National Landmark of Soaring

Dedication

Mount Washington
New Hampshire

October 8, 2005

National Landmark of Soaring

Mount Washington, New Hampshire

Mount Washington Landmark Implementation Committee

Kevin Brooker, Chairman	Post Mills Soaring Club
William D. Batesole	New England Soaring Association
Allan MacNicol	Mount Washington Soaring Association
Rick Roelke	Greater Boston Soaring Club
Rick Sheppe	Soaring Society of America

National Soaring Museum

Robert E. Gaines, President Peter W. Smith, Director

Landmark Committee

Simine Short, Chair; Janice Armstrong, William D. Batesole, and Robert H. Ball

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Mount Washington Landmark Implementation Committee Biographies

Kevin Brooker	Glider pilot since 1998, 2 diamonds, multiple state soaring records, Vermont SSA Governor, soaring author, leader of modern Mount Washington wave camps, originator of Landmark effort
	Responsibilities: Chairman, promotion, plaque
William D. Batesole	Glider pilot since 1964, past president of NESA, NSM Trustee
	Responsibilities: Finances, plaque
Allan MacNicol	Glider pilot since 1959, 1 diamond, original leader of Mount Washington wave camps, founder and president of Mount Washington Soaring Association, NSF Director, restorer and preserver of vintage gliders and winches.
	Responsibilities: Historical documents, NH liaison, fundraising, plaque
Rick Roelke	Glider pilot since 1971, 3 diamonds, past president of GBSC
	Responsibilities: Documentation, fundraising, plaque
Rick Sheppe	Glider pilot since 1967, 3 diamonds, shared 1997 OSTIV Special Prize, former MITSA Director, PMSC Director, SSA Director
	Responsibilities: Publications, Post Office, plaque

Abbreviations used in this document

GBSC	Greater Boston Soaring Club
MITSA	Massachusetts Institute of Technology Soaring Association
MWO	Mount Washington Observatory
MWSA	Mount Washington Soaring Association
NESA	New England Soaring Association
NLS	National Landmark of Soaring
NSF	National Soaring Foundation
NSM	National Soaring Museum
PMSC	Post Mills Soaring Club
SSA	Soaring Society of America

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The Sites

Dedication events will occur at three sites in the area. Participants are invited to all of them.

1. **Gorham Airport, Gorham New Hampshire**

   The Landmark dedication will take place during the first weekend of the 2005 Mount Washington wave camp. Glider pilots who wish to participate in the wave camp should visit the Region 1 website

   http://www.ssaregion1.org/region.htm

   where information will be available beginning sometime in August.

   On October 8, 2005 a flying event directly related to the Landmark dedication will take place. A glider carrying specially postmarked mail will take off from Gorham airport, fly over the peak of Mount Washington, and land on the grounds of the Mount Washington Hotel.

2. **The Mount Washington Hotel, Bretton Woods, New Hampshire**

   The Mount Washington Hotel (800-314-1752) will be the headquarters of the Landmark dedication. There will be gliders on static display on the hotel grounds. The special event Post Office will be open during the day, and the dedication itself will take place at the hotel at 7:00 pm on October 8, 2005.

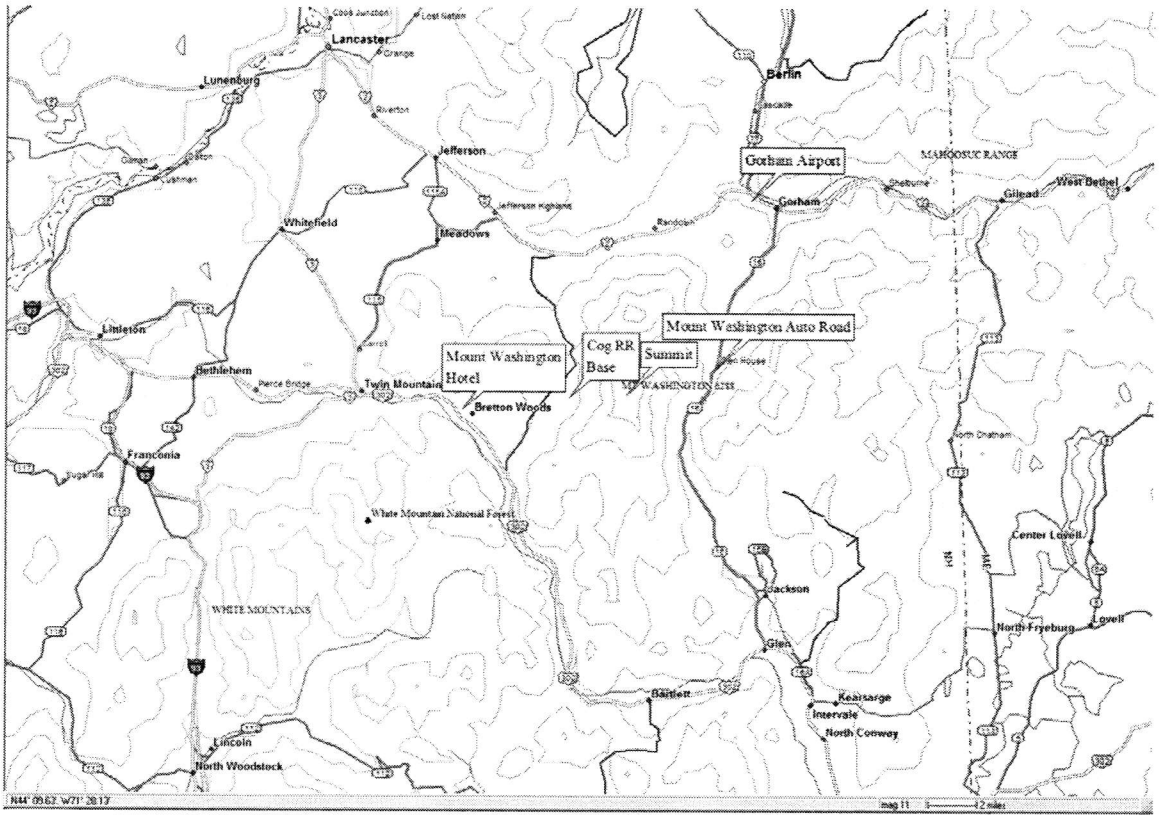
   The hotel's website is:

   http://www.mountwashingtonhotel.com

3. **The Summit of Mount Washington**

   At noon on October 9, 2005 the NLS#14 plaque will be installed in the Visitor's Center at the top of the mountain. Other than hiking, there are two ways to get there, the Mount Washington Auto Road (603-466-3988), and the Mount Washington Cog Railway (800-922-8825). Their websites are:

   http://www.mt-washington.com/autoroad/
   http://www.cog-railway.com/



Approximate Travel Times and Tolls

MW Hotel to Gorham	45 minutes	
MW Hotel to Auto Road	50 minutes	
MW Hotel to Cog RR Base	10 minutes	
Gorham to Auto Road	20 minutes	
Gorham to Cog RR Base	55 minutes	
Auto Road to Summit	30 minutes	$11 + $7 per person round trip
Cog RR to Summit	1.5 hours	$49 round trip

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Plaque Wording

METEOROLOGICAL CONDITIONS PRODUCED BY WINDS AND THESE MOUNTAINS HAVE DRAWN GLIDER PILOTS TO THE SKIES ABOVE THE PRESIDENTIAL RANGE SINCE 1938. MUCH OF WHAT IS KNOWN ABOUT MOUNTAIN WINDS AND TURBULENCE WAS FIRST DISCOVERED IN GLIDERS.

FLIGHTS TO OVER 30,000 FEET ABOVE SEA LEVEL HAVE BEEN MADE IN THE ATMOSPHERIC WAVES GENERATED BY MOUNT WASHINGTON AND THE SURROUNDING PEAKS.

THIS MARKER IS DEDICATED TO THE PIONEERING PILOTS WHOSE SPIRIT OF EXPLORATION MADE THESE ACHIEVEMENTS POSSIBLE.

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Schedule of Events

May 4, 2005

October 8, 2005

0700 -1600	Flight operations at Gorham
1200 - 1600	Sailplanes on static display at Mount Washington Hotel
1300 - 1600	Special event Post Office open at the Hotel
1400	Gathering of participants at the Hotel
1500	Commemorative mail flight arrival at the Hotel
1800	Supper
1900	Dedication

October 9, 2005

0700 - 1600	Flight operations at Gorham
0800	Plaque departs Mount Washington Hotel for summit.
1200	Plaque installation at Visitors Center at the summit of Mount Washington

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History

Beginnings

In October 1938, Lewin Barringer traveled from Philadelphia to visit his friend Eliot Noyes in Intervale, New Hampshire. The purpose of the visit was to investigate the possibility of soaring in the vicinity of New Hampshire's White Mountains. The two spent an enjoyable weekend flying around the mountains in "two Wacos and two Aeroncas." [1] Barringer was so impressed that he made plans to return two weeks later with his Ross R-2 Ibis sailplane.

The results of the second trip were reported in the December 1938 issue of *Soaring* Magazine [3]. Barringer made a total of five flights in the Ibis, and one of them [6] is now widely considered to be the first wave flight to take place in the United States. His maximum altitude of 9500 feet was achieved in the lee of the Presidential Range, just downwind of Mount Washington (elev. 6288 feet). It is not likely that Barringer understood the standing wave phenomenon. In his report he described rising through a layer of stratocumulus clouds:

> So followed an hour of dodging in and out of the clouds during which I experienced three times thermals of at least 20 feet per second, *in the holes between the clouds.* I also noticed that the clouds on the lee side of these holes were thicker than on the windward side. On the last and strongest thermal I climbed over 1,500 feet above the sea of clouds until my altimeter read just over 9,500 feet [3].

It is very unlikely that this was thermal lift.

Barringer's failure to recognize his flight as a wave flight persisted through 1942. In the second edition of his book, *Flight Without Power*, there is a section on "Altitude Soaring," in which he describes only cloud flying as a means of achieving great heights [4]. Interestingly, in the "Soaring Meteorology" chapter of the same book, the standing wave phenomenon is properly described [5]. The author of that chapter, MIT Professor Karl O. Lange, gives John Robinson credit for the first U.S. wave flight, in 1940. Finally, Lange mentions Mount Washington as a place where waves might occur. One wonders if the contributors to this book ever read each other's chapters.

The Middle Period

We have no records of soaring activity at Mount Washington between 1938 and 1966. During that period, wave soaring techniques were developed in the Rocky Mountains, and many eastern pilots traveled to Tehachapi, California and Colorado Springs to get their altitude diamonds. Back east, wave soaring was practiced in very few places, most notably in the Blue Ridge mountains of Virginia and the Green Mountains of Vermont.

By the mid-60s, a Massachusetts pilot, Allan MacNicol was probably the most experienced pilot in both Appalachian and Rocky Mountain wave systems. He knew the Barringer story, and decided that Mount Washington was worth another look, now that the mountain wave phenomenon was much better understood.

In the fall of 1966 MacNicol led a hardy band of New England glider pilots in Barringer's footsteps: back to North Conway and the Mount Washington wave [13]. The results of the first "wave camp" were so good (six Diamonds and 14 Gold climbs in nine days), that a tradition of annual wave camps was started. From 1966 to 1985 wave camps were held every October, most of them based at the North Conway airport. As experience was gained, fewer and fewer long aerotows to the primary wave were made (the airport is 17 miles from Mount Washington). Pilots learned that they could release in the secondary or tertiary wave, or even in ridge lift and still make a good climb.

Word quickly spread. Several Canadian pilots joined the group, traveling from as far away as Windsor, Ontario. The number of trips made by eastern pilots to California and Colorado diminished, and a diamond climb that stayed below 20,000 feet became known as an "Eastern Diamond."

Also during this period, a relationship developed between the glider pilots and the meteorologists on the top of the mountain. The Mount Washington Observatory (MWO) has maintained a full-time presence on the summit since 1932 (scientists there recorded the highest-ever surface wind speed, 231 mph, in the Spring of 1934). The chief meteorologist in 1967 was a man named Guy Gosselin. After helping the glider pilots with numerous weather observations and forecasts, Mr. Gosselin finally took a ride in a Schweizer 2-32 with pilot Mike Stevenson. It was an eventful flight. The two ridge-soared the "front side" of the mountain (a first) and landed out at the Gorham, New Hampshire airfield, 26 miles from North Conway. Mr. Gosselin, an excellent writer, published the story simultaneously in *Soaring* [12], and in the MWO *Bulletin*. The tradition of giving our MWO friends first-hand "atmospheric experiences" continues today [14] [15].

Records from this original series of wave camps survive, and several hundred diamond climbs were recorded during this period. The very best single day occurred in 1969 when 44 diamonds were claimed.

In 1969 Bob Neumann established the current New Hampshire altitude record (31,900 feet). This altitude has been exceeded unofficially several times since then.

The Mount Washington wave became known to readers of *Soaring* in a series of articles [2] [9] [12] [17]. Well-known soaring author Richard Wolters described his

experiences in his book, *Once Upon a Thermal*, [18] and Paul Schweizer included this historical period in *Wings Like Eagles*. [16]

For a brief time (1973 - 1975), Brooks Dodge ran the wave camp from Glen, New Hampshire, only 8 miles from the primary lift area. However, on good wave days, the secondary rotor was always parked right over the little airfield. Some good flights were made out of Glen, but in 1976 the operation moved back to North Conway.

On the 47th anniversary of Barringer's flight (October 25, 1985), Walter Weir set the unofficial record with a flight to 33,600 feet.

Then in 1986, the North Conway airport was sold to a real estate developer and closed for good. The airfield at Glen was also gone, and suddenly there was no access to the wave. An attempt was made to reach the wave from Fryeburg, Maine in 1990, but the distance from the airport to the high ground was too great to be practical.

Recent History

The Nutmeg Soaring Association, led by Ron Clifford and Jim Wright, returned to Mount Washington in 1993. They flew from the Gorham, New Hampshire airfield, which was an innovative idea. Gorham had a reputation of being a tricky place to fly for two reasons: the primary rotor and the non-existence of any alternate place to land. The Nutmeggers figured out how to tow around the rotor to the primary lift, and they always seemed to get back to the airfield. They operated wave camps there until 1996.

During the 1999 and 2000 wave seasons, the Post Mills Soaring Club sent a few experienced pilots from their home field in Vermont to Gorham. They determined that, with certain safety precautions, Gorham could become their new base for wave camps. It was also clear that the challenge was to find alternatives to the long high aerotows to the primary.

The following year, an extremely successful weekend camp was held (six diamonds, four lennie pins, a flight to 32,000 feet) [7] [8], and at least two alternatives to the high aerotows were developed. Safety procedures were worked out, and a comprehensive safety briefing document was produced [11].

PMSC was joined by the largest club in New England, the Greater Boston Soaring Club, and now the wave camps are bigger than ever, spanning more than ten days each October. Lewin Barringer's spirit of exploration lives on as well: the feasibility of cross-country wave flights has been demonstrated, and further x-c flights are planned.

Summary

For almost 70 years, glider pilots have been drawn to the White Mountains of New Hampshire. The remote location and rugged terrain make it unlikely that a permanent soaring site will ever be established near Mount Washington. However, pilots still make the effort to go there, and all who have experienced the Mount Washington wave have shared with each other, and with those who came before them, the pioneering spirit.

References:

[1] Anon., "News From Clubs and Members," *Soaring*, Vol. 2, No. 11, November 1938, p 10.

[2] Anon, "Regional Ramblings," *Soaring*, Vol. 32, No. 10, October 1967 p 30.

[3] Barringer, Lewin B., "White Mountain Winds," *Soaring*, Vol 2, No. 12, December 1938, pp 2-3, 11

[4] Barringer, Lewin B., *Flight Without Power*, Pitman Publishing Corporation, New York, 1940, revised 1942, pp 192-195.

[5] *Ibid*, pp 143-144.

[6] *Ibid* (1940 edition), p 220

[7] Brooker, Kevin, *Soaring*, Vol. 66, No. 1, January 2002, p 9.

[8] Brooker, Kevin, "Diamonds Before Breakfast", *Soaring*, Vol. 65, No. 10, October 2001, pp 28-30.

[9] du Pont, Stephen, "The 1968 Mount Washington Wave Camp," *Soaring*, Vol 33, No. 3, March 1969, pp 11-13.

[10] English, William D., "The Barringer Trophy," *NSM, A Quarterly Journal of the National Soaring Museum*, Vol. 2, No. 4, Fall 1978, p 3.

[11] Good, John F., "Flying Mt. Washington Area Wave from Gorham, NH," Ver. 3.1, PMSC Web, October 2003

[12] Gosselin, Guy, "A Timeless Sky," *Soaring*, Vol 32, No. 2, February 1968, p 12.

[13] MacNicol, Allan, "Waves, East and West," *Soaring*, Vol 32, No. 2, February 1967, pp 13-15.

[14] Posegate, Ann, "Glimpse of 'A Timeless Sky,'" *Windswept, The Quarterly Bulletin of the Mount Washington Observatory*, Vol. 46, No. 1, Spring 2005, pp 38-42.

[15] Sanborn, Doug, "Riding the Wave," *Windswept, The Quarterly Bulletin of the Mount Washington Observatory*, Vol. 43, No. 1, Spring 2002, pp 30-33.

[16] Schweizer, Paul, *Wings Like Eagles*, Smithsonian Institution Press, Washington and London, 1988

[17] Wolters, Richard, "A Letter from the Mt. Washington Wave," *Soaring*, Vol. 35, No. 3, March 1971, pp 20-22.

[18] Wolters, Richard A., *Once Upon a Thermal*, Soaring Society of America, Santa Monica, 1974, pp 91-105.

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Mount Washington, New Hampshire

Lewin B. Barringer

The following is excerpted from the NSM Quarterly Journal. [10]

Born in Wayne, Pennsylvania in 1906, Lewin B. Barringer learned to fly in 1929 and began flying gliders in 1930 as operator of the Wings Gliding School near Philadelphia. His first soaring flights took place at Elmira, New York during the 1934 contest. In 1935 he went to Iran as pilot for the Harvard Archaeological Expedition and served in that capacity through 1936. While flying in that then primitive country, Barringer had to make his own charts, still a marvel of cartographic skill.

Following his return to the United States, Barringer became almost immediately active in the affairs of the SSA which had been established officially some four years before. He was persuaded by his friend, Richard C. DuPont, then president of the SSA, to assume the title of General Manager of the SSA and to edit a new magazine, *Soaring*. In both capacities he performed with distinction.

As a flier he was by all accounts superb. This stood him in good stead as he led SSA soaring expeditions to various parts of the country to demonstrate that it was possible to fly great distances over flat country (Expedition to Wichita Falls, Texas 1938) and to great altitudes in the mountains using a strange form of lift we now know as mountain wave (Expedition to Mount Washington, New Hampshire 1938 and later Sun Valley), thus vastly opening up exciting opportunities for a sport that had for too long been limited to a very few places like Elmira, New York, Frankfort, Michigan, and Torrey Pines, California.

In 1940 Barringer published *Flight Without Power*, still a most useful and interesting book on motorless flight and which served to inform thousands about the sport and its intricacies.

With the outbreak of war and the great success of the German glider attacks in Crete and Belgium, the American military became anxious to develop the capacity to mount a glider invasion of its own. Barringer, a Reserve Officer in the army, was called to the colors by General H. H. (Hap) Arnold, Commanding General, United States Army Air Forces and told to create from scratch an American glider force capable of delivering thousands of troops on a pre-specified target.

It was in his capacity as head of the glider branch of the United States Army Air Force that in January, 1943 Lewin Barringer lost his life in a plane crash in the Caribbean. Mammoth production and training problems had caused tremendous difficulties in creating the glider force, but prior to his death Barringer had worked doggedly on these problems and developed the resources that eventually allowed entire divisions to be transported by glider into combat.

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In Memoriam

Allan Edward MacNicol

April 8, 1930 – July 2, 2005