

Over Death Valley Skull Mountain And Funeral Peak . . .

BY DR. JOACHIM P. KEUTTNER

(EDITOR'S NOTE:—The following scientific report on a soaring flight by Dr. Joachim P. Keuttner of Arlington, Mass., received the 1952 Tuntland Award. Dr. Keuttner is associated with the Air Force Research Institute at Cambridge.)

The morning of March 19, 1952 displayed a very surprising sight in Bishop: just as the day before when we flew the "Big Wave" with five gliders all above 30,000 ft., a dense roll cloud was hovering along the Sierra Nevada surmounted by high lenticulars in the cirrus level. The foehnwall (cap cloud) was pouring down the east slope of the Sierras like a waterfall to about 8,000 ft. In contrast to the day before when all gliders ran into visibility problems, the cloud coverage this day was less, also the roll and Wave clouds in the Bishop area (Mt. Tom-Mt. Humphreys) were missing. On any other day, we would have been delighted by this picture. That particular morning, however, everybody was still tired from the day before. We had never encountered waves of this dimension two days in a row, and it seemed that most of us were reluctant to accept the idea of another Big Day.

Larry Edgar and I had planned for quite a while to attempt a well prepared cross-country flight with two ships to Boulder City. Larry was to fly his own L. K. while George Deibert of Bishop was nice enough to let me use his Schweizer TG-3. Those who have flown frequently in the Sierra Wave Project know that wave flying is strictly a question of equipment. Larry and I had two independent oxygen systems in each ship and many other necessary details such as double windows,

canopy with allowance for plexiglass shrinkage, insulation, parachute with automatic altitude control and quick release, bailout bottle, radio connection between the two ships on 3105kc, first aid kit, water, fruit juice, chocolate, flares, desert mirror, etc. I also had a little suitcase with a fur coat tied in the luggage compartment. We had identical airways maps with numbered squares in the sailplanes, and at the airport.

Our preparations were just finished on March 18th and we were ready for testing the ships and their equipment in flight when the Big Wave appeared on the same day. This brought up the question of whether we should combine the test flights with a cross-country attempt. Bob Symons decided to join us with his nicely equipped Pratt-Read and to work on the same frequency. We made tentative plans to meet at Mt. Whitney and to fly together to Boulder City with the hope that our equipment would work satisfactorily. To use this flight for a Diamond Goal (300 km) we had to release ten miles west of Bishop in the Mt. Tom area. (This is due to the high release altitude over landing point).

As already mentioned, the Wave of March 18th turned out to be a difficult one at least in the forenoon. We ran into all kinds of trouble. The gap between the foehnwall and the Wave cloud closed in temporarily near the 30,000' level. I still don't understand how John Robinson managed to fly a perfect tracking pattern under those conditions. The radio connection between Larry and me did not work. Larry could hear me but I

could not hear him. Bob did not hear us at all. In the moist air the canopy and even the double windows iced up almost completely below 20,000', leaving only a few tiny spots to look through. Larry, who had started first, waited for me near Mt. Whitney about 60 miles south of Bishop at 30,000' and heard my message that I was at the same spot. Later on he saw my ship a few thousand feet below his. I did not see or hear him and considered the height as insufficient. Working back north into the area of best lift near Independence, I ran into clouds between 30 and 31,000 ft. It was necessary to open the spoilers to escape the clouds since the turn and bank indicator was not working. Larry penetrated way south to Little Lake and found himself inside clouds just as he started the downwind flight at 32,000'. With the airspeed and the turn and bank indicator frozen, his oxygen regulator blew up and he managed to make a quick landing in Death Valley. After three attempts to penetrate over 31,000' in four hours flight I decided to return to the Bishop Airport.

Meanwhile Bob Symons had gone on instrument flight between 30,000 and 36,000 ft. and started his downwind flight in the Independence area assuming that Larry and I had already started eastward. He had to stretch his glide and to fight cross winds to reach Las Vegas Sky Haven, which is about 20 miles short of Boulder City. This was a pure glide of 180 miles (290 km) demonstrating the range of gliders in this altitude. In the afternoon the visibility conditions improved considerably. We had started too early. I did not know until the next day that my decision to land back at Bishop was the right one. By so doing, I was ready to fly the next day.

When the morning of March 19th displayed another Big Wave, Ray Parker, Chief Pilot of the Sierra Wave Project, said, "Let us get this guy in the blue." I was very reluctant to do so. I did not want to make the same mistake again and start too early. Also there seemed to be no

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