13.4 REMEMBERING DR. IRA GEER: REFLECTIONS FROM THE AMS COMMUNITY

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1. INTRODUCTION

This presentation features reflections on Dr. Ira Geer's professional life and legacy by Elizabeth Mills, AMS Education Associate Director, and Dr. Edward Hopkins, University of Wisconsin Assistant State Climatologist. Dr. Hopkins, a longtime AMS collaborator and close friend of Ira, and Elizabeth Mills share how Ira's vision for Earth system science education inspired their many years of collaboration. Both regard him as a significant mentor and colleague.

2. REFLECTIONS BY BETH MILLS

Beth first met Ira in 1993 when she was a high school sophomore, and the AMS Education office was in its early stages, located on K Street in Washington, DC. Ira provided valuable guidance on the field of meteorology and connected her with Ron Gird at the National Weather Service Headquarters in Silver Spring, leading to a six-summer internship. While in graduate school, she reconnected with Bernard Blair and Ira, which led to another meeting at the AMS office and eventually a job offer. Beth fondly remembers Ira's humble nature, creativity, and ability to foster an atmosphere of hard work and respect for staff and the educators in their network—all while making meaningful work in Earth science education enjoyable (Figure 1).



Figure 1. Joseph Moran, Robert Weinbeck, Max Mayfield (NOAA NHC), Beth Mills, and Ira Geer during a summer teacher training session in the Miami, FL, area.

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Despite his many contributions to the field, Ira never sought the spotlight, and the AMS staff had to "insist" on celebrating his service when the time came.

3. ONLINE WEATHER STUDIES DIVERSITY PROJECT

One of the key collaborations Beth was originally hired to assist with was the "Online Weather Studies" undergraduate course, which Ira had launched a couple of years earlier and was experiencing rapid growth. Soon after, the NSF awarded AMS funding for the "Online Weather Studies Diversity/National Dissemination Project," which focused on providing professional development experiences at the NWS Training Center and AMS Annual Meeting for faculty from minority-serving institutions, including Historically Black Colleges and Universities (HBCUs). Two key collaborators on this project, Dr. William Porter and Dr. Jasper Harris, both taught at HBCUs in North Carolina. Ultimately, the program engaged 145 minority-serving institution faculty and impacted thousands of students. Similar diversity initiatives followed, expanding into AMS Ocean and Climate courses and later into external collaborations for AMS Education in paleoclimate and polar science education. In 2006, Ira received the prestigious AMS Charles E. Anderson Award "for innovative delivery of high-quality professional development experiences for K-12 teachers and for undergraduates, especially from groups traditionally underrepresented in the sciences, mathematics, and technology." Interestingly, Dr. Ed Hopkins, whose reflections we will share next, was a colleague of Dr. Anderson at the University of Wisconsin.



Figure 2. Description of the AMS Charles E. Anderson Award.

4. REFLECTIONS BY ED HOPKINS

The first formal meeting between Ed Hopkins and Ira Geer at the 75th annual AMS meeting in Dallas, TX marked the beginning of a 28-year friendship. Ira was familiar with Ed's resource listings for weather and climate instruction, which he had developed for K-12 teachers in southern Wisconsin. Ira had also received positive feedback about Ed from Dr. Joseph Moran, who was on sabbatical at the AMS DC office, working on the DataStreme Atmosphere project, scheduled to launch in spring 1996. Through Joe, Ira invited Ed to help update a glossary of weather terms for the teacher participants. That spring, Ed helped organize and edit a 272-page glossary of meteorological, oceanic, and hydrologic terms, published in 1996 and widely used in the DataStreme courses for years (Figure 3).

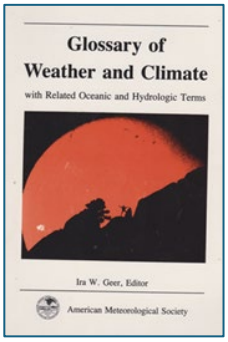


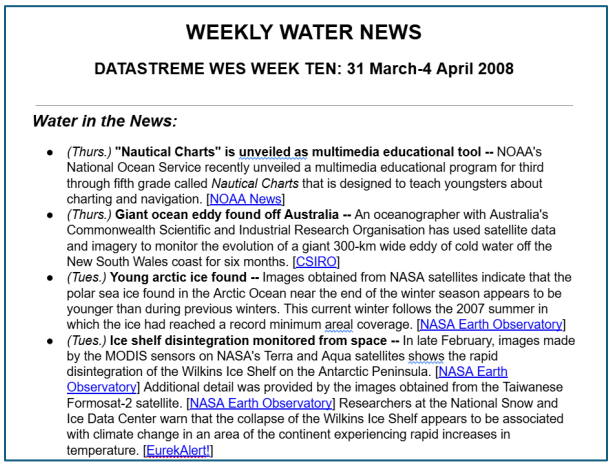
Figure 3. AMS Glossary of Weather and Climate. [Photo by Edward Hopkins]

Ira first sought Ed's assistance when the annual AMS Summer Teacher Training Session was held at the University of Wisconsin-Madison's Department of Atmospheric and Oceanic Sciences in July 1995, during a deadly heat wave. As a long-time member of the department, serving as both a graduate student and lecturer for over 20 years, Ed was able to calmly arrange accommodations to keep participants as comfortable as possible—a feat that left a lasting impression on Ira. AMS again brought its large cohort of teacher leaders, known then as Atmospheric Science Resource Agents (AERAs), back to UW in July 2001 for their annual training. This group of teacher leaders met annually during Ira's tenure as AMS Education Program director (Figure 4).



Figure 4. AMS Education staff, collaborators, and AERAs at NOAA Headquarters in Silver Spring, MD, during a summer training session.

The professional relationship between Ira and Ed strengthened further in December 1995 when Ira called Ed to request someone to write a daily national weather summary for the teachers in the DataStreme program. With his high school science teaching experience, Ed was well-prepared for the task and went on to write daily weather summaries for an appreciative audience, including Ira, for the next 20 years. Over time, Ed also became the editor for the Weekly Water News, Weekly Ocean News, Weekly Climate News, and Weekly Weather & Climate News for the DataStreme courses.



WEEKLY WATER NEWS

DATASTREME WES WEEK TEN: 31 March-4 April 2008

Water in the News:

- *(Thurs.)* **"Nautical Charts" is unveiled as multimedia educational tool --** NOAA's National Ocean Service recently unveiled a multimedia educational program for third through fifth grade called *Nautical Charts* that is designed to teach youngsters about charting and navigation. [NOAA News]
- *(Thurs.)* **Giant ocean eddy found off Australia --** An oceanographer with Australia's Commonwealth Scientific and Industrial Research Organisation has used satellite data and imagery to monitor the evolution of a giant 300-km wide eddy of cold water off the New South Wales coast for six months. [CSIRO]
- *(Tues.)* **Young arctic ice found --** Images obtained from NASA satellites indicate that the polar sea ice found in the Arctic Ocean near the end of the winter season appears to be younger than during previous winters. This current winter follows the 2007 summer in which the ice had reached a record minimum areal coverage. [NASA Earth Observatory]
- *(Tues.)* **Ice shelf disintegration monitored from space --** In late February, images made by the MODIS sensors on NASA's Terra and Aqua satellites shows the rapid disintegration of the Wilkins Ice Shelf on the Antarctic Peninsula. [NASA Earth Observatory] Additional detail was provided by the images obtained from the Taiwanese Formosat-2 satellite. [NASA Earth Observatory] Researchers at the National Snow and Ice Data Center warn that the collapse of the Wilkins Ice Shelf appears to be associated with climate change in an area of the continent experiencing rapid increases in temperature. [EurekAlert!]

Figure 5. Screenshot of the Weekly Water News from 2008.

In the early 2000s, Ed Hopkins and Joe Moran co-authored the book *Wisconsin's Weather and Climate*, building on their earlier collaborative work. Ira was pleased with their achievement and publicly praised them in front of the DataStreme and Project Atmosphere staff and teachers. At the start and end of each DataStreme semester, Ira would call Ed in Wisconsin for a friendly chat. In the final years of Ira's life, Ed took the initiative to call each semester, a gesture that brought Ira great joy.

5. CONCLUSIONS

These reflections, though just a handful of the many that could be shared, offer insight into Dr. Ira Geer's professional life and legacy. Always humble about his work, Ira had a profound influence on his colleagues, undergraduate faculty and students, and a vast network of dedicated K-12 educators who, over the years, have impacted millions of students.