Mountain Warfare School in 2003 and was tasked with teaching mountaineering to all Soldiers, active and reserve, as well as other branches of the military, law enforcement, and foreign service members. The schoolhouse conducts courses 11 months out of the year and instructs more than 500 students annually in its two-week Basic Military Mountaineer Course. Initially, a service member needed to pass both the summer and winter iterations of the course to earn the coveted “Ram’s Head” device, but since 2008 a Soldier only needs to complete one of the two phases to earn the “echo” qualification. The school has continued to provide relevant, sustainable, mission-focused mountain warfare training, and as a result the school has been designated a “School of Excellence” with accreditation by the U.S. Army Infantry School. It is also the only permanent non-European member of the International Association of Military Mountain Schools.

Training facilities on Camp Ethan Allen have continued to expand and currently include more than 25 square kilometers of training areas and live-fire ranges. On-post training sites include multiple rock-climbing and rappelling routes, an ice-climbing wall, biathlon trails, a ski slope with a renovated lift line, as well as dozens of maneuver training areas, all arrayed in challenging mountainous terrain. In addition to the Mountain School, the training area is utilized by active and reserve units in multiple service branches from across New England. AMWS’ story is punctuated by the May 2022 opening of a new \$27 million schoolhouse at Camp Ethan Allen that will increase its ability to train Soldiers. All courses considered, the school instructs about 1,000 Soldiers a year, but the demand has increased to over 160 percent of its current capacity. The new school building features state-of-the-art facilities including an increased number of beds and classrooms and a massive four-story indoor climbing wall. The new 80,000 square foot building will help the school meet the current demand that will only increase with the addition of the new mountaineer slots in the 10th Mountain Division as well as the expanded cold weather initiatives laid out in the Army’s new Arctic Strategy.

AMWS Courses

The school currently runs both winter and summer courses in its Basic and Advanced Military Mountaineer Courses. BMMC trains Soldiers in mountain mobility and many other skills including land navigation, first aid, and



**An Army Mountain Warfare School student aims at a target during training on 24 January 2022.
(Photo by SFC Whitney Hughes)**

casualty evacuation in alpine terrain. Students learn functional knots and rope systems needed to safely ascend and descend vertical terrain. Students utilize rock- and ice-climbing lanes to hone their skills that they eventually will share with their peers and subordinates back in their home units. The course lasts 14 days, averaging 14 hours a day, where students conduct practical, realistic, and strenuous hands-on mountaineering training. During the course, students become increasingly proficient in the fundamentals, principles, and techniques needed to conduct small unit operations in mountainous terrain and in cold weather conditions. The basic course of instruction focuses on Level 1 Basic Mountaineer tasks described in the TRADOC-approved Army mountain operations manual, Training Circular (TC) 3-97.61.

The Advanced Military Mountaineer Course also lasts 14 days and is designed to instruct specially selected students who excelled in the basic course and continue their alpine instruction with an eye towards becoming assault climbers. Assault climbers are trained and capable of leading and instructing mountaineering skills on technically difficult, hazardous, or exposed mountainous terrain. They are considered experts in small-unit mountain operations and can be counted on to safely lead and instruct basic military mountaineering skills and provide advisement to their unit commanders in decisions pertaining to alpine operations. The advanced course of instruction focuses on Level 2 assault climber tasks described in TC 3-97.61.

The AMWS also teaches three specialty mountain courses. The Rough Terrain Evacuation Course focuses on medical and casualty evacuation. In this course students learn to safely transport a casualty from the point of injury to a higher level of care over and through vertical terrain in all climactic conditions. Students experience a mixture of classroom and field time to develop their medical skills in a variety of scenarios and practical exercises. The Mountain Rifleman Course is designed to train snipers to improve their shooting skills and lethality in high-angle situations. Students are instructed in mountain-specific marksmanship skills as the round trajectory changes from horizontal to near vertical through the thin mountain air. Soldiers are instructed in mountain and cold weather mobility, load management, and long-range marksmanship, all in challenging mountainous terrain. They are provided with extensive shooting opportunities on both flat and high-angle ranges and integrate practical exercises that put all of these skills to the test and validate that the shooter can plan and execute missions in alpine terrain. Finally, the AMWS offers the Mountain Planner Course, which is designed to train leaders to better understand the challenges of conducting missions in mountainous terrain and in cold weather conditions. Leaders who can better

understand the challenges and requirements for alpine operations set their units up for success when conducting those missions. Students learn about the effects of altitude, vertical terrain, and cold weather on personnel, equipment, movement, reconnaissance, indirect fires, casualty evacuation, resupply, and water procurement. The course provides classroom instruction as well as practical exercises that address these challenges that include route planning, offensive and defensive operations, and patrolling.⁸

If you've ever attended or spoken to a Soldier who has attended one of the courses offered by the AMWS, what will have stood out is the competency and experience of the instructors. Due to the amount of time required to become certified to safely teach students on vertical terrain, instructors typically teach at the school for an extended period of time and become highly proficient in mountain skill craft. The school's 30 instructors have hundreds of years of cumulative climbing experience and extensive knowledge in the instruction of military mountaineering. Instructors at the schoolhouse have climbed hundreds of the world's most challenging summits and have provided guest instruction at most of the military mountaineering schools of our allied nations. They have attended European mountaineering schools in Austria, Germany, Italy, France, and Finland. The schoolhouse has also conducted mobile training teams to provide onsite training for active and reserve units across the country as well as to our foreign allies at alpine training centers around the world. They have been chosen as the Army's instructor of the year and have been called upon multiple times to save lives in critical real-world emergency situations in Vermont and across New England due to their expertise in alpine and cold weather operations.⁹ As a result, instructors at the AMWS are commonly referred to as the best in the Army.

Conclusion

The history of military mountaineering shows us that we will continue to need units that can operate in alpine areas and in extreme cold weather. The changing strategic conditions of our world also make clear our nation's future requirements to fight and win in all climactic conditions, including in the frigid Arctic. As a result, we need schoolhouses that can teach those critical cold weather and mountain skills that are needed for our warfighters to bring the fight to the enemy from the high ground. The AMWS has accomplished that mission since 1983 and will continue to answer the call to do so moving into the future.

Notes

¹ "Mountains and Wars," PeakVisor, 20 May 2019, accessed from <https://peakvisor.com/en/news/mountains-wars.html>.

² Ibid.

³ Ibid.

⁴ "The Alpini Corps," Italian Heritage, n.d., accessed from <https://www.italyheritage.com/magazine/history/alpini.htm>.

⁵ PeakVisor, "Mountains and Wars."

⁶ Michelle Kennedy, "Bootprints in History: Mountaineers Take the Ridge," Army News Service, 19 February 2015, accessed from https://www.army.mil/article/143088/bootprints_in_history_mountaineers_take_the_ridge.

⁷ Sam Hemingway, "Guard Infantry Unit to Receive Award for Afghanistan Service," *Burlington Free Press* (8 January 2014), accessed from <https://www.burlingtonfreepress.com/story/news/2014/01/08/guard-infantry-unit-to-receive-award-for-afghanistan-service/4378811/>.

⁸ "The Army Mountain Warfare School (AMWS)," Fort Benning website, n.d., accessed from <https://www.benning.army.mil/infantry/amws/Courses.html>.

⁹ Lynn, Lisa, "A Skier Dies and a Tragic Rescue," Vermont Ski and Ride, 2 March 2020, accessed from <https://vtskiandride.com/a-skier-dies-and-a-tragic-rescue/>.

¹⁰ "The Army Mountain Warfare School," Academic Dictionaries and Encyclopedias, n.d., accessed from <https://en-academic.com/dic.nsf/enwiki/10708958>.

¹¹ Headquarters, U.S. Army, "Regaining Arctic Dominance: The U.S. Army in the Arctic," 19 January 2021, accessed from https://www.army.mil/e2/downloads/rv7/about/2021_army_arctic_strategy.pdf.

¹² "Russia Builds Second Military Base to Support Arctic Ambitions," Radio Free Europe, 21 October 2015, accessed from <https://www.rferl.org/a/russia-builds-second-military-base-support-arctic-ambitions/27317698.html>.

¹³ HQDA, "Regaining Arctic Dominance."

¹⁴ Ibid.

¹⁵ Wyatt Olson, "Army Considering 13 Bases as Sites for Multidomain Artillery Units," *Stars and Stripes* (23 June 2022), accessed from <https://www.stripes.com/theaters/us/2022-06-22/multidomain-task-force-army-comment-6429605.html>.

¹⁶ HQDA, "Regaining Arctic Dominance."

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