

Weekend At Bishop

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looked best in that direction, with large lenticular clouds for over 100 miles. After talking it over with the tow pilots, John Robinson and Bill Bowmar picked Reno, Nevada, as their goal. John needed this goal flight to complete his Diamond "C" badge. They were towed south to be released west of Big Pine, California, in order to be over 186 miles from Reno. Both pilots released at 10,300 ASL, and started to climb at once. Bill climbed at 600 to 1000 fpm to 23,000 ASL and then started south toward better looking clouds. But he soon flew out of the lift and headed back toward Bishop. Roll clouds started to build again and he turned south and climbed to 26,300 ASL, his best altitude. The temperature inside the cockpit was -18 degrees centigrade, and his feet were getting cold. At this time he found the rudder gap covers on his rudder were frozen and he had no rudder control at all. At 14,000 feet they thawed out, and he returned to the Bishop Airport after a 2:10 flight.

John's flight really made history by breaking the record for absolute altitude and the largest downdraft in the world. After he released his climb was 1000 fpm up to 27,000 ASL when he started north toward Mt. Tom. He arrived with 20,000 feet and climbed back to 24,000 before continuing on to Lake Crowley. The lift was spotty and he was down to 15,000 after a glide of 25 miles. He then found lift of 1000 to 1500 fpm and climbed in straight flight until over Mono Lake, where the lift was 2000 fpm to 30,000 feet and 1000 fpm up to 33,000 ASL. He reached the base of the lenticular cloud and circled up to 33,800 in front of the leading edge. He flew out of the lift, but did not hunt for it, as he started north with zero sink. About 20 miles further he was down to 30,000 and west of Bridgeport, California. Here he encountered a downdraft of 1000 fpm. He continued his glide for another ten miles with the sink getting stronger all the time. At times it increased to 2000 fpm. Realizing that he could not glide to his goal with such strong downdrafts, John turned downwind to the second wave but there was still a down of 500 fpm as he crossed Bryant Field at Bridgeport. The field was covered with snow so he turned south toward Mono Lake still losing altitude at 500 fpm. Arriving over Mono Lake with 11,500 the large lenticular cloud above him seemed a very long way up, but it was now or never so he dove the ship to 100 mph as he flew out over the middle of the lake hoping to make contact with the wave. In the past 30 minutes he had lost 18,500 feet, and had flown over 40 miles trying to get out of the downdraft. With one eye watching the shore line and the other watching the climb indicator, he continued at a high rate of speed until over the lake center where the

SOARING REVIEWS

The Best Cross-Country Soaring Speed. Paul B. MacCready, Jr. *Schweizer Aero-Revue*, November, 1949 (In German).

The technical basis for MacCready's remarkable soaring is displayed in this article. The conclusion of this paper shows a very simple dial which can be attached to any equally spaced variometer. By means of this dial the proper cross-country speed is readily read from the variometer reading and the strength of the last thermal worked.

A New Sailplane, Horten XV. Dr. Herman Horten, *Thermik*, October, 1949.

The combination two-place or one-place motorized tainness sailplane which was built in Argentina is described. Performances are given for the two versions of the sailplane. Most interesting is the rather high lift coefficient (1.7) claimed for the ship.

Accidents and Fuselage Construction. E. G. Haase, *Thermik*, October, 1949.

The author recommends steel tube fuselages over dry wood fuselages for glider construction. He tells of drag tests in a steel tube Baby Grunau fuselage in which accelerations of 17g. were recorded on a sandbag simulating a pilot.

climb started up at the phenomenal rate of over 2000 fpm. Ten minutes later he was at 32,000 and looking down at the lenticular a few hundred feet below. After that close call he decided to abandon the flight to Reno and turned toward the east at a high rate of speed. A few minutes later he arrived over the airport at 20,000 feet and spiraled down to land after a flight of 5:00. He said the double canopy worked fine and there was no icing on that portion. His total mileage was 192 miles.

All in all, the wave expedition was a great success, even though the 'wave' conditions were not very good. There was a total of 10 flights over 25,000' and three flights over 30,000'. Six records were broken one day.

A CATALOG OF SAILPLANES

On the next two pages the first sailplane in our "Catalog of Sailplanes" is presented. This will henceforth be a regular feature of SOARING. Included are a picture of the sailplane, a short note on its history and noteworthy features, a table of pertinent data, a three-view, and flight-tested performance. This information is assembled in convenient form so that it will be readily available to all; especially to designers, who should know what has been done. Later, we hope to publish a complete catalog of all the world's important sailplanes. This material was obtained through the courtesy of the Engineering Research Station, Mississippi State College.