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MOUNT
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Windswept

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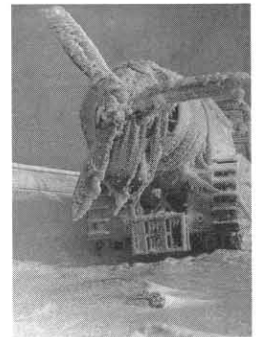
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On the Cover

Spring snowmelt in a mountain stream (Eric Pinder).
Inset: A fox visits the summit of Mount Washington on a foggy day (MWO archives).

The Mount Washington Observatory is a non-profit scientific and educational institution organized under the laws of the State of New Hampshire. Its purpose is to maintain a permanently staffed observatory atop Mount Washington and to use this unique station and other facilities to:

- conduct programs of environmental observation and technical research;
- develop educational programs to advance public knowledge of the meteorology, sub-arctic environment, and natural and human history of the Mount Washington region; and,
- preserve the unique character and heritage of Mount Washington.

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They told me to prepare for a long, cold ride. We could be in the air for close to three hours, and the temperature would get well below freezing. I'd put on as many layers as my limited wardrobe allowed me. My attire was a little mismatched, but at least I'd be warm.

I was off to Gorham, New Hampshire, to research a story about sailplanes and wave flying for *The Weather Notebook*. As I drove my Jeep onto the airfield in Gorham, I witnessed one of the sailplanes taking off. It was being pulled by a large prop plane, which yanked it up into the sky towards its ultimate goal: the wave of wind that forms above Mount Washington.

its record-setting weather, but this was new. Apparently, Mount Washington is one of the best places in the country for wave flying. Sailplane pilots from all around the world converge on Mount Washington each autumn in order to "ride the wave" that forms above it.

I grabbed my recorder and got out of the Jeep to find my contact, Kevin Brooker.

Brooker is a member of the Post Mills Soaring Club, which originates out of Post Mills, Vermont. His group makes a yearly autumn pilgrimage to the Gorham airfield and spends the entire weekend doing nothing but flying above the mountain. I finally found him helping a pilot from

loose," he said. "At the top of it you'll always see those puffy cumulus clouds. They're marking the top of a thermal. With ridge lift the wind blows more or less perpendicular to a ridge and is deflected upwards. We place the glider in that uprising air on the windward side of the hill. That propels you along and keeps you aloft."

Wave flying requires several unique meteorological conditions, and according



It's a tight squeeze in the two-seater Blanik sailplane, which was designed in Czechoslovakia during the Cold War.

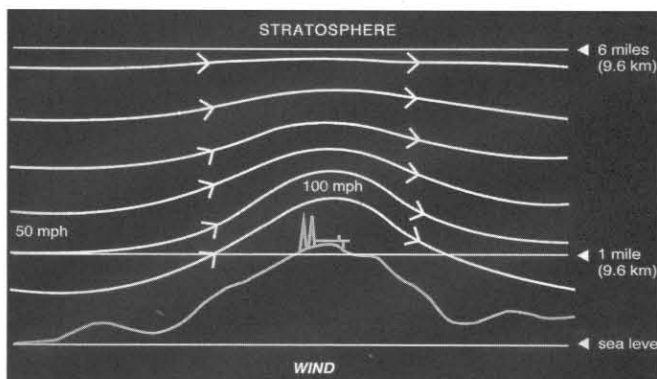


THE WAVE

by Doug Sanborn

I'd already been aware of several unique things about Mount Washington, such as

another group complete his pre-flight check. After I introduced myself, we went off to talk.



The Bernoulli effect, ridge lift, and other factors help form a wave of wind over Mount Washington.

"There's basically three types of lift that glider pilots use to remain in the air," he explained. "One is thermal lift, one is ridge lift, and one is wave lift."

Wave lift is what had brought him to Mount Washington, though the other forms of lift are important as well. "With thermal lift the sun heats the ground and the ground heats the air, and that warm bubble breaks

to Brooker, Mount Washington often has them. "It's a wonderful place to fly," he said.

The mountain wave is a big reason why. "The wind comes into the mountain and is actually deflected downward. It goes over unstable air underneath, and it acts like a big spring, pushing this air mass back up. Then it goes up and runs out of steam and falls back down again." The result is what's called a standing wave. "It's really similar to what you see with waves behind rocks in a river," said Brooker. "It's the same thing. The air mass stays still, and you're actually on the leeward side of the mountain. You ride up on the rising air. At Mount Washington you can go well into the 30,000-foot range."

That, my friends, is very impressive indeed. In comparison with other mountains in the world, Mount Washington is to soaring what Hawaii is to surfing. Even higher peaks and mountain ranges across the nation can't compete with the kind of wave that Mount Washington gets.

Autumn, though, is the only time of year when the wave is stable enough to fly in. "That's what makes wave flying so unique," Brooker told me. "It doesn't occur all the time. It mostly occurs in the fall. During the summer the wave is really strong, but it's also relatively unstable. Thermals will break it up and cause the wave to fall apart. In the summer, when the thermals around here are really strong, that gets in the way and blocks the wave."

Fall is a different story. "With the days being shorter, the thermals aren't as strong. So the wave can set up, and we take advantage of that. The high winds that Mount Washington is notorious for—that helps us set up a really good wave. So if the summit winds are going at 50 to 60 miles per hour, we know the wave is working really, really well."

The sport of wave flying is relatively safe, but there are always dangers. With high altitude comes cold temperatures and a lack of oxygen. The human body gets cold. Water vapor from breath also causes condensation and frost



Cockpit of the sailplane.

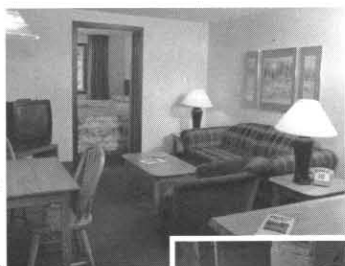
on the sailplane's canopy. Kevin Brooker told me that many pilots tend to put two canopies on their planes, to gain a little more insulation from the cold air outside, thus preventing frosting. Above 15,000 feet

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Doug Sanborn of *The Weather Notebook* interviews Kevin Brooker of the Post Mills Soaring Club.

the air is thin, and lack of oxygen to the brain can cause hypoxia. If pilots plan to go above that limit, they are required to bring bottled oxygen.

I had waited throughout the day for a chance to go up in a sailplane.

Brooker said that if there

was an opening, then I would have the chance. He personally would take me up for a firsthand experience. As luck turned out, we were the last flight of the day.

The Post Mills Soaring Club owns two sailplanes, one of which is a two-seater Blanik designed by the Czechs during the Cold War for fighter pilot training. These planes are small, and I'm a person of large stature. I don't fit well into Ford Escorts or other small cars, and the Blanik was smaller than a Yugo. For a moment it was questionable as to whether I would actually fit in. Luckily I was able to disengage my kneecaps from my legs and

stuff them down under the instrument panel.

The flight itself was almost dreamlike. On the runway as we were about to get pulled up into the sky, there was the sudden sound and feeling of being knocked around in a tin can. Then we were airborne. Suddenly there was nothing—nothing but the rush of air around us. We began climbing. Soon we were towed into the wave itself, and we released

the towrope. There was a sudden sound as the rope let go and then...nothing. Silence. We were floating on air!

The trip lasted for a little over an hour. I knew Kevin wanted to go higher than the 14,200 feet that we peaked at, but

we weren't carrying oxygen.

We slowly glided down to Earth, pausing to try to peer in through the windows of the Observatory, wishing we could wave to one of the observers.

When we landed, I pried my legs from underneath the instrument

panel and stretched my shoulders; they had been rolled forward the whole trip to fit inside the canopy. It had been an exhilarating trip and a very memorable one. I thanked Kevin, but still can't thank him enough for the ride. One day I hope to do it again. ❁

In comparison
to other mountains in
the world, Mount
Washington is
to soaring what Hawaii
is to surfing.