



1½ ins. to 1 ft.—one eighth scale model of a famous early light plane with the flight characteristics of the full-size.

# De. H. 80 by F. G. Longbon

## PUSS MOTH



Not very often do we get so enthusiastic over a scale design as with this fine flier—for here is a subject that performs as well as it appears.

WHEN in 1928 the private flying movement began to demand the comfort of a cabin after training on the famous Gipsy Moth, De Havillands created the D.H. 80A PUSS MOTH.

It was new in many ways although a derivation of the larger Hawk Moth. The Gipsy engine was inverted and by September, 1929 (long time ago, eh!), the first Moth Mk. 3 was ready. The design was

Nose view below with the 'Naylor Air Service' on the upper cowling with Baltic Blue overall colour scheme represents the Puss Moth with which Aeromodeller staff were particularly familiar in immediate postwar years at our previous offices at Eaton Bray Sportsdrome, Nr. Leighton Buzzard, Beds. Heading photo is typical of realistic flight by the Puss Moth which has been seen at nearly all rallies over the past two years.



extremely clean and performance exceeded expectation though production was delayed until a metal tube fuselage was developed to meet demands outside G.B.

Orders accumulated from all quarters of the world but a series of wing failures in Australia, South Africa, Canada and in Europe called for an N.P.L. and R.A.E. investigation. Famous pilots Glen Kidston and Bert Hinkler of distance flight fame were among those to lose their lives. It was proved that in turbulent conditions at high speed, flutter could cause a wing breakage. Balance changes in the controls, larger rudder and rearranged strut bracing eliminated the risk: but for all time the D.H. 80 was condemned in places like South Africa.

### Record Breaker

Puss Moths created incredible records in long flights and among the most famous was G-AAZV "Jason II" used by Amy Johnson for a flight to Tokyo via Moscow, G-ABXY "The Hearts Content" flown by Jim Mollison for the first solo East-West crossing, and Amy's G-ACAB "Desert Cloud" used by her for out and back records from London to the Cape of Good Hope.

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Full size copies of ½ scale reproduction opposite are available from Aeromodeller Plans Service, 13/35, Bridge Street, Hemel Hempstead, Herts., price 10/- post free. The completely detailed stage by stage instructions leaflet is included with each plan. This model should be within the capability of anyone who has already built a simple power model.

## PUSS MOTH (continued)

The Puss Moth survives in Australia, Great Britain and Canada but the subject of our design met an untimely end on the middle of our old airfield location at Eaton Bray, Bedfordshire. Owner Joan Nayler (to become Mrs. D. A. Russell) was lucky to escape as the aircraft caught fire on landing. "Widget" was a pretty machine that gave pleasure to many joy-trippers, our earlier staff included, and we're pleased to say that Fred Longbon's fine replica with scale structure looks every part like the real thing.

Construction of this fine model has been devised to satisfy both the scale "buff" who likes to attend to the last detail, and the more casual enthusiast who cares more for flying than building.

## Design details

Complete building sequence instructions are issued with each copy of the full size plan so that we can describe the salient points here for the interest of scale model builders in general.

First, the scale is one-eighth, a popular size to suit popular engines in the 1.5 cc. class with moderate power driving a 9 in. diameter prop, revving at about 8-9,000 r.p.m.—the aim for realism and safe flight.



Underside view of Fred Longbon's model shows a dummy exhaust pipe beneath fuselage and wing struts, etc. Note how the engine is totally enclosed and the registration lettering is spread across the wings outside the strut fairing strips.

Next, the structure is all "Knock-off". Wings are on short locating dowels, retained by elastic bands through cross tubes and the tail surfaces similarly detachable. We've seen the original in action at many '64 and '65 rallies and the only damage has been an occasional tissue tear. Note the side view of the fuselage and how a  $\frac{1}{8}$  in. sheet balsa panel extends from nose to wing trailing edge, the rest of the fuselage having liberal diagonal bracing. The tailplane is solid sheet balsa, shaped from  $\frac{1}{4}$  in. thickness to a symmetrical streamline section. One can afford the slight extra weight to allow for balance. Cabin windows have a neat system of assembly with acetate sandwiched between a balsa and a ply frame, adding both strength and scale effect while the undercarriage is made to give telescopic "oleo" leg action for shock absorption.

## Scale surfaces

In the wings, close rib spacing is realistic and strong while a sheet trailing edge and stout leading edge withstand hard knocks (as we have witnessed). For additional effect, the surface lines for the wing fold flap, and ailerons are engraved into prepared inserts.

Here's a scale subject that looks and flies as it should and we expect to see many like it at the 1966 scale model meetings.

Structural details of the Puss Moth illustrated at top, the nose section with shock absorbing undercarriage, framework for windows and "gull" effect where the wing joins cabin roof. In centre view, cabin windows are obvious and also marking on top of the starboard wing which has been placed nearest camera. This photograph serves to illustrate how the Puss Moth can be packed away into a relatively small space by virtue of detachable wings.

At bottom a side view which could almost be of the full size machine which shows how faithful Fred Longbon has been in adhering to true scale in every possible respect.