Zefir, he with flap extended, the "B" with flaps closed. The air was perfectly smooth and we were rapidly approaching 8000' in this beautiful wave; an ideal way to make comparison tests. I now motioned Jerry to increase his speed and we stabilized at 45 mph. Runs were made in 5 mph increments up to 60 mph. The "12" had a slight edge from 40 to 60 mph, more noticable at 40 than 60. From 60 to 65 both ships seemed to perform identically. Now we began a 70-mph run at 10,000'. The Zefir started to gain on me and at 75 he increased the gap. By 80 mph he was a good 50' above me after several miles of running upwind. It is unfortunate that the Zefir has a low rough air speed of 81 mph since it apparently excells at high speed due to its low frontal area. We were now in considerable down air so we separated and I turned back toward the field. As soon as "green" air showed, I slowed and flew into the wind at 40 mph, climbing steadily as I surveyed the other soaring activity in the area. At 12,000' I was quite cold and still climbing at 1½ to 2m./sec. It was time to go down. What could I do to further test the "12"? I had just recently calibrated the airspeed up to 165 mph and felt it was time to load up the ship with sharp maneuvers. Since it was stressed for 12 G's I wanted to at least reach 6 G's. I found this impossible to do without flying over the rough airspeed placard of 105 mph. Several sharp spirals and loops only showed 5½ G's. I just didn't feel I could stand any more, perhaps it was my age, but let's not talk about that, so up we went into a loop and rolled out on top. This was fun even for an old "Bald Eagle." Now, the other ships were only a thousand or so feet below. A dive at 140 mph soon overtook them and now the "12" was slowed to 90 mph and flaps lowered. The speed was pushed to 110 and the nose was pointed nearly straight down. This is an uncomfortable position since most of the pilot's weight is on his bent knees. I was glad to pull out of this position. As the speed diminished, the flaps were released and we proceeded to land, again using the flaps on approach.

Bach on earth the realities of work were ever present. Students clamoring for information, sailplanes and tugs to put away. As the last vestiges of daylight began to disappear, the "12" was stored next to its tug with the hopes that we could flight test it in calm air the following week. We still are not certain of its performance, L/D something over 35-to-1 and minimum sink somewhere above 2ft./sec. We do know it will stall without flaps at 37-38 mph and 32-33 mph with flaps. We also know that interest in this machine is increasing, Serial No. 107 having been issued on February 12th. But there is still much to be done. George Moffat improved his "12's" performance by cleaning it up. We still consider our "B" as the "dirty" configuration. Gaps still have to be sealed on the bottom of the ailerons, elevators and top of the flaps. The canopy leaks badly in front of the wing and fuselage holes for the flap mechanism are still wide open. Consideration is being given to untwisting the wing with upraising of the ailerons at slow speed to retard tip stall. We still have to sand and finish the wing. Perhaps then our performance will be increased.

Now what about the laminar section versus our old NACA 4400R series? As the boys say, the proof of the pudding is in the eating. I know the "experts" will still not agree with me but my hat if off to Harry Perl, who once told me I was wasting my time on low-drag sections, and my own investigation proved him right. I also have facts and comparison figures on the low-drag sections vs. the 4400R series. Some day perhaps we can prove our case but for now will have to be satisfied with the results of comparison performance testing.

(Note: Information on the BG-12B is available from Sailplane Corporation of America; 25 cents will being a brochure and several pages of information. Plans for the BG-12B are available for $125.00 from Sailplane Corporation of America, El Mirage Field, Adelanto, California. A complete deluxe kit costs $1900. This includes all parts needed to complete the BG-12B, including finished fittings, basic instruments and paint. Lower-cost kits are also available. Man-hours to assemble run from 360 to 3000, depending on type of kit and skill of purchaser.)

Photo by George Uveges

The Briegleb BG-12C built by Gordon Wheeler with two-piece wing and dive-brakes, shown here slightly extended. The pilot in the picture is Jack Arkovich who, at 19, is believed to be the world's youngest Diamond badge pilot. He made a 318-mile goal flight from El Mirage Field, Calif., to Williams, Ariz., in the BG-12C to complete his badge last year.

Bibliography on Soaring

Recent articles or items on soaring which have appeared in non-soaring publications.

Flying, Jan, p. 49, photo of world goal record holder Al Parker in his Sisu 1A sailplane.

Flying, March, p. 85, photos and news item about John Grinton and son soloing in gliders at Holiday Soaring School.

Flying, April, p. 31, full-page photo of Sisu 1A sailplane with Gill Robb Wilson's "The Airman's World" message.

Journal of All Sports, 1964 edition, p. 47, entry on soaring. (Available from Jarman shoe dealers or from Bob Norris, Editor, Box 8144, Jacksonville, Fla. 32211, for 25c.)

National Aeronautics, March, p. 15, article about SSA by Bill Ivans, SSA president.

Science News Letter, Feb. 29, article about the activity of soaring.