

HIGH ALTITUDE IN FLORIDA

By PAUL TUNTLAND

On July 26 Paul Tuntland, flying an LNE-1 for the Thunderstorm Project at Pinecastle Army Air Field, Orlando, Florida, established a new world's altitude record for two-place sailplanes of 18,700 ft.

As a native Californian I was sure that the local Chamber of Commerce had something to do with the weak thermals I was getting in Florida. After an airplane tow in an attempt to get into a cumulus I was making a straight glide to an auxiliary field. I encountered no lift that was sufficient to distract me from reviewing the age-long controversy between Florida and California. Needless to say, as a loyal son and objective reporter, I decided that California not only had better climate and oranges, but also better thermals.

The tow-plane followed me into the field just in time to keep me from packing my things for the trip back to the West Coast. We took off again and I was wearing the expression of one who "has been through this before." After fifteen minutes of towing I chose a cumulus that was about 3000 ft. thick from base to top, and which seemed to be growing. Because it was from under a similar cloud that I had recently returned to earth, I thought it best to tow right up to the cloud base before releasing. At 3900 feet we were at the base of the cloud and I pulled the release knob.

I turned on the camera and instrument switches for recording the data collected during the flight, began a spiral, and entered the cloud immediately with lift at 5 ft. per second. The lift increased to 7 and then 10 ft. per second, but this seemed like many of the other clouds I had entered in this area. Ten minutes after release the altitude was 7000 feet and I was getting light turbulence. Then the rate of climb jumped to 1500 feet per minute and it was very pleasant to watch the hands of the altimeter spin around. 10,000 feet was passed quickly and the lift increased to 2000 feet per minute. The turbulence was also increasing and I began to get the first intuition that this might be an eventful flight. I was in radio contact with the ground monitoring station, giving them periodic readings of the instruments, and I remember interposing a remark

as to how happy I was to find such a good cloud. Little did I realize how differently I would be feeling in a few minutes. I was now at 14,000 ft. and going up so rapidly that I thought it would be wise to go on oxygen. I reached for the helmet and oxygen mask on top of the radio and tried to put them on. The turbulence was so heavy that I could only devote one hand to the operation and practically no attention. I gave up the idea of getting the oxygen mask on and decided to concentrate on flying the ship.

I was encountering light rain and the temperature was close to 0°C. The vertical speed was still 2000 feet per minute, the altitude 16,000 feet, and the turbulence heavy. Two minutes later, at 19,000 feet, I noticed rime ice on the wings and the vertical speed began dropping to 1000 feet per minute. I felt a couple of very severe gusts above the steady turbulence and was finding the physical problem of moving the controls difficult. The ice on the wings was getting thicker and the canopy began icing up. I was now at 22,700 feet indicated, but not very elated about it. Right then I entered a severe downdraft and had difficulty controlling the airspeed. The controls were getting quite heavy and I decided to leave the cloud. I had been in the cloud for only twenty-one minutes, but the lack of oxygen coupled with the extreme physical forces needed to move the controls had me feeling weak.

I called the ground tracking station to ask for a vector out of the cloud. From the radar scopes they were able to plot my position inside the cloud and gave me a heading which would take me out. While flying this heading I ran into some very heavy updrafts and downdrafts that had me on the ropes. I flew for seven minutes on this heading and was not yet out of the cloud.

Altitude was 20,000 feet and I was really worried. The loud crack of an electrical discharge jolted me mentally. "Lightning!" I thought. Then I smelled smoke and thought, "Brother, this is it!" I turned around to see what I could, and this momentary distraction from the instrument panel resulted in a spiral dive in which the airspeed hit 140 and in which I lost 7000 ft. in two and a half minutes, although I didn't realize it at the time. (This was all shown on the 16 mm. movie film of the instrument panel.) The spoiler dive brakes were frozen shut and I must have tried every method of recovery including both hands on the stick and feet on the instrument panel. I was certainly not thinking about lightning or fire during this period. How I came out I don't know except that all of a sudden I was straight and level and it was raining. This seemed very odd, and I picked up the microphone to tell the monitoring station about this strange phenomenon of rain at 23,000 feet when I took another look at the altimeter and realized that it read 13,000 feet! A few minutes later I was out of the cloud and put on the oxygen mask to recuperate.

(Continued on Page 17)



Paul Tuntland and the LNE-1 used in the record breaking flight.