

efficient regime with low drag, especially the greater the positive flap deflection becomes. Because the location of the transition point with respect to the contour break caused by the flap deflection is so critical at low Reynolds numbers, one has to match the flap chord length to the profile design. Two such profiles with thicknesses of 15.3% and 13.1% are shown in fig. 8 with sealed flaps of 20%- and 17%-chord, respectively, pivoted about an axis located near the lower wing surface.

The test results of both profiles are illustrated in figures 9 and 10. In both cases the polar envelope is very close to the desired polar and the single polars remain in a useful form up to flap deflections of plus 10 deg. However, one has to live with the low thickness of the 17%-chord flap, especially in case of FX 62-K-131, which may pose construction problems. Because the profile designs are based on a given flap-chord/wing-chord ratio, one cannot transfer the measured test results to flaps with different chord-length ratios. Comparing the polar envelopes to the polars of the proposed group without flaps, it becomes evident that a 20- to 25% smaller drag is possible with simple flaps, with almost the same bucket width.

References

1. F. X. Wortmann, K. Schwoerer: "Einfluss der Profilpolaren auf die Flugleistungen von Segelflugzeugen," *Aero Revue*, Sept., 1963. (Summarized in this issue of *Soaring*.)
2. L. K. Loftin, Jr., H. A. Smith: "Aerodynamic Characteristics of 15 NACA Airfoil Section at Seven Reynolds Numbers," NACA TN 1945.
3. F. X. Wortmann: "Ein Beitrag zum Entwurf von Laminarprofilen fuer Segelflugzeuge und Hubschrauber," ZFW 3 (1955), pp. 333, British M.O.S. TIL/TA 903.
4. F. X. Wortmann: "Progress in the Design of Low Drag Aerofoils."
- G. V. Lachmann: "Boundary Layer and Flow Control," pp. 748, London, 1961.

**WHAT'S THE DATE?
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SEE AD ON PG. 25**

Club News

Edited by PETE HARVEY

Club reporters should submit items for this column to Pete at 17 Cawfield Lane, Huntington Sta., L.I., N.Y. Please try to limit news to one page of double-spaced typing on a separate sheet as it might appear in print (as regards capitals, indentations, etc.). Subject matter ought to cover that which is thought to be of general interest. Clubs with newsletters are requested to put Pete on the mailing list for same, in addition to *Soaring*.

Antelope Valley Soaring Club, El Mirage Field Adelanto, Calif. A Chapter of SSA

The Club's December meeting was held at El Mirage Field in the old SCSA building. The meeting was well-attended and we are pleased to announce the new club officers elected for 1964, as follows: Paul LaFrenier, President; George Uveges, V-P; James Moeller, Sec.-Treas.; Carl Brinkmann, John Gravance and Earl Seagars are the other directors.

We have had a very successful and busy year with many badges and legs acquired. Jack Arkovich set Jr. and Sr. goal records and Bill Brinkmann set Jr. altitude and altitude gain records for the state of California. Jack and Bill kept busy breaking each others' records. Our club members earned the following awards: 3 Diamond badges, 12 Diamond legs, 3 Gold badges, 5 Gold legs, 1 Silver badge and 6 Silver legs. There were some C badges earned by the group, also. We congratulate the members for their achievements and the crews that make it possible.

We wish to welcome Daniel Lentz, Patrick Symons, Alan Biermann, Robert Lee, Robert Avon, John Burgess, Joseph Dietrich, Joe Zarubica, Daniel Gray and James Dickson to our club and hope they have many pleasurable hours of flying (and work) with the club.

We are looking forward to a fine year and would like to say "Soar in '64" and made it a good year.

Jim Robinett, our chief check pilot, lost his life in a power plane crash on Nov. 9, 1963. This was a great loss to our club and to everyone that had the pleasure of meeting our "Robbie," for to meet him once gave you the feeling that you had acquired a life-long friend. We will all miss his warmth and wisdom. It is with great sorrow that we close with this news.

CARL BRINKMANN

Associated Glider Clubs of Southern California, Box 3301, San Diego 3, Calif.

A new slate of officers was elected at the October meeting, as follows: President, Walt Mooney; V-P, Andrew Kecskes; Secretary, Ed Salkeld; and Treasurer, Leslie Howard. Other Board members are Operations Manager, Robert "Red" Ramsey; Maintenance Manager, Marshall Randall; Ray Brown;

Joseph Colton; Don McCormick; and Dale Truckenmiller. Appointments: Sylvia Colton, Editor, *Wind and Wings*; Mike Larson, Assistant Editor; Chief Flight Instructor, John Swinson; Membership Chairman, Ray Brown and Lynn McNames.

The Club owns a 1-26 and 2-22C which logged 193:36 hr. and 250:23 hr., respectively. In 1963 car tows were provided by a 115 and an 85 Cub. These planes are also used for cross-country check-outs and solo student flying. The 115 is currently down for recovering and eventual installation of a new engine.

There are 18 sailplanes owned by club members including five 1-23's, four 1-26's, one Sisu 1A, one GT-2 (see April *Soaring*), one GT-1, two Cherokees, one BG-7, one TG-2, one GW-1 (GH-2 coming up), and one Prue 160. Having 21 approved tow pilots is handy although they rarely show up in large numbers. We have 12 instructors who teach at Torrey Pines and Elsinore. There are 13 members who comprise the 1-26 club and fly on scheduled weekends and holidays at Elsinore, Inyokern and El Mirage.

The club has participated in five contests in 1963. We sponsored the Torrey Pines Mid-Winter Meet in March, and went inter-club with SCSA in May at Elsinore, July 4th weekend at Inyokern, and September 1st at El Mirage. October 27th and 28th we had ten planes entered in a club contest at Elsinore which was won by George Tweed and Jack Green (GT-2), followed by John Williams (1-23), second, and Sterling Starr (1-23D), third.

Roger Williams, son of John and Vera Williams, married Janet Johnston on November 9th in San Diego.

New members in the club are still coming in, but as of November we number 90. This includes all classifications: family, associates and active.

SYLVIA COLTON

Chicago Glider Club 342 Redbud Drive Naperville, Illinois A Chapter of SSA

Things were a little slow in November for the Naperville group. No details on any soaring flights!

If any of you are thinking of the altitude diamond soon, (or a Lennie-Ed.) I understand that the Colorado Group has completed "negotiations" with the FAA for the use of a positive control hunk of airspace near Pike's Peak. Dave Johnson and his friends at the Black Forest Glider Port have ships to rent all equipped for wave flying and are terrific people to fly with.

The Chicago Glider Club has made no plans to take the 1-23C to Colorado as a club project, though individual members may take it or the Ka-7 as provided in the bylaws of the club.

The Peterson-Cale-Sutfin 1-26 missed getting done for this season but is now being finished in "Uncle" Dick's garage. That means the boys are going to have all winter to get a good coat of wax on it.

Andy Buccini donated a used air compressor to the Chicago Glider Club. It's planned to have the unit available to the