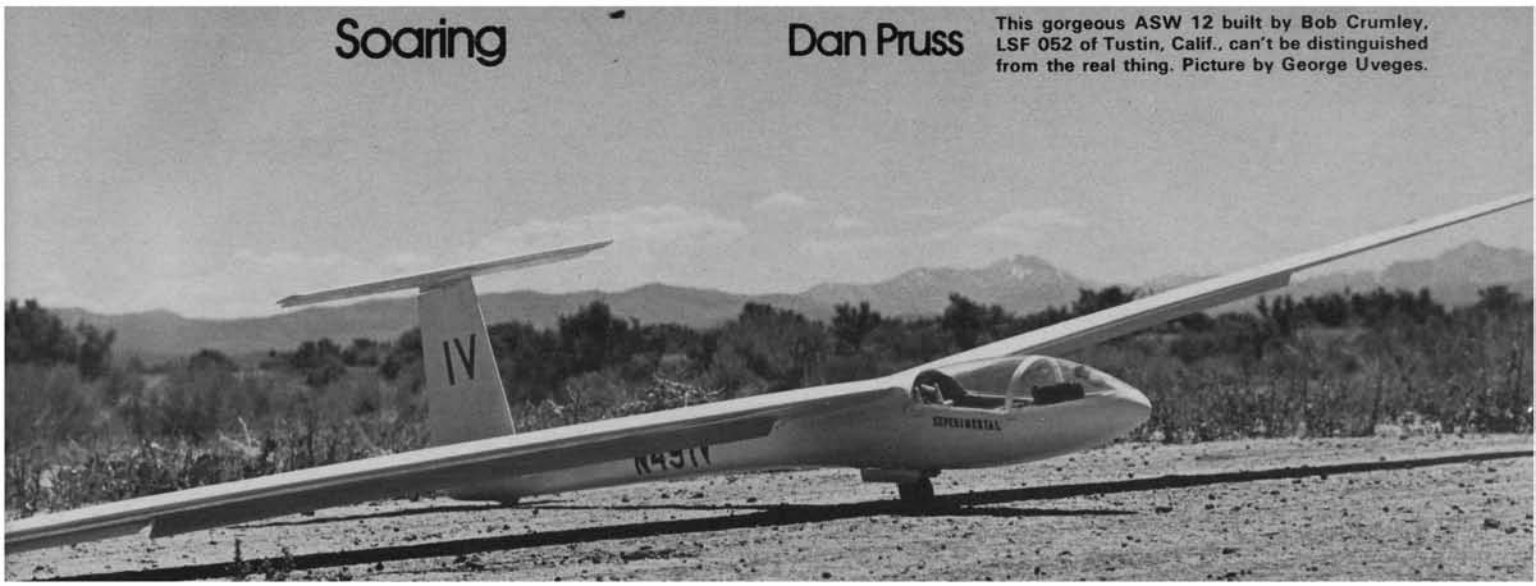
Soaring

Dan Pruss



This gorgeous ASW 12 built by Bob Crumley, LSF 052 of Tustin, Calif., can't be distinguished from the real thing. Picture by George Uveges.

SINCE THIS column began almost a year ago, numerous readers' requests have been received with regards to nearly every aspect of RC sailplanes. These included requests for airfoil designs and specific coordinates—where to find them and how to plot them.

The League of Silent Flight office also gets many requests as does that of the National Soaring Society. "How-to" questions include slope and thermal soaring, launching techniques, linkages for various controls, and building techniques.

Over the years a few books were published that dealt with sailplane designs. Some of these have become "bibles" to some and justifiably so.

Currently, other books are on the market and in most respects have kept pace with the state of the art and in some ways have illustrated ideas how that state could be advanced.

The intent of this column is not to serve as a book review or to evaluate kits. However, when something becomes available that is in the general interest, efforts will be made to pass on that information.

The following books would serve you well and you are encouraged to include them in your modeling library:

Model Glider Design by Frank Zaic. Available through hobby shops; published by: Model Aeronautics Publications, Box 135, Northridge, CA 91324. Price—about $5.00.

Originally published in 1944 and reprinted since then this book has truly become the "handbook" for sailplane enthusiasts. Very heavily illustrated in model building techniques and designs. Good three-view plans of older free-flight sailplanes and scale—from the pre-fiberglass era.

Model Aeronautics Made Painless by R. J. Hoffman. Available through hobby shops.

This book originally sold for a dollar and is still seen at shops now and then. Not a book from which your next world-beater could be designed, but it is a book that contains a modeler's glossary and sketches to accompany the definitions. The drawings are more like ideas copied from the author's sketch pad, but this makes for interesting reading and browsing.

Radio Control Soaring by Dave Hughes. Available through hobby shops or direct from Hobby Shack, 6475 Knott Ave., Buena Park, CA 90620. Price $9.95 plus $1.20 for postage and handling. Published by Radio Control Publishing Co., Ltd., 64, Wellington Rd., Hampton Hill, Middlesex, England.

Probably the best book on the subject of RC Soaring. The book is full of pictures, sketches, and drawings of just about every facet of RC sailplaning. Although many articles on slope soaring, they do include pylon racing, aerobatics, thermal soaring and launching techniques.

Sketches include radio installations, "T"-tail and "V"-tail details, spoilers, flaps, ailerons and other controls that are surely to whet the appetite of the experimenter—even if he's a two function devotee.

The chapter on aerofoils ('tis the British version of airfoils y'know) is very well written and again this chapter is full of drawings and pictures. When the author begins with "we can agree on one thing: wings are indispensable," you do wonder, that with such perceptibility, in which direction he will head. Fortunately for the reader, the chapter is written so that those without aeronautical engineering degrees can understand it and those with such degrees aren't insulted. The chapter also includes coordinates for the most popular Eppler, NACA, and Gottingen series airfoils.

Sailplane Designer's Handbook. Available direct from the author Eric Lister, 953 Klockner Rd., Trenton, NJ 08619. Price: $4.97.

First printed in May, 1973, this book was written for the modeler who leans towards designing his own sailplane, yet doesn't want to get too involved with theories he might not be too familiar with. By picking data from charts that fit the designer's basic design criterion, one can design with a certain degree of confidence.

Tables include data from some known designs so that comparisons can be made with the designers own ideas. Sections in the book include Longitudinal Stability, Directional Stability, Do It Yourself Design, Optimized Wing Layouts for Soaring, and Effects of Wing Loading on Your Design.

Current FAI Distance Record holder, Jack Hiner, used this book for designing his "Astro Jack" wing which included airfoil selection. The rest made history.

Airfoil Selections for Flying Models, A.S.A. Test Report 03-72 by Associazione Sportiva Aeromodellistica, Via S. Giovanni Bosco 21, 20081 Abbiategrasso, Milano, Italy. Price $10.00. Order Direct.

This book contains the results of tests run in the A.S.A.'s own wind-tunnel for 16 different airfoils. Included are the following: BO 545-310, Clark Y, Eppler 385, Eppler 387, Eppler 392, Fukada 10, Gott. 496, Gott. 500, Gott. 546, Hill SR 2, NACA 0009, NACA 0012, NACA 4212, NACA 4412, NACA 6409, NACA 6412.

In talking with Ferde Gale—LSF coordinator for Italy—Mr. Gale stated that each airfoil required up to eight hours of wind-tunnel tests to produce the data published. These modelers/engineers worked with Reynolds numbers of around 60,000 and the tables of data printed reflects their dedicated efforts. The book is a must not only for the serious designer but for those that would care to compare the performances of the different wing sections.

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A book guaranteed *not* to help you win an RC sailplane design contest and further guaranteed *not* to allow you to design a record-breaking ship and, above all, guaranteeing you no help whatsoever in achieving LSF/Level V is a book called: *The Great International Paper Airplane Book* published by Simon and Schuster, New York.

Why mention that here? Just to share with you a fun book. Seems as though back around 1966, when the politics of the SST were creating more noise than the plane itself ever could, the *Scientific American* decided to hold the "First International Paper Airplane Competition." By coincidence the ad announcing the contest appeared in a New York newspaper opposite an ad for an aircraft company's detailed case for building the SST.

What effects the foregoing could have had on each other is unknown but the contest produced some fun and far-out designed flying machines. The book contains the winning planes (full-size plan/planes) which are the best of nearly 12,000 entries!

The book is 128 pages of pure entertainment and for $2.95 you never will have as much fun folding a wing! Available through book stores.

FAI Team Selection: As mentioned a couple of columns back, the FAI program to select a U.S. team is underway. Program manager, Jim Simpson, says that 17 quarter-finals are already scheduled as are six semi-finals; the final team selection will take place Labor Day week-end in Denver. This has been changed from Albuquerque.

Updated information may be found in the "Competition News" section of this magazine. The shorter lead time will permit the printing of any last-minute happenings.

The fund raising chairman, John Nielsen, through the generosity of many, has six EK Logictrol radios, a newly designed super-lightweight ten-speed Schwinn bicycle, plus numerous kits and other prizes. All of this hardware is to be raffled and proceeds are to help finance the U.S. Team's trip. Your support will be most welcome.

LSF Shortlines: 1975 ended with the membership at 1,745 and over 1,100 in the aspirant files! Of the 1,745, 258 are from outside of the U.S.A. . . Level IV members now number 61 . . . John Baxter, LSF/024 and Steve Work, LSF/571 being the only members to attain Level V . . . plans underway for LSF Tournament/1976 . . . California site to be in the San Francisco area . . . Thanks to the Clubs that sent proceeds from their 1975 contests to help support the League.

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