While stationed in England during World War II, I spent some of my free time riding my bicycle, visiting many of the small airfields which dotted the British countryside. It was there that I first saw large numbers of de Havilland Tiger Moth trainers being used to teach future Spitfire and Hurricane pilots how to fly. I can still recall how slowly the Tiger Moths made their circuits and bumps, and still wonder at the bounces their landing gear were able to survive. It was then that I realized how great a primary trainer the Tiger Moth was.

Over the years, I read every aviation history book I could find, and discovered that the Tiger Moth was really an outgrowth of the first aircraft named Moth, powered by a de Havilland Cirrus engine. The aircraft company had taken one of their 8-cylinder, V-type engine, and literally sawed it in half, then installed it in the trainer they had just built. This re-designed engine provided 60 horsepower at 290 pounds. The name Moth was given the new trainer because of Captain de Havilland's avocation as a lepidopterist (collector of beautiful, unusual butterflies and insects).

The correct de Havilland designation for the Cirrus Moth was D.H.60. It had straight wings, mounted directly over each other, which also folded for ease of storage. The first flight of the Moth was made by de Havilland at Stag Lane, England, in February of 1925. One year later, the first Moth seaplane was equipped with all-metal floats, and flown to the United States for possible production in this country. One Moth was even equipped with a single float and a Short amphibian undercarriage.

(Continued on page 64)

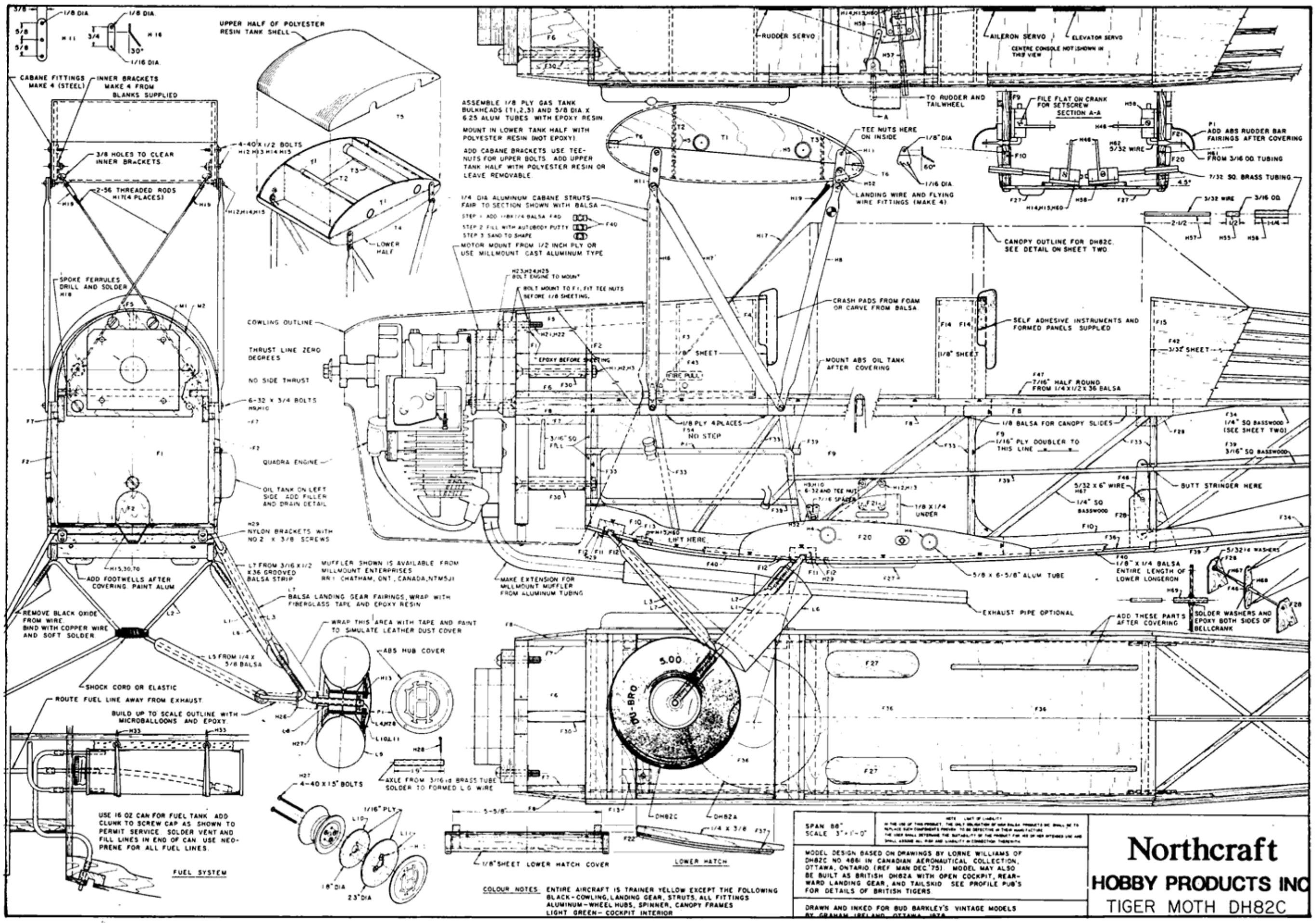
DE HAVILLAND TIGER MOTH

England and Canada's Primary Trainer Has Always Been a Popular Model Subject

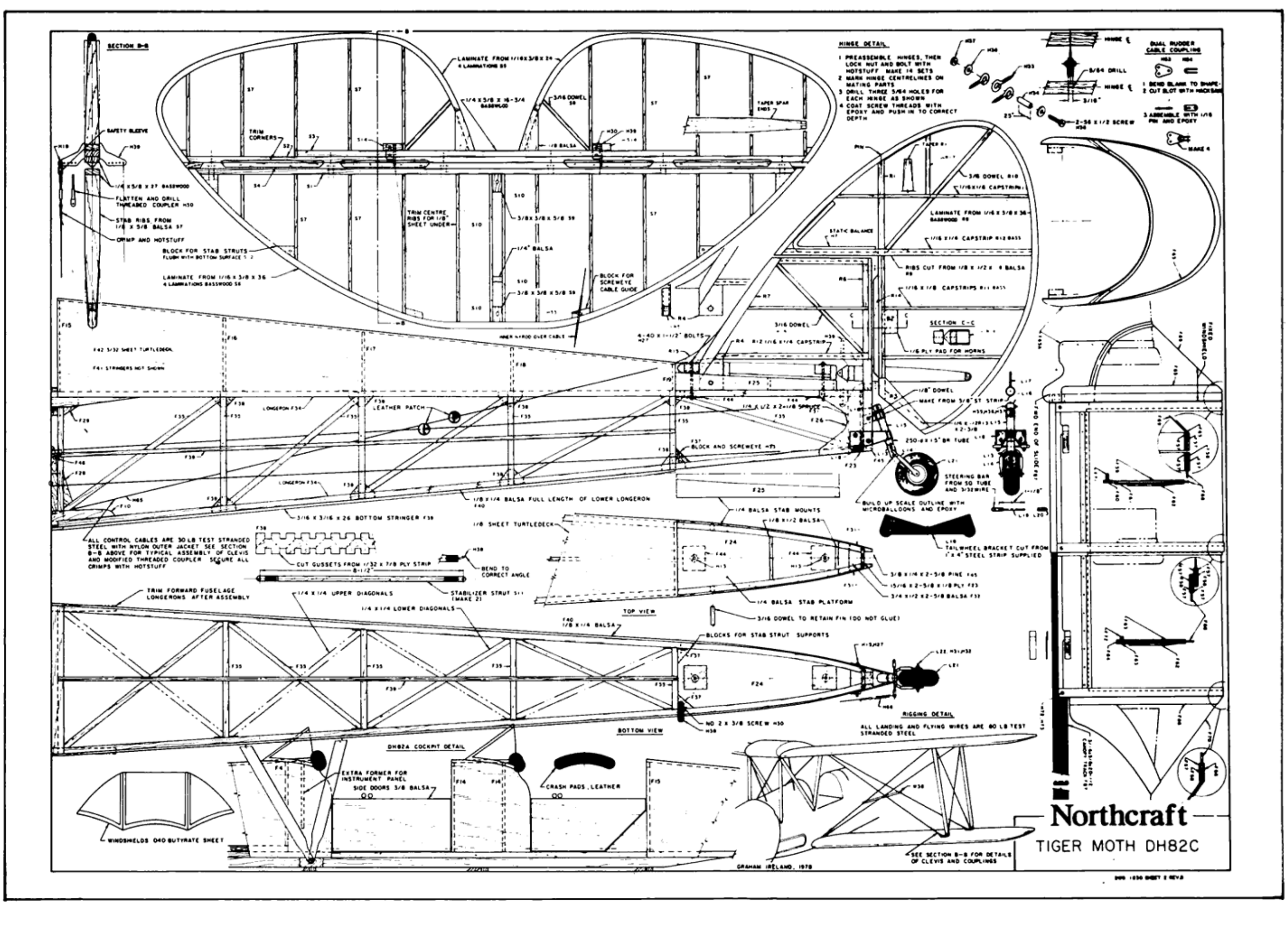
By Pete Chaput

Willie McLauglin of Terra Cotta, Ontario built his Moth from a Northcraft kit. Willie is an active Canadian full size professional pilot, and has thousands of hours in many different Canadian and American aircraft.

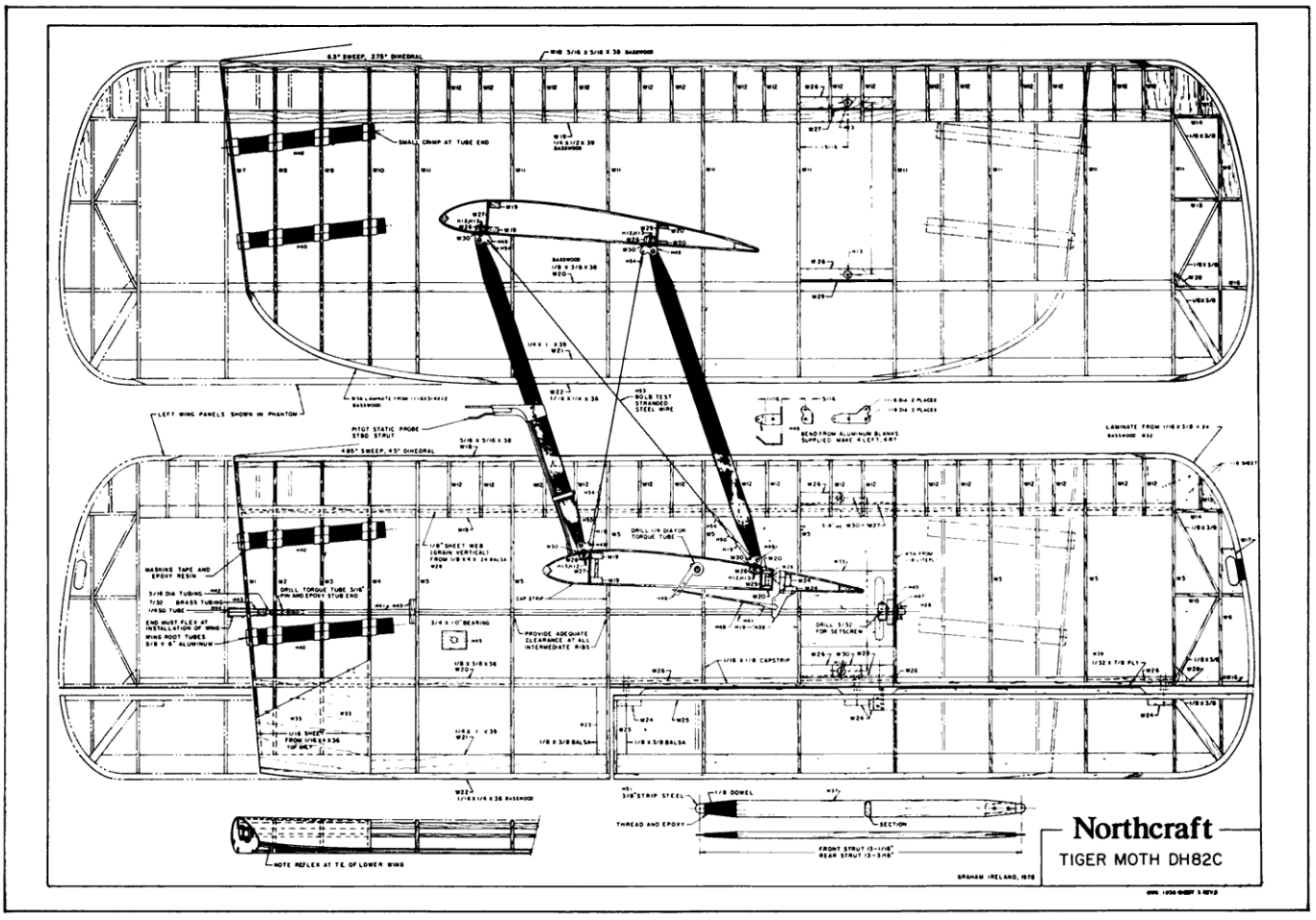
Jim Morrow, of Riverside, California has been campaigning his DH-82 for several years and has qualified for the Masters in the past because of the Moth's good flying ability.



UPPER HALF OF POLYESTER RESIN TANK SHELL
CABANE FITTINGS MAKE 4 (STEEL)
INNER BRACKETS MAKE 4 FROM BLANKS SUPPLIED
ASSEMBLE 1/8 PLY GAS TANK BULKHEADS (T1,2,3) AND 5/8 DIA X 6.25 ALUM TUBES WITH EPOXY RESIN
MOUNT IN LOWER TANK HALF WITH POLYESTER RESIN (NOT EPOXY)
ADD CABANE BRACKETS USE TEE-NUTS FOR UPPER BOLTS. ADD UPPER TANK HALF WITH POLYESTER RESIN OR LEAVE REMOVABLE
1/4 DIA ALUMINUM CABANE STRUTS
MOTOR MOUNT FROM 1/2 INCH PLY OR USE MILLMOUNT CAST ALUMINUM TYPE
RUDDER SERVO
AILERON SERVO
ELEVATOR SERVO
TO RUDDER AND TAILWHEEL
SECTION A-A
ADD ABS RUDDER BAR FAIRINGS AFTER COVERING
FROM 3/16 OD. TUBING
7/32 SQ. BRASS TUBING
TEE NUTS HERE ON INSIDE
LANDING WIRE AND FLYING WIRE FITTINGS (MAKE 4)
CANOPY OUTLINE FOR DH82C. SEE DETAIL ON SHEET TWO
CRASH PADS FROM FOAM OR CARVE FROM BALSA
SELF ADHESIVE INSTRUMENTS AND FORMED PANELS SUPPLIED
MOUNT ABS OIL TANK AFTER COVERING
COWLING OUTLINE
THRUST LINE ZERO DEGREES
NO SIDE THRUST
QUADRA ENGINE
OIL TANK ON LEFT SIDE. ADD FILLER AND DRAIN DETAIL
NYLON BRACKETS WITH NO 2 X 3/8 SCREWS
ADD FOOTWELLS AFTER COVERING PAINT ALUM
MUFFLER SHOWN IS AVAILABLE FROM MILLMOUNT ENTERPRISES
MAKE EXTENSION FOR MILLMOUNT MUFFLER FROM ALUMINUM TUBING
BALSA LANDING GEAR FAIRINGS, WRAP WITH FIBERGLASS TAPE AND EPOXY RESIN
REMOVE BLACK OXIDE FROM WIRE BIND WITH COPPER WIRE AND SOFT SOLDER
WRAP THIS AREA WITH TAPE AND PAINT TO SIMULATE LEATHER DUST COVER
ABS HUB COVER
SHOCK CORD OR ELASTIC
ROUTE FUEL LINE AWAY FROM EXHAUST
BUILD UP TO SCALE OUTLINE WITH MICROBALLOONS AND EPOXY
AXLE FROM 3/16 I.D. BRASS TUBE SOLDER TO FORMED L.G. WIRE
USE 16 OZ CAN FOR FUEL TANK. ADD CLUNK TO SCREW CAP AS SHOWN TO PERMIT SERVICE. SOLDER VENT AND FILL LINES IN END OF CAN. USE NEOPRENE FOR ALL FUEL LINES.
FUEL SYSTEM
EXHAUST PIPE OPTIONAL
ADD THESE PARTS AFTER COVERING
SOLDER WASHERS AND EPOXY BOTH SIDES OF BELLCRANK
BUTT STRINGER HERE
1/8 BALSA FOR CANOPY SLIDES
1/8" SHEET LOWER HATCH COVER
LOWER HATCH
SPAN 88" SCALE 3"=1'-0"
MODEL DESIGN BASED ON DRAWINGS BY LORNE WILLIAMS OF DH82C NO 4861 IN CANADIAN AERONAUTICAL COLLECTION, OTTAWA, ONTARIO. MODEL MAY ALSO BE BUILT AS BRITISH DH82A WITH OPEN COCKPIT, REARWARD LANDING GEAR, AND TAILSKID. SEE PROFILE PUB'S FOR DETAILS OF BRITISH TIGERS
DRAWN AND INKED FOR BUD BARKLEY'S VINTAGE MODELS
COLOUR NOTES: ENTIRE AIRCRAFT IS TRAINER YELLOW EXCEPT THE FOLLOWING BLACK-COWLING, LANDING GEAR, STRUTS, ALL FITTINGS ALUMINUM-WHEEL HUBS, SPINNER, CANOPY FRAMES LIGHT GREEN-COCKPIT INTERIOR
Northcraft
HOBBY PRODUCTS INC
TIGER MOTH DH82C



SECTION B-B
HINGE DETAIL
1 PREASSEMBLE HINGES, THEN LOCK NUT AND BOLT WITH HOTSTUFF. MAKE 14 SETS
2 MARK HINGE CENTRELINES ON MATING PARTS
3 DRILL THREE 3/64 HOLES FOR EACH HINGE AS SHOWN
4 COAT SCREW THREADS WITH EPOXY AND PUSH IN TO CORRECT DEPTH
DUAL RUDDER CABLE COUPLING
TRIM CORNERS
TRIM CENTRE RIBS FOR 1/8" SHEET UNDER
BLOCK FOR STAB STRUTS
BLOCK FOR SCREWEYE CABLE GUIDE
STATIC BALANCE
SECTION C-C
LEATHER PATCH
BLOCK AND SCREWEYE
1/8 X 1/4 BALSA FULL LENGTH OF LOWER LONGERON
3/16 X 3/16 X 26 BOTTOM STRINGER
ALL CONTROL CABLES ARE 30 LB TEST STRANDED STEEL WITH NYLON OUTER JACKET. SEE SECTION B-B ABOVE FOR TYPICAL ASSEMBLY OF CLEVIS AND MODIFIED THREADED COUPLER. SECURE ALL CRIMPS WITH HOTSTUFF
CUT GUSSETS FROM 1/32 X 7/8 PLY STRIP
BEND TO CORRECT ANGLE
STABILIZER STRUT (MAKE 2)
1/4 BALSA STAB MOUNTS
1/4 BALSA STAB PLATFORM
3/16 DOWEL TO RETAIN FIN (DO NOT GLUE)
BUILD UP SCALE OUTLINE WITH MICROBALLOONS AND EPOXY
TAILWHEEL BRACKET CUT FROM 1"X4" STEEL STRIP SUPPLIED
STEERING BAR FROM SQ TUBE
TRIM FORWARD FUSELAGE LONGERONS AFTER ASSEMBLY
1/4 X 1/4 UPPER DIAGONALS
1/4 X 1/4 LOWER DIAGONALS
TOP VIEW
BOTTOM VIEW
BLOCKS FOR STAB STRUT SUPPORTS
NO 2 X 3/8 SCREW
RIGGING DETAIL
ALL LANDING AND FLYING WIRES ARE 80 LB TEST STRANDED STEEL
DH82A COCKPIT DETAIL
EXTRA FORMER FOR INSTRUMENT PANEL
SIDE DOORS 3/8 BALSA
CRASH PADS, LEATHER
WINDSHIELDS .040 BUTYRATE SHEET
SEE SECTION B-B FOR DETAILS OF CLEVIS AND COUPLINGS
GRAHAM IRELAND, 1978
Northcraft
TIGER MOTH DH82C



TIGER MOTH

(Continued from page 59)

In 1987 there were still two Moths flying in England, having been preserved by the de Havilland Moth Club.

By 1928, Moths were in service in many other countries as well, including Africa, Australia, and Canada.

In 1927, the name Tiger Moth was applied to a small racing-type test-bed, designated the D.H.71, and was the vehicle used to flight-test the engine which would become the standard in England's training fleet, the 135 hp Gypsy Major, and in this installation, the engine was installed inverted, to provide more ground clearance for the propeller, and other considerations as well.

The first Tiger Moth D.H.82, as we know it, was test-flown in 1931. At the insistence of the Air Ministry, for safety's sake, the struts were re-located, and the wing swept back, so that the occupant of the front seat would stand some chance of getting out of the aircraft, in case of an accident. In the early days of England's training command, nose-over accidents were quite common.

When England entered into World War II, production of Mosquitos was considered a very high priority, and soon, all of de Havilland's Hatfield manufacturing plant space was needed for that purpose, and building of the Moths was transferred to Morris Motors. By 1945, over 8,000 Tiger Moths had been built.

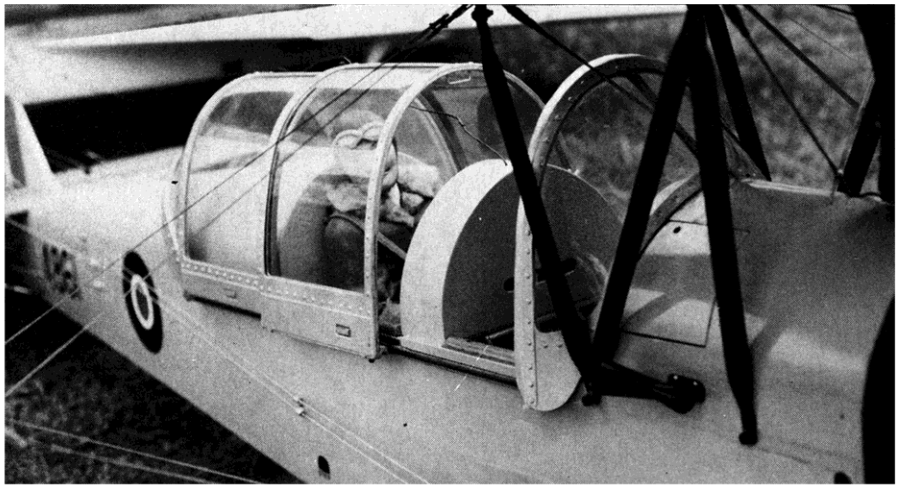
During the early years of the war, license had been granted to de Havilland of Canada to re-design the Moth to adapt it for local conditions, and the result was the D.H.C. 82C. During this time, the constant threat from enemy vessels in the North Atlantic prevented the shipment of Gypsy Major engines, so an in-line Menasco, available in North America, was substituted. In fact, the Tiger Moth underwent so many changes, including the installation of cowling hinges, re-location (more forward) of its landing gears, and the addition of a cold-weather hatch, that a new designation, that of 82C was assigned to the trainer.

In 1942, 200 of these aircraft were built by the United States as PT-24s, then turned over to the R.C.A.F. for their training program.

There is no mistaking the shape of a de Havilland; its distinctively-shaped rudder was retained on almost every one of them built, from the earliest models to the latest. They were built in every conceivable configuration, from single-engine models, to twins, to four-engine biplanes, and every single one of them was pleasing to the eye.

Scale modelers discovered the Tiger Moth many years ago, and many are built and flown each year by enthusiastic hobbyists. Modelers in Southern California who attend any of the large number of meets and contests there are undoubtedly familiar with one of the best-known local Moths, the Tiger Moth owned and flown by Jim Morrow, of Long Beach, California. A veteran of several years flights, Jim's Moth bears the yellow, blue and red colors, and distinctive markings of the Swedish Air Force, one of the countries which was licensed to build the Moth by de Havilland.

There are many plans and kits in a large enough variety of sizes available to satisfy everyone. The plans being featured, this month, are from Northcraft Hobby Products Inc., 115 Industrial Avenue, Box 419, Carleton Place, Ontario, Canada K7C 3P5. This firm offers plans and parts, as well as complete kits for this historic, great-flying aircraft. Hobby Shack also offers several different kits of the Moth, as do a number of other model companies. ●



The Canadian version can be spotted because of its canted forward landing gear and cockpit cover.