

## FLYING THE SUGARBUSH WAVE

By David Ellis

With a 30 Kt NW wind (Alberta Clipper) in late October, the Sugarbush Wave extends into Controlled Airspace above 18,000 feet. We call Boston Center to open a “wave window”, and with oxygen masks on we chase Gold Altitude badges. The local altitude record is ~ 27,000 feet, and I’ve personally climbed to 23,000 feet. Think parkas and frostbitten toes – challenging and exhilarating.

This September day is mellow. The temperature is 68F (20C), with 10 knots SW wind on the ground. In early afternoon I leave the 2000 ft. AGL tow over Scrag Mountain on our East Ridge. The bowl facing SW below Scrag provides reliable thermal lift to 4500 ft. MSL. A small lenticular cap forms over the cumulus cloud just east of the main ridge connecting Mt. Abraham and Mt. Ellen. I note that the wind has rotated around to W and increased to 20 knots. Ideal for wave lift! Facing the wind, I set off towards the Sugarbush South ski area parking lot. Passing just north of the glider port, the air suddenly becomes very quiet and I’m climbing in the secondary wave. Turn left or right? Nobody knows. Time to play the “lift game”. The rising air forms an invisible wave parallel to the mountain ridge. I wander along what is hopefully the leading edge of this wave, zigzagging gently to optimize the vario reading. Minutes pass and the altimeter shows 7000 ft MSL directly over the glider port. The primary wave is 3-4 miles to the West, so I once again point the glider’s nose down and cruise at 80 knots through sinking and eventually turbulent rotor air. I lose 3000 feet in 3 miles.

Panic! Decision time. Turn back to the safe secondary wave? Keep going in hopes of connecting with the primary? Others are chatting on the radio at 9000 ft. in the primary. Plunge ahead! Suddenly the turbulence disappears. Contact! Slow to 40 knots. Smooth air; the glider and I are on nature’s elevator at +5 knots. Once again I play the lift game, sliding to and fro along the leading edge of the primary wave. The glider responds to the gentlest touch in the laminar air mass. Think turn and turn happens. The glider becomes an extension of my mind as I climb smoothly through 8000 ft. Ski areas gradually shrink and flatten out below. Lake Champlain reflects the afternoon sun to the West, and New Hampshire’s Mt. Washington is visible 100 miles to the East.

If the air is dry there may be no lenticular cloud. In humid conditions, I’ll be flying above cumulus clouds, keeping a careful watch for “holes” that ensure safe descent. Once on top, it’s time to relax and enjoy the scenery. In the clear sky, the sun’s rays warm the cockpit, so the vents stay open. There is plenty of time for a drink and a granola bar. Other gliders make radio contact, and we fly as a congenial group. At 10,500 feet, the lift drops to 0.5 knots. No Gold Altitude climbs today. We wonder if anyone will get to 12,000 feet.

One by one, pilots decide to descend. Drifting back to the trailing edge of the primary, I find 5 knot sink that takes me quickly to 6000 feet over Route 100.

Someone announces his decision to lose altitude by doing a sequence of 3-4-5 loops and still has to open the spoilers to get down. There is time for a quick 20 mile run up and down our East Ridge late-

afternoon ridge thermals. Someone with an extra large bladder is still “on top”, determined to tease out the last bit of wave lift.

Thus ends a fine August/September day with thermal, wave, and ridge thermal lift over the space of 3 hours.

The Sugarbush Wave takes many different forms dependent on wind strength and direction from SW to N. It may be strong at 3500 feet MSL in the morning and gone by noon. It may blossom in late afternoon once thermal turbulence dies down. Each day the sun, wind, and mountains present a new puzzle. Once solved by skill or luck, flying the Sugarbush Wave can be a memorable experience for both novice and experienced soaring pilots.