



Photos by Ernie Shattuck of the first sailplane operation at the Laramie, Wyoming, airport. At the left, Einar Enevoldson and Dave Winkel in the flat-top Schweizer TG-2 recently purchased from Ned Sneed of Austin, Texas. On the right is the ship on final approach from one of the first flights made on October 15, 1961. No towplane was available so a car and 2500 ft. of cable were used. The airport is 7100 ft. a.s.l. and the longest runway 6200 ft. long. The first of nine tows only got up to 600 ft. but 900 ft. was common later by keeping the car in second gear. Ernie had two of the flights and appreciated being airborne again. It is hoped that a club can be formed to use the ship come spring and good soaring weather.

whole world of new phenomena just waiting to be added to the soaring spectrum.

In closing, I should like to refute the pessimistic note raised earlier in the paper concerning the possibility of obtaining one foot per second sink at more normal soaring speeds such as 40 miles per hour. I said that it has not been confirmed today how this will be done. However, if we think back to the history of the sailplane, we remember that maximum glide ratios leveled out in the 20's near 20, rose above 30 in the 30's, and rose above 40 by 1950. Perhaps new breakthroughs will occur by 1970 to permit attaining the goal with a better all around sailplane. There are two possible ways this may come about, but that is a story for another time. Meanwhile, it is my hope that the low speed, low sink sailplane, possible with today's state of the art, will take the air first as a research vehicle, and perhaps become the forerunner of a new class of sport sailplane.

References

1. MacCready, Jr., Paul B.: "Comments After Dr. Raspet's Paper on 'New Approaches'," *Soaring*, November, 1959.
2. Simpson: "The Evolution of the Sailplane," *Soaring*, March-April, 1946.
3. Zacher, Hans: "The D 28b Windspiel," published by Aerophysics Institute, Malverne, N.Y., 1949.
4. Zacher, Hans: "Some Results of the Flight Measurements of the German Sailplane D-30 'Cirrus'," DVL Mitteilungen der FFG, Folge 6, September, 1944.
5. Gyorgyfalvy, Dezo: "Performance Analysis of the Horten IV Flying Wing," *Swiss Aero Revue*, January, 1961.
6. Raspet, August, and Gyorgyfalvy, Dezo: "The Phoenix as a Solution to Optimum Cross Country Soaring," *Swiss Aero Revue*, June, 1960.
7. Haessler, Helmut: "Man-Powered Flight in 1935-37 and Today," *Canadian Aeronautical Journal*, March, 1961.
8. Bossi, Enea: "Man Has Flown by His Own Power in 1937," *Canadian Aeronautical Journal*, December, 1960.
9. Shenstone, B. S.: "The Problem of the Very Light-Weight, Highly-Efficient Aeroplane," *Canadian Aeronautical Journal*, March, 1956.
10. Naegle, H. and Eppler, R.: "Plastic-Sailplane FS 24 Phoenix," *Swiss Aero Review*, March, 1958.

11. Loftin, Laurence K., and Smith, Hamilton A.: "Aerodynamic Characteristics of 15 NACA Airfoil Sections at Seven Reynolds Numbers From 0.7 to 9 Million," NACA TN 1945, October, 1949.

12. Kraemer, K.: "Windtunnel Measurements on the EC 86 (-3) - 914 Airfoil," *Aerodynamische Versuchsanstalt, Goettingen*, Report 56-5-05.

13. Nonweiler, T. R. F.: "The Man Powered Aircraft," *Journal of the Royal Aeronautical Society*, October, 1958.

14. Wortmann, F. X.: "Experimentelle Untersuchungen an neuen Laminarprofilen für Segelflugzeuge und Hubschrauber," *Z. Flugwiss* 5 (1957) Heft 8.

15. Jacobs, Eastman: "Preliminary Report on Laminar-Flow Airfoils and New Methods Adopted for Airfoil and Boundary-Layer Investigations," NACA ACR, June, 1939.

MAN-POWERED AIRCRAFT FLIES IN ENGLAND

On Nov. 9, 1961, Derek Piggott made the first successful flight in a new man-powered aircraft at Lasham Airfield, England. He took off and flew straight for about 50-70 yards, attaining an altitude of about five feet. The aircraft was built by a group at Southampton University and is essentially a large but light sailplane with a pusher propeller mounted on a pylon above the wing which is driven by the pilot through a pedal arrangement. The British *Flight* magazine for Nov. 16th (p. 752) shows six photos of the aircraft, some in motion. The Nov. 23rd issue (pp. 787-8) carries an illustrated article by the designers. Some basic facts about the machine: wooden, parachute nylon fabric-covered construction; 80 ft. span; 65 (sub 3)-818 airfoil; 8-ft. dia. prop "cruises" at 240 rpm; cruising speed is 30 ft./sec. or 20.5 mph (wing RN is 700,000); and empty weight is 130 lb.

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