

WAVE FLIGHT NEAR SCHENECTADY, N. Y.

by Francis P. Bundy and James F. Norton, *Mohawk Soaring Club*

Late afternoon of May 9, 1958, brought to eastern New York a cold air mass with a real chill. That evening, walking to the parking lot in the vigorous west wind, we were cooled to shivering. The next morning, Saturday, May 10th, Albany, N.Y., announced a new low temperature record for the date, 28°F. The early morning sky was clear, barometer fairly high, but only moderate W to NW wind at ground level. Perhaps it would develop into a good soaring day.

A 9 AM flight north to Lake George in the towplane for some pictures near Tongue Mountain emphasized the coolness and clearness of the day. The air was smooth that early in the morning, ideal for picture taking. The return flight around 10 AM began to get bumpy as we neared Schenectady.

To the south we began to see classical lenticular clouds form. At one time we saw as many as five wavelengths. The most active waves had three or even more lenticulars stacked upon one another.

Several club members showed up at Schenectady Airport about 11 AM. Brad Walker took an aerotow in the Club's Schweizer 1-26 sailplane. During the tow, Jim Norton, the tow pilot, could see the shadows of the lenticular clouds on the ground just south of Schenectady. This indicated that the clouds were near and were not so extraordinarily high as they are sometimes.

We had often talked of exploring one of these wave conditions if it occurred at a time we were free to go and the tow plane were available. Here we were on a Saturday, free to go, and a tow plane right on the scene, so there was no excuse. It was worth gambling a moderate tow fee.

Jim Norton flew the L-5 towplane and "Doc" Bundy flew the Schweizer 1-23D sailplane. Take-off was about 12:25. After leaving the control area of the airport the radios were switched over to the sailplane band, 123.3 mc, so communications between towplane and sailplane could be complete.

The main lenticular at the moment extended almost N and S over the Alcove Reservoir near the position indicated on the map (Fig. 1). The flight was aimed a little to the W (upwind) of the lenticular. The approximate flight path of the tow to the wave and time at various points are also indicated on the map. Occasionally some moderately vigorous turbulence was encountered, as well as areas of 3 to 4 feet per second sink to 2 or 3 feet per second lift compared to normal climb rate. About 20 miles south of Schenectady just east of the Helderberg Mountains, an altitude of about 5000 feet was attained. A search downwind and upwind of the lenticular was made. Finally by going upwind about half a mile steady lift was encountered in smooth air at 6000 feet.

The time was now 12:45. At 6200 feet Doc Bundy released from the towplane and continued to climb steadily at 4 to 5 feet per second in the 1-23D. Jim Norton stayed with the wave, too, in the towplane, operating at reduced power, and observations of position and lift were exchanged by radio.

The next problems were to stay in the lift and find what airspeed and crab angles would keep the ships in position in the wave. 50 mph "indicated" airspeed straight into the wind seemed to do it. Any sidewise travel required more airspeed. The altimeter kept winding up steadily.

A little above 7000 feet, Doc Bundy noticed that the sky ahead was beginning to turn gray and realized that he had either drifted back under the edge of the lenticular, or a new extension of it was developing just upwind. The airspeed was increased to 75 mph straight upwind. In a minute or two the 1-23D pulled ahead of the leading edge of the lenticular, climbing constantly. The lift in the clear air ahead was even stronger and the air flow strictly smooth and laminar. The sailplane and towplane now climbed higher and higher above the lenticular. A look at the thermometer showed why the air was so smooth. The temperature at 10,000 feet was practically the same as it was at 8000 feet - exceedingly stable air!

The 1-23D continued to climb . . . 10,500 feet, — 10,700 feet. The top of the lenticular 3000 feet below looked just like the pictures of the "Bishop Wave." It must have been at least fifteen miles long N to S, and reminded one of an enormous, slightly irregular, airplane wing. Above, at 16,000 to 20,000 feet, was another cloud deck which showed some of the wave pattern but was even more extensive. For a few minutes Doc Bundy had hopes of riding this thing up to 16,000 feet to complete his Gold C.

Jim, in the towplane, worked up to about 10,000 feet, then at 1:00 PM radioed that he would go back to the airport and bring the 1-26 over if the wave still looked good. He reported moderate to high sink conditions on the way back after leaving the position in front and above the lenticular.

At 10,800 feet the lift began to decrease, so the position of the 1-23D relative to the lenticular was changed upwind, downwind and crosswind, — but to no avail. At 10,900 it had

A view of the sky on May 10, 1958, at 1210 looking ESE from a point two miles west of Schenectady, N.Y.

Photo: Dr. Vincent J. Schaefer

