The scientific and pedagogic legacies of Michael T. Walegur, 1973-2018

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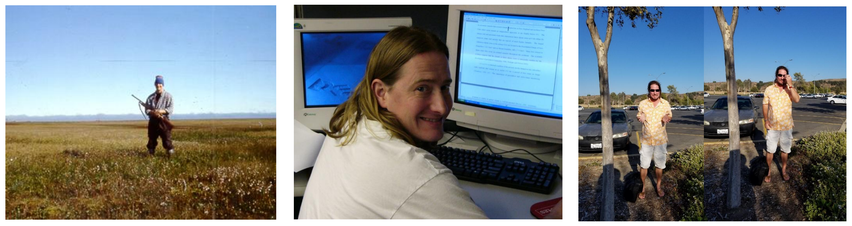
Abstract

Michael Thomas Walegur was a hiker, animal lover, climatologist, periglacial geomorphologist, and teacher extraordinaire. Mike grew up in Queens, New York City. In 1991, he enrolled at SUNY-Albany, majoring in physical geography. He was a top-notch student. Graduating in 1995, he immediately began work on his M.S. at SUNY.

Mike showed a singular devotion to his studies. His dedication to science, combined with his love of wilderness and his outdoor skills, led to establishment of his signature accomplishment—the Appalachian High Elevation Network. AHEN, a series of climate stations on 20 Appalachian summits extending from Maine to North Carolina, was a visionary effort motivated by a paucity of lapse-rate data in Appalachia. Mike ran this network of air and soil temperature-monitoring stations for over a decade, servicing his instruments annually between 1996 and 2008. After finishing his master's thesis, a detailed analysis of AHEN data, Mike began doctoral studies at the University of Delaware. His research involved applications of AHEN data to periglacial and permafrost problems, resulting in several peer-reviewed publications. During his Delaware years, Mike also participated in field work in Alaska.

In 2008, Mike accepted a teaching position at Moorpark College in southern California, quickly achieving tenure. He was an effective and well-respected teacher. In the best scientific tradition, he used his field experiences as a finely tuned teaching device. Professor Walegur died at age 44 from complications related to a long-standing medical condition. He is remembered fondly by his many friends and colleagues in the scientific and geographical communities.

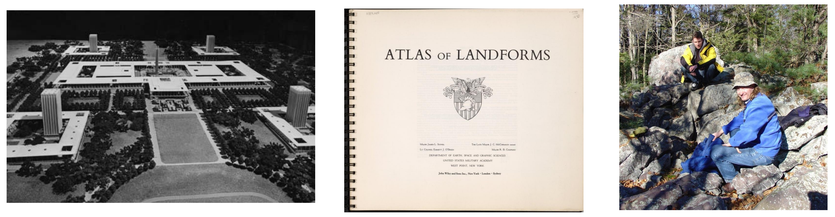


Walegur in Alaska, Delaware, and California.

NYC

Mike was raised in New York City's Borough of Queens. Not surprisingly, he was thoroughly and permanently infatuated with Queens' major-league baseball team, the New York Mets. Young Mike played baseball and attended many games at Shea Stadium (pictured here in 1981). He continued to follow and root for the Mets after leaving New York City for college in Albany in 1991. He was known to have gifted people with Mets batting helmets in return for help with his projects. Mike had plenty of stories about his exploits in NYC, such as the time he managed to climb to the top of a tower on the Triborough Bridge.

Walegur and NYC



SUNY-Albany, the *Atlas*, and Walegur at Hickory Run Boulder Field, east-central Pennsylvania.

Physical Geography at SUNY

Mike entered SUNY-Albany in the fall semester of 1991 and majored in geography. He took a full complement of courses in the discipline, but settled on physical geography. He had a penchant for geomorphology and climatology.

Fritz Nelson recalls: "My first interactions with Mike were in a senior-level geomorphology course in the spring of 1995. We used the *Atlas of Landforms* in the laboratory portion of the course and spent a lot of time analyzing maps and air photos of landscapes that illustrated specific landforms particularly well. I often chose study locations in areas of the eastern USA, to stimulate student interest. Early on, I noticed that lab reports from one of the two-student teams eclipsed those of others in the class. It turned out that this team was making weekend trips to sites within 300 miles or so of Albany, and using their own field observations and photographs to supplement materials supplied in the *Atlas*. I realized at this point that I was dealing with someone unusually fascinated with the outdoors and earth-science field work. I began talking with Mike about pursuing grad studies, and in the fall of that year he enrolled in SUNY-Albany's Geography master's program."

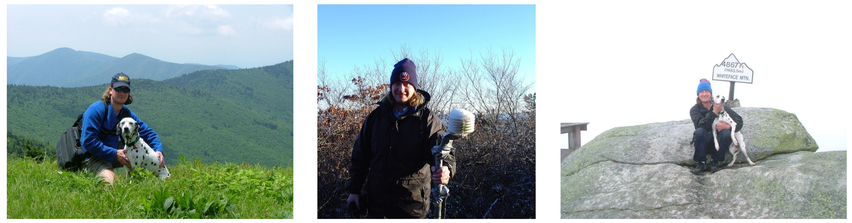
Mike, always a strong hiker, had great love for the mountains of upstate New York and New England. These interests melded with scientific investigation when he took courses in climatology and cold-regions science. Publications about the climatology of the Appalachian Mountains by R.J. Leffler and T.W. Schmidlin were particularly inspiring for Walegur, and by the end of the 1995-96 academic year he had designed a network of climate-observation stations he came to call the "Appalachian High-Elevation Network" (AHEN).

The Appalachian High Elevation Network

Mike's interest in Appalachian climatology developed at exactly the time when GPS and miniature data logger technology became widely available at reasonable cost. Our SUNY-Albany permafrost research group had begun deploying these loggers in northern Alaska and had developed strategies to keep them operating year-round under extremely challenging environmental conditions.

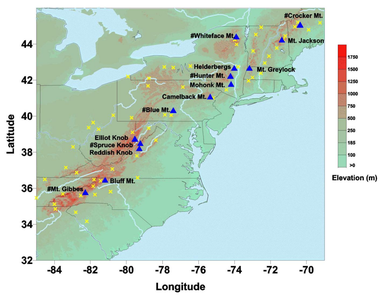
Mike developed plans to deploy temperature data loggers on 20 Appalachian summits over a transect extending from Maine to North Carolina. He successfully raised money for the project through proposals to SUNY and several outside funding organizations. Installation of the instrumentation was accomplished during the summer of 1996. His schedule was extremely demanding, and also required a great deal of permissions-paperwork for landholders. Two installations were deployed at several of the mountains, in order to obtain lapse-rate observations

Mike left Albany with a fresh buzzcut ("It's less trouble than long hair in the field") and an old Jeep CJ5. He was gone most of the summer of 1996. Each AHEN installation consisted of a logger reading air, ground-surface, and soil (-25 cm) temperatures year-round at one-hour intervals. The network was designed to address four outstanding issues: (1) the accuracy of previous air-temperature estimates at high-elevation locations; (2) the relation between the mean annual 0°C isotherm and latitudinal position; (3) the form of the frequency distributions of freeze-thaw days with respect to latitudinal position; and (4) the general accuracy of existing soil temperature maps for the study area, based on the USDA's classification system.

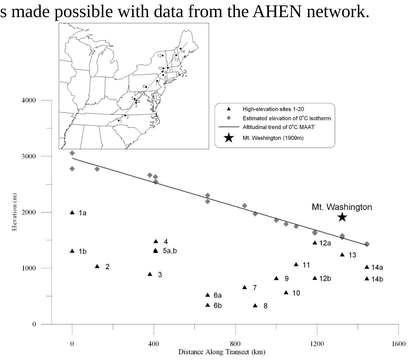


Walegur and Dottie in North Carolina, Virginia, and New York.

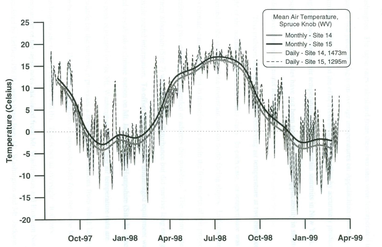
The figures below only hint at the sophisticated analyses made possible with data from the AHEN network. All figures are from Walegur (2001).



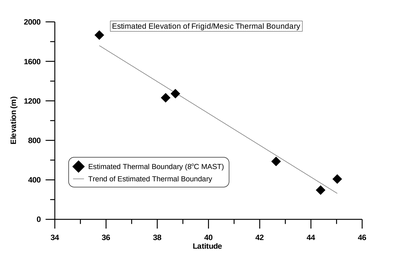
Stations comprising the AHEN network (blue) and National Climate Data Center (NCDC; yellow).



Estimated elevation of the 0°C mean annual isotherm along the transect shown in the figure to the left. Diamonds represent the estimated elevation of the zero isotherm using data from each site and calculated lapse rates.



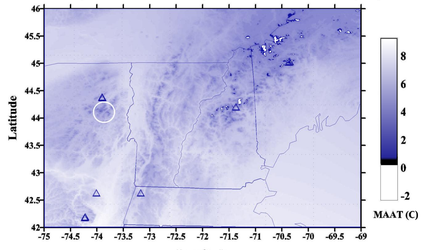
Mean monthly and daily air temperatures at two elevations on Spruce Knob, WV.



Trend of the AHEN estimated USDA Frigid-Mesic soil boundary.

Permafrost and Periglacial Geomorphology

After finishing his master's program at SUNY, Walegur moved to the University of Delaware for doctoral work. His dissertation research involved use of AHEN data to gain insight into the distribution of periglacial landforms during the last glacial maximum, and of contemporary permafrost. He continued to service the AHEN network annually until he left for California in 2008. Two important publications came out of this work (Walegur and Nelson (2003) and Park Nelson et al. (2007). Mike also spent several field seasons involved in the Circumpolar Active Layer Monitoring program in Alaska, and was coauthor of several publications and presentations on that project.



Map of permafrost in the northeastern USA (white), based on data from AHEN and NCDC.

Walegur at Hickory Run.

Pedagogy

Mike Walegur was a dedicated teacher and a popular professor. He was keenly interested in pedagogical theory and practice, and worked for the University of Delaware's Center for Teaching Excellence for several years. During his brief career he taught courses for at least three colleges: University of Delaware, Widener University, and Moorpark College. His teaching evaluations indicate that he was demanding but fair with his students. We could do no better than to quote Professor Walegur's own statement about teaching philosophy, as expressed in a 2008 application for a faculty position:

I have had the opportunity to instruct and work with a diverse body of students, including the "typical" undergraduate, learning disabled students, foreign students, and adult learners. My experience with students of varied backgrounds, abilities and special needs, has led me to conclude that the most important aspect of teaching is the development of strong working relationships with and amongst my students. All too often, I have experienced the disassociated "I got an A, (s)he gave me a D" mentality of many students. I feel this attitude is toxic to the development of a fruitful classroom learning environment. If allowed to fester it typically results in students "texting" or picking split ends out of their hair during class.

To avoid such an environment, I always begin a new class by stressing to my audience that, although they are "my" students, and I am "their" instructor, the course is as much theirs as it is mine. In other words, I strive to make students buy into the concept that we are on a two-way street. While I am responsible for course logistics and the facilitation of learning, they are ultimately responsible for their learning and performance. I feel strongly that part of my job is to prepare students for their professional careers and believe that this "we are in it together" approach to teaching and learning will facilitate their development as young (and sometimes older) professionals.

When students feel there is a tangible benefit to a class, they are more likely to remain motivated. I typically ask my students the following philosophical question about half way though our course, presumably after we have developed a professional working relationship. "What will your college degree mean to a prospective employer?" While some have very specialized majors requiring specific skills or certifications, most do not. Ultimately, I want them to realize that their ability to think critically, problem solve, and work with others is what typical employers will find most attractive.

Working with students in a professional teaching capacity requires patience and organization. While instructors have many hats to wear—lecturer, comedian, disciplinarian, and advisor—adaptability is the most integral part of my approach to teaching.

Remembering Mike

Danita Redd: *He had a soft heart that was full of gold. He was hilarious at times. He was known for his empathy and compassion.*

Jon Little: *I was new to the North Slope and field work, and Mike put me under his wing. Although the field work was a part of my thesis and not his, he helped me lug a 50+ pound high precision GPS base station over the permafrost terrain to the field site. Looking back, I realize how these actions, and his humor that day, were how Mike lived every day.*

Heath Sandall: *He was such a big-hearted guy. I remember burning up many hours of the Haul Road drive arguing about how long it would take to hike to the top of Mt. Sukakpak in the Brooks Range. I finally hiked in that area a few years ago, and dang it, I was wrong and he was right. I kept meaning to track him down and let him know he was right….*

References

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