Better than the Tiger?

When endeavouring to assess an aeroplane it is important to decide the purpose for which it is being weighted. It may be for its commercial rating, practical value to its owner/pilot as a tool of travel, or the level of enjoyment/satisfaction for the person who flies it. I confess to being guilty of placing the last of these at the head of my list, especially when looking at a light aircraft from an earlier era. I mention this because recently two people have suggested that the Moth Major is the best of all the types in the broad Moth family; clearly they, too, were thinking on similar lines. Although in an earlier report I covered the straight-wing DH60 Moths in general, largely because of this comment I have selected the Major for a spot of space to itself.

Now let us head for a little more detail. The original wooden-bodied DH60 was born in 1925 and without doubt set the private and club flying movement (today's general aviation) on its proverbial feet. Powered by an ADC Cirrus engine of only 65 hp, the type evolved progressively and the most popular numerically was the DH60G Gipsy Moth, which established long-distance records throughout the world. Like the Cirrus, the 95 hp Gipsy 11 was an upright engine, which necessitated a fair amount of metal above the horizon and therefore created a poor forward view when on the ground, so in 1931 the next development – the 120 hp Gipsy 111 – was designed to run inverted. Fitted to the DH60 airframe, this created a virtually new aeroplane, yet one that retained the many virtues of its predecessor.

Known as the DH60G111, the prototype, G-ABUI, emerged in March 1932. The extra power and improved view were very welcome and demand came from private owners and clubs, with eight of the latter equipping with the type from new. From the 58th machine, the G111 engine was replaced by what became the ubiquitous Gipsy Major of 130 hp. Although the machine became known as the Moth Major, inexplicably it has retained

the handle DH60G111 to this day.

154 machines were built from scratch, including one by students of the then famous de Havilland Aeronautical Technical School, with several others created by conversions from older DH60s with upright engines. Additional fuselages were constructed and diverted from the original aim, to be used on the military Queen Bee target aircraft, which was not – as many people think – just a radio controlled Tiger Moth, which had a metal fuselage.

In 1954, through my involvement with the then Vintage Aeroplane Club, I had the good fortune to be invited to fly Moth Major G-ADHE, based at Denham and owned by Peter Hindmarsh. I grew quite attached to this intriguing machine and had the opportunity to fly it in the Southend Trophy Air Race. My main recollection of this event was flying almost wing-tip to wing-tip for what seemed like several minutes with Neville Duke as he overtook me by about 2 mph in what was then his Hawker Tomtit G-AFTA – which for many years has been with the Shuttleworth Collection carrying its original Service serial K1786. Alas, G-ADHE, though, came to grief in an accident in March 1958.

Now we must break from mere reminiscences to relevant facts. To get on

Colour photos: Keith Wilson

***David Ogilvy** ducks as he ventures to suggest the de Havilland DH60 G111 Moth Major has advantages over the Tiger*

Moth Major (in the foreground) has an edge over the Tiger Moth, (beyond) says the author

B/W photos: via Philip Jarrett

board, there is a need to negotiate the flying wires close to the wing walkway alongside either side of the fuselage. Once inside, the cockpit layout is much as would be expected, with a selection of basic instruments comprising from left to right a non-sensitive ICAN altimeter, rpm and turn and slip gauges, airspeed indicator, oil pressure gauge and a large P-type compass on the right wall. As with so many other machines of the era, for safety reasons I would prefer to see the ASI on the extreme left, a sensible practice that took designers many years to realise. As in its later brother the DH82A Tiger Moth, the trimmer is on the left wall, but there is no slat lever. There is no carburettor heat control, but the traditional Gipsy Major flame trap allows warm air to do the necessary work which, in my humble opinion, it does more effectively than the troublesome modern devices. Fuel is gravity fed from the 19-gallon tank forming the centre-section between the two top all-

Top left: DH60GIII prototype G-ABUI first flew in 1932
Above: Moth Major G-ADHE, the aircraft flown by the author
Left: the cockpit layout was typical of the DH60 breed
Below: wings folded outboard of the 19 gallon fuel tank

folding wings.

The suspension, provided by a combination of oil and rubber blocks within the main legs, (the latter developed so successfully on the DH98 Mosquito), provides a firm but comfortable ride. The standard pre-take-off checks are more than covered by the long-established but now discarded TTMFFGHH and away we go, expectedly calling for a medium dose of right rudder. Acceleration is vastly superior to that of its predecessor and very shortly the alert machine flies itself off the floor at about 45 mph. A gentle delay to reach 60mph IAS leads to a very creditable climb rate of almost 900 feet per minute, which gives it a head-start of more than 200 fpm over its successor the similarly powered DH82A Tiger Moth. Levelling into cruise mode, the 60G111 purrs along quietly due to the under-fuselage exhaust pipe; which provides a marked change from the admittedly pleasant burble from the normally exposed four stubs. A setting of 1950 rpm produces about 90 mph, thus following standard behaviour for a high-

drag aeroplane, where an increase in power has little beneficial effect on speed but provides a very useful safety feature in the improved get-away performance.

A pleasant feature noticeable from an early stage of a flight is the tautness of the ailerons; this applies to all the straight-wing DH60 series but is a quality that was partly lost when the staggered layout was introduced on the otherwise enjoyable Tiger Moth. The G111's overall handling is very likeable but, as expected, there is little directional stability; this calls for realistic use of rudder at all times including changes of power setting and, especially, when leading into a turn, in which adverse aileron drag is relatively modest. Steep turns can be held very contentedly.

Low-speed flight leading to the stall holds no surprises and the break-away is very tame, but this should not be treated as an invitation to avoid positive recovery action; for it is possible to remain in the stalled condition with wings level and losing more height in the process than appears from the relative comfort of the cockpit. Nearer to the other end of the speed range, despite the absence of strakes, aerobatics are permitted and the loop is a smart, happy event. As with most biplanes of the era, though, rolling manoeuvres are less benign and, out of respect for a vintage aeroplane which, at the time, was the sole UK survivor, I refrained from venturing far into this realm.

Above: steep turns can be held contentedly with proper application of rudder
Left: the Moth Major's aileron tauntness was partly lost when wings were staggered
Below: stable glide approach at 60 allows well-judged three-pointers

The Major trims out happily on the glide approach at 60 mph and provides very good experience in judging precision for a three-point landing. Doing so into wind is a very satisfying exercise, but out of it there is much wisdom in setting out for a wheeler. As with all brakeless machines, subsequent taxying calls for a sense of airmanship covering aerodrome (or airstrip) surface, ground gradients, wind strength and direction and available manoeuvring space.

I liked the Moth Major and, although 'DHE came to grief long ago, I am pleased to report that the type has not disappeared from the UK scene. Mainly through examples being re-imported, there are six on the register and currently two of these are airworthy. With good fortune, before long, perhaps another two will join that status. Here is an aeroplane that warrants a future existence; if I dare say so and if it was better known, the Major could become a more popular possession than is the Tiger Moth. I expect to be shot for that. ■