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1. BACKGROUND

In June 2001 (June 28/29), 5 teachers, our summer intern, and I traveled to New Hampshire to participate in a summer education seminar at the top of Mt. Washington. The weather we experienced was extraordinarily beautiful.

On day 1, other than being on the chilly side and a little windy, we had plenty of sunshine and excellent visibility. Day 2 saw more cloudiness and even a few sprinkles, but nothing to hinder outdoor activities. While at the summit, we received a guided tour of the facilities, took a short hike, and participated in several presentations.

The trip was such a huge success, that, while driving home, we began talking about doing a Winter Edu Trip. For those unfamiliar with Mt. Washington's weather, they claim to have some of the world's worst. The severity of a climate is described in terms of: 1) the penetrating qualities of the wind, 2) the bitter cold temperature, 3) the amount of snow, and 4) the occurrence of freezing fog. All of these are found on Mt. Washington. The highest wind velocity ever officially recorded anywhere in the world by accurately-tested instruments (231 mph) occurred at the Mt. Washington summit on April 12, 1934 at 1:21 PM.

By October 2001, the possibility of a winter trip became more of a reality. My association with **Bryan Yeaton**, the Education Outreach Coordinator for the Mount Washington Observatory, was the connection that put us over the top. I had met Bryan in January 2001 at the AMS Annual Meeting in Albuquerque, New Mexico. He was instrumental in organizing our summer trip, and, along with Dr. Peter Crane (Director of Programs for the Mount Washington Observatory), was the key in getting the ball rolling and putting the winter trip together. Bryan gave me the dates of the Edu trips that he would be leading during the winter season. I reserved the February 9/10 trip for our group.

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Since I am a Local Implementation Team member for both *DataStreme* and *WES* (American Meteorological Society long distance learning courses) and the Education Outreach Program Director in my office, I have had the opportunity to interact with many teachers. I spread the word about the trip to our current teachers and to as many alumni as I could contact. In the end we came up with 3 teachers, 1 future teacher, and myself.

2. THE PARTICIPANTS

LEADER AND ORGANIZER

Bob Wanton — National Weather Service Meteorologist (forecaster in the Philadelphia/ Mt. Holly, NJ Forecast Office) — Education Outreach Program Director — Local Implementation Team member for both *DataStreme* and *Water In The Earth System*.

TEACHERS

Bill Dyke — Science teacher at East High School, West Chester, PA

Bill Huskin — 5th grade teacher at Warwick Elementary School, Central Bucks School District, Jamison, PA

Bill Vosburgh — 5th grade teacher at Hillsdale Elementary School, West Chester, PA

We had one other participant —

Kristi Wanton — B.A. Rutgers University 2001 --- working toward her teaching certificate at Georgian Court College

3. THE TRIP — FEBRUARY 8-10, 2002

Since our trip up Mt. Washington was to begin at the base of the Auto Road around 9 AM Saturday February 9, our travel day to New England was going to be Friday February 8.

Day 1 — Friday February 8, 2002

I picked up our rental vehicle (Dodge Durango) Thursday evening February 7. We met at the National Weather Service Forecast Office in Mt. Holly, NJ at 7:30 AM Friday February 8, had our early morning weather briefing, and departed for New England shortly before 8 AM. After a short lunch stop outside of Hartford, CT, we arrived at the Weather Discovery Museum in North Conway, NH at 4:20 PM. Dr. Peter Crane was there to greet us and fill us in on everything we needed to know about the weekend. Since we were “camping out” in the Museum Friday night, Peter had arranged for one of their staff (Amy Stout) to be our host for the night. After meeting Amy, we went to pick up our boot rentals from EMS and then headed to the “Muddy Moose” for dinner. Since North Conway has an abundance of outlet stores, we visited a few on our way back to the museum. It was almost 9 PM when we arrived at the museum. After an hour or so of browsing through the museums hands-on displays, we picked our sleeping spots, spread out our sleeping bags and bedded down for the night.

Day 2 — Saturday February 9, 2002

Since we were supposed to meet **Bryan Yeaton** (our trip leader) in the parking lot across from the base of the Auto Road between 8:15 and 8:30 AM and it was almost a ½ hour drive, we departed the museum at 7:45 AM. We picked up bagels on the way and arrived about 8:20 AM. Bryan arrived about 8:30 AM. He introduced us to the assistant trip leader, **Doug Mayer**. We then went inside to fill out a few forms and receive instructions for the trip.

Shortly before 9 AM we walked across Rt. 16 to the base of the Auto Road where we boarded our transportation to the top of the mountain...a Bombardier Snow Tractor (the only way to get up the mountain in winter — unless you would like to hike it). The tractor seats 10 in the back with very little room for luggage. Most of our gear was stowed on the top. Up front, with the driver (**Chris Uggerholt**), there was room for 1 person. Joining our group of 5 were 4 other people — two couples — Mike Fager and Kathy Foley (she had given him the trip as a birthday present — his birthday was Monday 2/11) — and Sandt Michener and Doreen LaFond (he is an astronomer with a planetarium in New Hampshire).

We began our trip up to the summit about 9:15 AM. It was an absolutely beautiful day. Bright blue skies and relatively mild temperatures (mid 20s). Bill Dyke rode shotgun for the first half of the trip. We stopped for a photo shoot about halfway up. It was just starting to get a little windy and temperatures had dropped into the teens, but, all in all, still gorgeous. Mike took over the passenger seat up front when we started up again. The road was snow and ice covered for the most part. If there had been a significant snowfall between our trip and the last trip, Chris would have had to plow his way up — and that makes for a long and rough ride. Fortunately, there

was not much plowing to be done and we reached the summit shortly after 11 AM. Still not a cloud in the sky — visibility over 120 miles — temperature around 10 deg F. — wind 30 to 50 mph.

After we found our bunks and stowed our gear, we met the staff and had lunch. Two interns (**Tom Seidel** and **Ann Grote**) did the cooking for us. And they did a great job. Ann’s homemade soup was delicious. The rest of the staff included: **Charlie Lopresti** — meteorologist; **Katie Koster** and **Steve Bailey** — observers; **Dick Bailey** — technical assistant; and **Nin** — their pet cat (resident mouse catcher and King of The Hill).

After lunch, it was time to head out onto the observation deck (a great place to view the scenery). Unfortunately, we did not wear our crampons and the deck was 90 percent snow and ice covered. With the wind blowing 50 to 60 mph (peak gust was 62 mph), it was very difficult maneuvering (several people actually lost their footing and were blown across the icy surface). When we were able to stand still long enough to check out the view, it was breathtaking. Bright blue skies (not a cloud) and visibility over 120 miles — it seemed like we could see forever.

After about 20 minutes on the deck, we went back in and relaxed for an hour or so as Bryan told us some trivia and history of the mountain.

Then it was time for a hike (yes we went for a hike with the temperature at 13 deg F. and wind speeds of 30 to 50 mph). The hike was optional but everyone decided to give it a try. We were plenty warm enough — dressed in layer upon layer. As a matter of fact, some of us had to unzip a bit — you use quite a bit of energy hiking in 15 inches of snow and ice. We headed down toward the Alpine Gardens — a fairly steep incline. Mike and Kathy decided that it would be too much for them, so Doug took them back to the summit before they went too far. The rest of us went with Bryan. It was quite an experience, to say the least. The scenery was fantastic. Hiking downhill was not too tough, but uphill was a different story — especially for those of us not used to that sort of thing. But we took it slow and made it back in time to get some really neat sunset pictures.

After we got out of our hiking gear, it was time for wine and cheese — our appetizer for dinner. And dinner was delicious (I can’t say enough about the food except that they could use more chocolate for desert). We were exhausted after our very busy day, so a relaxing evening was in store. We parked ourselves in front of the TV and watched “The Rocky Horror Picture Show” (they recently got a DVD player and that was their most recent movie acquisition). After the movie some of us went back outside to check out the nighttime view — crystal clear skies, relatively light winds (10 mph) and visibility over

120 miles. There appeared to be zillions of stars. It was beautiful. Then it was sack time.

Day 3 — Sunday February 10, 2002

As on our last trip, Bryan offered to wake anyone who wanted to see the sunrise and, as on the last trip, no one took him up on his offer. Breakfast was served between 7 and 8 AM. Then it was off to the conference room for our weather seminar. Bryan did an excellent job of explaining the “weather basics”. There were several questions that had to do with National Weather Service operations. In particular, the topics included radiosondes, NOAA Weather Radio (especially the automated voice), jet streams, global warming, forecast preparation and dissemination, and the relationship between the National Weather Service and 1) broadcast meteorologists; and 2) private forecast meteorologists. Naturally, since I was present, Bryan deferred those questions to me. It was a very productive session for everyone, even the non-meteorologically oriented.

Speaking of weather — the day dawned with clouds on the increase. Winds Saturday had been from the west and northwest. By Sunday morning, they had swung around to the south. And by 10 AM, the summit was in the clouds. Bryan thought that it would be a great time to climb to the top of the instrument tower. So we all put on our gear and climbed up the tower. By the time we were outside standing at the base of the instruments, the weather had deteriorated considerably. Visibility had dropped to near zero, since we were actually in the clouds. Rime ice was forming on everything, including us. The temperature had actually risen to about 16 deg F., but the winds had increased to 40 to 60 mph. That put the wind chill at about -10 deg F.

Of course, our objective was to get to the highest point on the mountain (other than climbing the television transmission tower). And that was at the top of the instrument tower. At the base of the tower, we were at 6309 feet above sea level. An outside ladder, with 4 or 5 steps, took us up to the instruments. At that height (instrument level), we were at 6316.75 feet above sea level. Only 2 or 3 people could fit at one time, so we all took a turn. It was quite a chore just to hold on to the railing with winds gusting over 60 mph.

After everyone had their turn up top, we went back in and headed directly to the weather observation station. We checked the wind chart and discovered that the wind had actually gusted to 83 mph while we were up there with the instruments. So now we all know what it feels like to be in hurricane force winds.

It was now about 11:30 AM, so we all headed down to the museum and gift shop. Bryan conducted a tour of the museum, told some interesting stories about the mountain, and fielded many questions. It was then time to purchase gifts and souvenirs. Our thanks go out to Tom and Ann

for opening the register for us.

The end of our trip was rapidly approaching. But first came lunch. We couldn't ask for anything better than soup and peanut butter and jelly sandwiches.

Chris had brought the Snow Tractor back up the mountain right before lunch. The weather continued to deteriorate (started to snow around Noon), so we were given the word to be ready to depart around 2 PM.

The only thing we wanted to do before leaving was to climb to the summit (6288 feet above sea level). We had packed our gear prior to lunch and Chris loaded it onto the Tractor while we were eating. After lunch, we, once again, got into our survival outfits and trudged outside. After some group pictures, we hastily made our way to the summit (not an easy chore in the snow and winds). Our thanks to Dick, who was our photographer for the moment. With the winds, snow, and visibility near zero, we just hoped that at least one of the pictures would turn out.

With Chris anxious to get under way, we climbed into the Tractor and began our trip down shortly after 2 PM. Bill Vosburgh rode shotgun the first half of the trip. For those of us in the back, it was not much of a sightseeing trip down the mountain. The windows had all frozen over, so all we could do was feel the bumps and imagine what was going on outside. We did stop about halfway down, but only to change front seat passengers. Kristi took the last part of the trip. At about the 3000 ft mark we began to come out of the clouds. We arrived at the base around 4 PM. It was snowing lightly with a temperature of 25 deg F.

We said our goodbyes to Doug and Chris, and made arrangements to meet Bryan at the Weather Discovery Museum (since it was on our way home). We arrived at the museum about 4:40 PM. Since Bryan had not arrived yet (turned out that he had stopped off at his house first) we did a little bit of last minute shopping. Bryan got there about 10 minutes later. We thanked him for a great weekend and were on our way around 5 PM.

It was 26 deg F. and still snowing lightly when we left North Conway. It was not a coastal storm that was moving in. As a matter of fact, we were in the mild southerly flow ahead of a storm approaching from the west. It did not take long for the snow to mix with sleet and freezing rain. The New Hampshire road crews were already out spreading salt, so driving Rt. 16 was not a problem. As we headed south, the temperature slowly rose and by the time we reached Massachusetts it had climbed above freezing and the mixed precipitation had changed to all rain. Intermittent rain of varying intensities is what we encountered until we got into New Jersey, where the rain had ended.

The trip home was, more or less, uneventful. We

made three stops — 2 for gas and 1 for food. And since everyone was anxious to get home as early as possible, the food stop was at Wendys just before we crossed into Connecticut.

The traffic was moderate, since it was a Sunday night. And, taking into consideration the wet weather, we still made relatively good time. We pulled into the Weather Service parking lot right around 1 AM. After transferring gear, we headed home.

4. SUMMARY

As with our June trip to Mt. Washington, we crammed an awful lot into a short period of time. But, once again, it was well worth it. Just being able to experience the mountain's weather made it a fabulous trip. It was an educational adventure that anyone, even remotely interested in mountain winter weather, would enjoy.

But let's not kid ourselves. It was the people involved who made the trip as wonderful as it was. Every one of the staff went out of their way to make us comfortable. And I would like to thank each and everyone of them for everything that they did for us. The summit staff was great :

Tom and Ann — thanks for all that wonderful food.

Charlie, Katie, Steve, & Dick — thanks for being so hospitable — you answered every question we came up with — hope we didn't make too much noise to wake up the shift workers — and thanks for that wonderful entertainment Saturday night.

Chris — thanks for a great ride (not always a smooth one, but definitely a safe and enjoyable one).

Bryan and Doug — you did a super job as trip leaders — we all had a great time and we even learned something.

Amy — thank you for being such a gracious hostess Friday night.

And, of course, a special thank you goes out to both **Bryan and Dr. Peter Crane**. Without their assistance, we could not have pulled this off. It took months of planning and organizing to get it together, but we did it and, who knows, we might even try it again sometime. After all, it's not every day that a person gets to experience some of **"THE WORLD'S WORST WEATHER"**.