

# Front Soaring from SLEEPING BEAR

by L. D. Montgomery

During the Second American Open Soaring Contest at Frankfort, Michigan I was soaring in front of the southwest face of the Sleeping Bear sand dune. This southwest face is wooded. It makes a sharp 135° angle with the west face, which is pure sand, and terminates at the bottom in a beach which varies from '60 to 150 feet wide. The height of the Sleeping Bear dune is 500 feet at the point of the angle and tapering down from that both along the shore north and inland to the southeast.

On this occasion the wind was strong, being 40 miles per hour on the average, but sometimes 50 or 55. It was coming from the south southeast. This meant that the angle was rather poor on the ridge. It was, however, the only ridge we could use for flying on this day. Most sailplanes were flying at about 1200 feet.

The air was very rough. I had had an hour on the ridge earlier and had gone down to let other pilots have a turn. Again obtaining a chance to take the Wolf, I had worked out somewhat of a plan of attack. I hoped to work far southeast along the ridge so as to perhaps be able to get some thermal lift. Since other ships were concentrated near the lake, there would then be no danger in spiralling, should a good thermal come along out of the valley below. I felt that there was a fair chance, if I went far enough inland, for getting thermal lift. This might enable me to leave the ridge and fly north with the wind thus making distance. No distance flights greater than 7 miles had been made during the entire meet until the day before when two pilots had flown 22 miles to reach Traverse City. Due, perhaps, more to encouragement from Wally Setz than to any real expectation on my part, I gave Woolsey airport, which was at the end of the point of land just before one would have to jump the Grand Traverse Bay, as my goal.

During an hour and a half I had sometimes done fairly well in thermal lift near the east end of the ridge, but any attempt to make complete spirals ended in having to dive at 65 miles per hour to get back in front of the ridge, then I would have to dash back to the end of the ridge near the lake in order to gain from 800 feet or so back to 1200 before working inland again. 1600 feet marked the highest altitude I had attained by this line of attack. On the fourth dash back to the good lift near the lake I noticed that a little rain was falling. Also I noticed that one sailplane, the new Midwest, being flown by Elmer Zook was far out over the lake and higher than the rest.

This greater altitude on the part of the Midwest ship might be due to the fact that this ship does not sink very fast and then again it might be because the lift was better

out there. Jack Murphy was flying his Haller Hawk just at the shore line. With 1300 feet of altitude I skidded behind and below the Hawk and on out toward the Midwest. It was a pleasant surprise to find there was one meter per second *up* out over the lake and it kept on being *up*. But, as I kept going farther out, it dipped again from about a meter and a quarter to one meter. I turned back. Sure enough it was better if one did not go too far out. Soon the lift was two meters up. Soon 2000 feet showed on the altimeter. This was the best I had had in an hour and a half.

It proved that this was only the beginning. The air was remarkably smooth at 2,000; the lift was 2½ m/s. It increased still with a great smoothness. What a relief this was after the rough air over the ridge. It seemed too good to be true that the Wolf was climbing higher and higher all of a sudden. The slight cloud effects which I could notice must mean the presence of a front. 5 meters per second up. I had slowed my speed to 40 m.p.h. Very soon I reached 4,000 feet.

I do not know whether the presence of haze or the nearness of a cloud overhead and to my right were contributing factors or not, but I decided to fly straight east. The Horn variometer had already been at full scale reading 5 m/s; now the Winter variometer showed 6½ m/s and very soon I reached 6,500 feet.

I had flown over Glen Lake. All around the woods seemed to be solid. Information I had received before taking off was accurate, as it was to the effect that there was bad country just north and east of the Sleeping Bear Dune, but that farther on beyond there was much better country with plenty of landing fields. These were in plain view.

About this time the air became very rough. There would be a down draft of 3 meters per second followed abruptly by an up draft of 5 meters per second. It was worse than it had been down on the ridge. By Spiralling I was able to stay in the rising air more of the time and thereby gained a little more altitude until the altimeter read 7,000. If this thing kept on I was determined to stay with it until I might reach 10,000 or even 12,000 feet. It had all been so unexpected and had all happened so quickly, with no blind flying, that I was still ready to use any lift available. But there was no more. Even by spiralling I could never maintain more than one meter per second up and I was averaging about zero climb. I still could not see any very definite line of clouds anywhere. This was perhaps the best altitude I was going to get.

Still I hunted about for more lift. It seemed that there  
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